RIVERSIDE COUNTY TRANSPORTATION COMMISSION

DATE:	July 11, 2007
TO:	Riverside County Transportation Commission
FROM:	Budget and Implementation Committee Hideo Sugita, Deputy Executive Director Marlin Feenstra, Capital Projects Program Manager Mark Massman, Bechtel Project Manager Robert Wunderlich, Bechtel Project Coordinator
THROUGH:	Eric Haley, Executive Director
SUBJECT:	Agreement with David Evans and Associates for the Development of Plans, Specifications, and Cost Estimate for the Construction of the State Route 74/Interstate 215 Interchange Improvement Project in the City of Perris

BUDGET AND IMPLEMENTATION COMMITTEE AND STAFF RECOMMENDATION:

This item is for the Commission to:

1) Approve the selection process and award consultant Agreement No. 07-31-122-00 to David Evans and Associates, Inc. to perform final engineering services and prepare plans, specifications, and cost estimate (PS&E) for the construction of the SR-74/I-215 Interchange improvement project in the city of Perris (Perris) based on the attached project scope, schedule and cost for the base amount of $2,091,662 plus a contingency amount of $218,338 (10.4%), to cover potential changes in scope for a total not to exceed amount of $2,310,000;
2) Authorize the Chair, pursuant to legal counsel review, to execute the agreement on behalf of the Commission; and
3) Authorize the Executive Director or his designee to approve contingency work as may be required for the project.

BACKGROUND INFORMATION:

The proposed limits of the project will be from the intersection of Fourth Street and G Street to the intersection of Redlands Avenue and San Jacinto Avenue in Perris.

At its April 13, 2005 meeting, the Commission awarded a contract to David Evans and Associates to perform preliminary engineering and environmental services to produce a project report and environmental document (joint National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) document) for

the 1989 Measure A I-215/SR-74/G Street interchange improvement project. Caltrans is lead agency under CEQA and Federal Highway Administration (FHWA) is lead agency under NEPA. This work is in process and the draft environmental document has been submitted to Caltrans for review.

This item is to secure the services of a consultant to perform final design for this 1989 Measure A project and have that consultant under contract near the estimated completion of the environmental document in order to facilitate the project's delivery. Final design work will begin only after conceptual approval of the single remaining alternative under consideration has been obtained from FHWA.

Commission staff will also work with Western Riverside Council of Governments on Transportation Uniform Mitigation Fee funding coordination to support the final design effort, and Measure A funds will also be included in funding this phase of work.

At its January 10, 2007 meeting, the Commission approved and directed staff to issue a request for proposals to prepare the PS&E for the SR-74/I-215 interchange improvement project.

Calendar of Events

Distribution of RFP	January 16, 2007
Bidders information meeting (not mandatory)	January 30, 2007
Proposals were due to the Commission prior to 2 p.m.	March 1, 2007
Short listed firms were notified	March 13, 2007
Interviews of short listed firms	March 20, 2007
Staff recommendation to Commission	July 11, 2007

Selection Process

A selection panel was assembled, which consisted of representatives from the Commission, Caltrans, the city of Perris and Bechtel staffs. Staff received proposals from two firms. The selection panel reviewed the proposals and it was decided to interview both firms.

Both firms demonstrated that they would be capable of completing the proposed scope of work. After careful evaluation of the personnel of the proposed project teams, knowledge of the project, and proposed project approach, the selection panel ranked the firms as follows:

Top Ranked	David Evans and Associates, Inc.
Second	Stantec Consulting, Inc

After David Evans and Associates was selected as the top ranked firm, its cost proposal was opened and reviewed by staff. The scope of work, cost proposal, and proposed schedule were found to be generally acceptable. Staff has been working with David Evans and Associates and has come to an agreement concerning the attached scope of work, schedule of services and the respective costs.

Based on the results of the selection panel, Commission staff recommends that Agreement No. 07-31-022-00 be awarded to David Evans and Associates, Inc. to perform final engineering services and prepare PS&E for the construction of the State Route 74/ I-215 Interchange improvement project in the Perris based on the attached project scope, schedule and cost for the base amount of $2,091,662 plus a contingency amount of $218,338 (10.4%), to cover potential changes in scope for a total not to exceed amount of $2,310,000. PS&E is expected to take approximately 16 months.

Financial Information						
In Fiscal Year Budget:	N/A	Year:	FY 2007/08 FY 2008/09	Amount:	$1,600,000 $ 710,000	
Source of Funds:	Measure A/TUMF			Budget Adjustment:	No	
GLA No.:	222 31 81101 P 3015 $ 100,000 222 31 81102 P 3015 $1,500,000					
Fiscal Procedures Approved:	Theresia Trevino			Date:	6/25/07	

Attachments:
1) Scope of Work
2) Cost Proposal
3) Proposed Schedule

Project Management (WBS 100)

This task includes overall project management, Project Development Team (PDT) leadership, progress monitoring and maintenance of project files. DEA will supervise, coordinate, monitor and review alternatives development for conformance with Caltrans and local agency standards, policies and procedures.

The scheduling and management activities will serve as the basis for the development of the Project Work Plan. This Project Work Plan will be provided to all members of the Project Development Team to ensure that all members clearly understand their responsibilities and the timeliness of executing these responsibilities.

DEA will prepare a Caltrans Work Breakdown Structure (WBS) schedule and integrate project milestones. The schedule will be updated bi-monthly or more frequently as required and a variance analysis provided in our monthly report. It is planned to use Microsoft Project Software.

DEA will organize and attend the monthly PDT meetings to discuss scope, schedule and cost, and other meetings as required for coordination. DEA will provide discussion materials and agendas and will prepare and distribute meeting notes. DEA will develop an action item matrix, document all project decisions and distribute correspondence copies to all Project Team members as appropriate.

DEA will provide monthly invoices in RCTC format including project status reports as part of the RCTC invoice format.

Prepare Base Maps and Plan Sheets (WBS 185)

Perform Design Surveys

DEA will perform specific design level surveys on the already existing base mapping topography. The design level surveys will include:

- Edge of pavement elevations
- Flow line elevations for existing ditches, and storm drains to be tied to
- Pavement elevations at the proposed bridge crossing location
- Ground topography for construction of retaining walls and sound walls
- Field verification of utilities

The work described here is an estimate and represents 6 field crew days.

Perform Preliminary Design

DEA will review the final approved Geometric Approval Drawing with Caltrans and RCTC to determine if any additional modifications or revisions are needed for the project. Based on this review, DEA will make adjustments and identify any additional actions required to meet Caltrans requirements for the project.

Prepare Engineering Reports

Drainage Study

To prepare hydrology and drainage designs and the storm water management plan for the proposed improvements and incorporate that information into a stand alone report.

DEA will obtain available hydrologic and hydraulic information from the City of Perris, the County Flood Control District and Caltrans. This may include the hydraulic design parameters including latest as-built plans, design discharge, design water surface elevation on existing drainage systems.

The base map and other information will be used to provide a base for the onsite hydrology and hydraulic exhibits. The hydrology study will be prepared for the interchange areas following Caltrans and County methods. Calculations will be based on existing freeway and street grades as noted by the survey. Preliminary hydrologic calculations will be prepared to determine inadequacies of the existing drainage system. We anticipate that onsite hydrology calculations for the 25-year and 50-year storm event will be prepared using the County hydrology manual rational method.

DEA will prepare Best Management Practices (BMPs) plans as identified in the Storm Water Data Report. It includes impact reduction measures, design pollution prevention measures, and treatment measures. These facilities will be discussed in the Drainage Report as part of this phase of the work.

A layout of the proposed drainage system will described and a hydraulic analysis of the system provide in the drainage study.

Geotechnical Design Report

Our Geotechnical Design Report for design and construction of embankments and pavement structural sections will be prepared in general accordance with California Test Method CAL-130, and will present the data obtained during field exploration and laboratory testing, as well as the following conclusions, recommendations, and discussions.

- Project description including proposed improvements, climatic conditions, terrain and surface drainage, and land use.
- Discussion of geotechnical settings including regional geology, subsurface soil and groundwater conditions.
- Recommendations for construction of roadway and embankment foundations and estimated settlement.
- Evaluation of gross and surficial stability of the proposed fill slopes.
- Earthwork considerations, including excavation characteristics of the underlying materials.
- Collapse, expansion, and corrosion potentials of the subgrade soils and recommended mitigation measures, if necessary.
- Earthquake considerations including seismic design criteria for fill embankment, and seismic hazards including the potential for liquefaction, ground rupture due to surface faulting and seismically induced settlement.
- Recommendations for pavement structural design based on traffic indices assumed or provided by the client.
- Discussion of materials available including local and commercial sources and materials specifications.

Our findings, conclusions and recommendations will be presented in a Draft Geotechnical Design Report with logs of the borings and laboratory test results. After review by the client, Riverside County Transportation Commission (RCTC) and Caltrans, comments will be incorporated into the report and a final report submitted. We assume one round of review comments from each agency prior to completion of our final report.

Materials Report / Pavement Design Report

The Materials Report will present data obtained from the field exploration and laboratory testing, as well as recommendations regarding pavement structural section design based on traffic indices provided by the client and current Caltrans design methods. The Materials Report will also discuss potential import materials including local and commercial sources and preliminary materials specifications.

Findings, conclusions and recommendations will be presented in a draft Materials Report with boring logs and laboratory test results. Comments received from the draft Materials Report will be incorporated into the report

and a final report submitted. One round of review comments from each agency prior to completion of the final report. In the event that our exploratory borings are advanced through existing pavement, we will measure the thickness of the pavement and present that data in our report. Field or laboratory testing of potential import materials sites is not included in this scope of services.

As may be required, a separate Materials Report will be provided for summarizing the information related to the structural section recommendations. This report will be used for making the final determination for the structural section for the project.

Update SWDR

Perform an update of the Storm Water Data Report for the PS&E phase of the project in accordance with Caltrans procedures for this document. DEA will coordinate with Caltrans Stormwater coordinator for approval of the document and incorporate the required BMPS into the document and project plans.

Update TMP

DEA will prepare and update to the Transportation Management Plan based on the specific staging requirements for the project. Initial conceptual staging plans for construction of the bridge and the ramp will be further developed for inclusion of the in the TMP Data Sheets. This task will be ongoing throughout the project processing of the PS&E.

Prepare Right of Way Requirement Maps

DEA will prepare the right of way requirement maps based on the approved Geometric Approval Drawings and the required right of way for the project. DEA will identify the necessary property for acquisition both as in fee and easement acquisitions, both permanent and temporary easements. The maps will include identification of the parcels affected by the project, the amount of property required from the parcel and the area of the remnant property. The map will be prepared to the same scale as the proposed layout sheets for the project, i.e. 1 inch = 50 feet.

This submittal will be made as part of the 35% Submittal.

Prepare Structure Site Plans (WBS 190)

DEA will refine the previously approved Advance Planning Study to reflect the approved Geometric Drawing. The Structure Site Plan will be prepared in accordance with the Caltrans procedures and will identify the critical design elements. Additional field surveys will be performed (under separate task) to identify bridge clearances for both final and temporary conditions.

DEA will develop a preliminary foundation plan assuming pile foundations and depict the limits of the approach embankments and any retaining walls needed adjacent to the freeway mainline.

Non-standard retaining and sound walls are not assumed to be present on the project and are not included in this scope of services.

Structure site Plan will prepared at the onset of the project once the approved GAD is available. This information along with the Site Report will be used to determine the field boring logs required for the project. The proposed boring log locations will be included in this submittal for Caltrans to review and approve.

Coordinate Utilities (WBS 200)

Utility Coordination and Letters

DEA will identify the affected property owners for the project and provide a utility roster of the parties. The roster will identify the contact person for the project along with their contact information. DEA will provide

correspondence to the affected agencies at the key stages of the process, i.e. 35%, 65% and 95% plan sets for their review along with a final signed set of plans for their execution of any necessary relocation activities.

At this time only two utility poles are anticipated as part of this scope of work.

Potholing and Additional Field Surveys

Potholing of any utilities found within the project site will be performed to satisfy:

1. Caltrans High and Low Risk Utility Policy
2. Identify the position of utilities which may be in conflict with element of the project to be designed.

The potholing will be coordinated with a vendor service who performs these services as a regular practice. DEA and its vendor will be responsible for the proper notifications to Underground Service Alert and other pertinent agencies such as Caltrans prior to performing any pothole activities.

DEA will provide the necessary field survey work to identify the top of the facility as well as any invert elevations that may be required for "wet" utility conflicts.

At this time no specific utility conflicts are noted however this scope of services assumes 2 full days of survey and potholing services as may be required for the project.

Utility Conflict Maps

Upon completion of the potholing, DEA will prepare the Utility Conflicts Map for the project. This map will be prepared even should there be no conflicts as a matter of documenting just that case. The map will be prepared on the same layout sheets as the right of way Requirement Maps and will include parcel information as well as the collected utility information.

High and Low Risk utilities will be noted on the map in accordance with Caltrans policy for the same. This map will be part of the 60% submittal along with the overall PSE submittal at that time.

Obtain Permits and Agreements (WBS 205)

DEA will be responsible for identifying the necessary permits for the project along with coordinating with Caltrans for any specific requirements as may pertain to them or other agencies in the area. DEA will document the need and prepare applications for the required permits which will include:

- State Department of Fish and Game under Section 1602 of the State Fish and Game Code
- Federal Section 404 Permit or Nationwide Permit with the Army Corps of Engineers Regulatory Branch
- State Water Quality Control Board for Section 401 of the Clean Water Act
- Other permits as may be applicable to the site.

DEA assumes that no other permits will be required but will perform a search with the local agencies and identify any as may be required.

Prepare Preliminary Structures Design Data (WBS 210)

Perform Geotechnical Investigation and Foundation Report

Structure Foundation Report will be prepared in accordance with Caltrans Guidelines for Foundation Investigations and Reports, and will include the following:

- Seismic design recommendations including recommended acceleration response spectra in accordance with the current Caltrans Seismic Design Criteria.

- Recommendations for design and construction of shallow or deep foundations including recommended bearing capacities, lateral resistance, and total and differential settlements.
- Recommendations for design of retaining walls, including foundation type, allowable capacity and lateral pressures.
- Overall stability analyses of footings, slope and foundation materials; evaluation for static and pseudo-static conditions.
- Construction considerations.
- Log of Test Borings (LOTB) sheets.

Our conclusions and recommendations pertaining to design and construction of foundation systems will be presented in a Draft Structure Foundation Report with a site map showing boring locations, LOTB sheets and laboratory test results. After review by client, Riverside County Transportation Commission (RCTC) and Caltrans, comments will be incorporated into the report and a final report submitted. We assume one round of review comments from each agency prior to completion of our first report.

A final LOTB sheet will be included as part of the Foundation Report and Contract Plans following review of the LOTB. We assume nine LOTB Sheets will be provided, one for each boring and CPT at each abutment and bent location (5), and up to four (4) for the retaining walls.

Engineering Site Investigation and Report

DEA will prepare a summary of the findins from the foundation report and its recommendations. This site investigation report will briefly detail the findings and be a support document for the bridge design to proceed into the Type Selection portion of the design.

DEA assumes this effort to be performed in conjunction with the results of the foundation recommendations and included in the Bridge Type Selection Report.

Prepare Structure General Plan (WBS 215)

Our team will develop the recommended structure type for final design. A General Plan (GP) cost estimate will be prepared for the recommended structure type. A Bridge Type Selection Memo will be prepared and will address the key issues associated with each site. These issues include but are not limited to:

- Handling of traffic
- Verification of girder depth and vertical temporary and permanent clearances over existing and future assumed facilities.
- Verification of bent locations for horizontal temporary and permanent clearances to existing and future assumed facilities.
- Providing structural engineering parameters to the geotechnical engineer for use in establishing a recommended foundation type considering dead, live and seismic loading conditions.
- Document the recommended foundation type, shallow or deep, considering median construction impacts to traffic and foundation construction impact to canals.
- Determination of bridge deck drainage system. Storm runoff from the bridge deck will be collected and discharged away from the right-of-way.
- Identification of items built into the structures that will require future maintenance.
- Verification of constructability for the proposed structure.

- Proposed aesthetic treatments of proposed structures to enhance the appearance of the corridor as may be directed by RCTC or PDT.

Our team will document the findings and recommendations in the Bridge Type Selection Memo. A General Plan will be prepared showing the conceptual design for each site. We will attend the Bridge Selection Meeting to discuss the findings and obtain consensus on the recommendations. Upon approval of the structure type, our team will proceed with the final design.

DEA will deliver as part of this element of the scope of services: General Plan, Bridge Type Selection Memorandum, Seismic Design D/C Ratios for Substructure elements, Preliminary Construction Cost Estimate for the bridge.

Perform Right of Way Engineering (WBS 220)

Perform Land Net Surveys and Prepare Maps

DEA will perform the necessary boundary survey requirements to document the existing property boundaries. This work will entail research of the existing boundary information and record survey monumentation.

DEA has estimated 9 field days for surveying the boundary information on the project site.

The landnet map will be prepared showing the recovered monuments and identifying the location of record monuments. The map will be prepared in accordance with state requirements dictated by the state Professional Land Surveyors Act and Caltrans standards.

This map will be used to prepare the Record of Survey Map to the County of Riverside. The Record of Survey will depict the new and old centerlines for the project. The landnet map will then also be used to prepare the required legals and plats for the project property acquisitions.

Prepare Right of Way Maps

DEA will prepare the required Right of Way map for the project conforming to Caltrans standards for the project. Mapping will be to a scale conforming to the current mapping standard on file for this reach of the I-215 corridor.

No mapping is anticipated along the SR 74 corridor for this project.

Prepare Acquisition Documents

DEA will prepare the legals and plats for the acquisition of the property required for the project. The properties involved will be those private property parcels adjacent to the project site and directly affected by the project.

DEA has assumed 10 parcels for acquisition as part of this scope of services.

Prepare Draft PS&E (WBS 230)

The draft PSE will be submitted in 3 deliveries for review: 35%, 65% and 95%. The items for submittal in each are identified here.

35% Draft Plan Submittal

Title Sheet
Typical Sections
Layout and Profile Sheets
Retaining Wall Layouts
Drainage Layout Plan
Grading/Contour Plan
Traffic Striping Plans
Bridge General Plan Sheet
Conceptual Landscape Plan
Utility Coordination Memorandum

65% Draft Plan Submittal

Title Sheet
Typical Sections
Layout and Profile Sheets
Drainage Layout Plan
Drainage Details and Profiles
Grading/Contour Plan
Retaining Wall Layouts
Retaining Wall Details
Sound Wall Plans and Details
Landscape Planting Plans
Traffic Striping Plans
Traffic Signing Plans
Traffic Electrical Plans
WPCP Plans
Traffic Management Plans
Bridge General Plan Sheet
"Unchecked" Bridge Plans
Project Bid Item List
Project Special Provisions
Utility Coordination Memorandum

95% Draft Plan Submittal

This submittal shall include all items noted in the 65% as well as the balance of items noted in the following scope of services identifying the anticipated plan set for delivery

Prepare Roadway Plans

DEA will prepare the necessary roadway and freeway improvement plans as needed for the proper delivery of the project. Retaining wall plans for this project are anticipated to be standard retaining walls and will therefore not require any review by Caltrans Structures Unit. It is anticipated the walls will be Standard Type 1 Retaining Walls. All sound walls for the project are anticipated to be standard wall plans as found in Caltrans XS Detail Sheet Library. Aesthetic treatment for the walls is anticipated and is included in this proposal. The plans required for the project are as follows:

Sheet Description	**Estimated Number of Sheets**
Title Sheet	1
Typical Cross Sections	4
Key Map and Line Index	1
Roadway Layouts	11
Profile and Superelevation Sheets	9
Construction Details	4
Contour Grading Plans	11
Summary of Quantities Sheets	4
Retaining Wall Plans	12
Sound Wall Plans and Details	16
Standard Plans	2

Prepare Highway Planting Plans

DEA will prepare the necessary planting and irrigation improvement plans as needed for the proper delivery of the project. Points of connection for the project are not known at this time. It is assumed the power and water connection points will be within the project site. A Conceptual Landscape Plan is required as part of the 35% plan submittal. This plan will depict the proposed locations of the planting in accordance with the planting scheme as determined by the PDT. DEA assumes the PDT will identify the plant palette for use on the project and that a single review by Caltrans will provide the direction for preparation of final plans. The plans required for the project are as follows:

Sheet Description	**Estimated Number of Sheets**
Highway Planting Plans	11
Plant List	3
Irrigation Plans	13
Irrigation Quantity Sheets	1

Prepare Traffic Plans

DEA will prepare the necessary traffic improvement plans as needed for the proper delivery of the project. Along with street lighting plans as may be required along the ramps and the local road, 4 signalized intersections will be prepared, 3 along Redlands Avenue, and 1 along 4th Street at Wilkerson. The plans required for the project are as follows:

Sheet Description	**Estimated Number of Sheets**
Prepare Signing and Pavement Delineation Plans	12
Prepare Traffic Electrical Plans (includes 4 signalized intersections)	17

Prepare TMP

DEA will prepare the updated Transportation Management Plans for the proper delivery of the project. The plans required for the project are as follows:

Sheet Description	**Estimated Number of Sheets**
Stage Construction Plans (2 Stages for Bridge Construction)	12
Construction Area Signs Plans	4
Detour Plans (SB Off Ramp Layout, Profile and Detail Plans)	5

Prepare Utility Plans

DEA will prepare the Utility plan sheets for the proper delivery of the project. No utility relocation plans are included in this scope of services. The plans required for the project are as follows:

Sheet Description	Estimated Number of Sheets
Utility Sheets	11

Prepare Drainage Plans

DEA will prepare the Drainage Plans for the proper delivery of the project. Drainage plans are assumed to include and be limited to the on site drainage improvements. No specific off site or regional drainage facility is included int his scope of services as none is anticipated to be encountered on the project. The plans required for the project are as follows:

Sheet Description	Estimated Number of Sheets
Drainage Layout Plans	11
Drainage Profile Plans	5
Drainage Details and Quantities	4

Prepare Water Pollution Control Plans

DEA will prepare the water pollution control plan sheets for the proper delivery of the project. The plans required for the project are as follows:

Sheet Description	Estimated Number of Sheets
WPCP Layout Sheets	11
Detail and Quantity Sheets	2

Prepare Erosion Control Plans

DEA will prepare the Drainage Plans for the proper delivery of the project. The plans required for the project are as follows:

Sheet Description	Estimated Number of Sheets
Erosion Control Plans	11
Erosion Control Details and Quantities	2

Prepare Civil Specifications

DEA will prepare specifications for the items of work noted in this section. Specifications will be prepared in conformance with the Caltrans Standard Specifications and the Caltrans Standard Special Provisions format. DEA will submit full SSPs for Caltrans review with all formatting and SSP instructions turned on for proper review by Caltrans.

DEA will submit specifications at the 60% and 95% submittal stage of the project. A bid estimate form will be provided for each submittal as well.

Prepare Quantities and Estimates

Quantities will documented in a project engineers notebook based on the bid items described in the engineer's estimate. Quantities will based on units of measure that will be required for payment as in accordance with the Caltrans Standard Specifications or as agreed to otherwise.

DEA will provide this submittal at the 60% and 95% submittal stage for review.

Prepare Draft Structures PS&E (WBS 240)

DEA will prepare the Draft Bridge Design (Unchecked Details) including all plan sheets and design calculations. The design will be based on the "LRFD" method. Seismic design will be performed in accordance with Caltrans "Seismic Design Criteria" (version 1.2). Plans will be prepared in accordance with the Caltrans "Bridge Design Details" manual and PS&E documents will be prepared in conformance with City and Caltrans requirements. A Structure Item List will be prepared which will be used to develop the Special Provisions and Quantities. The assumptions used in developing the General Plan Estimate will be reviewed to identify possible impacts to the construction cost estimate. All PS&E documents will be developed using English units.

DEA will provide Unchecked Bridge Plans and a Structure Item List as part of the Draft Bridge PSE Submittal.

Prepare Final Structures PS&E Package (WBS 250)

DEA will address the comments on the Draft Bridge Design (Unchecked Details). DEA will perform a complete independent check of the bridge design in accordance with Caltrans procedures, resolve review comments and revise the plans as required, prepare and review the Special Provisions, prepare quantity calculations and check calculations, and prepare a construction cost estimate. DEA will perform a senior review of the Final Bridge Design prior to submittal to the City.

Final Submittal will include: Checked Bridge Plans, Structure Special Provisions, Marginal Estimate, Quantity Summary Sheets, Design Calculations, Independent Design Check Calculations, Quantity Calculations, and Quantity Check Calculations. This submittal will be made with the Final District Review submittal

Prepare Final District PS&E Package (WBS 255)

Final District PSE package will be the "packaging of the final plans specifications for delivery ot the agency responsible for letting the construction contract. DEA will oversee the compiling of the information and delivery on behalf of RCTC. Signed plans and specifications will be available at in electronic and final reproducible medium (mylar or other).

DEA anticipates as much as 200 plan sheets for final delivery.

Stakeholder Communication Plan

DEA has identified Arellano and Associates as a consultant to provide appropriate communication efforts for the project at those points in time where it is necessary. For this scope of services, it is anticipated that at the time the project is ready for advertising, an information c program will be needed for property owners affected by the project construction as well as general information for the city and its residence. A specific scope of work is not provided at this time as it will be more appropriate to develop this plan at the time the project is ready to advertise. Therefore, a contingency is set aside in the cost proposal for this effort and will be allocated at the time it is warranted. No action under this task will occur without direction and agreement between all parties.

Prepare Construction Documents (WBS 260)

DEA will prepare the final construction document and review for consistency prior to submittal to RCTC for reproduction for advertising.

Advertise, Open Bids, Award & Approve Contract (WBS 265)

Prepare Residents Engineer File

DEA will provide to RCTC a Resident's Engineer (RE) file which shall include:

- 4-Scale Drawing of the proposed bridge deck to the finished grades as shown on the plans. Drawing will depict the centerline layout for the bridge and the girders.
- Grid Grades for intersections where profile and grade information may not be sufficient for proper staking of the work to be performed.
- Utility company correspondence as may affect the project along with a list of all contacts that have been made through out the course of the project.
- Bask up data as may be required for the Water Pollution Control Program as may be shown on the project plans
- Copies of the quantity calculations for the project bid items as used in the project bid sheet for awarding the project.
- Copies of the geotechnical reports for use by the RE.

Review of Contractor Submittals

DEA shall be available for the review of those submittals as may be required in the project specifications and or as may be initiated by the contractor. These reviews will be for items such as:

- Checking for conformity to the project specifications for items where the RE or Construction staff require design staff review.
- Review of specialty design items to assure they meet the intended performance specification for the project.
- Review of shop drawings as may be required for the bridge construction and as noted in the contract specifications.
- Review of Contractor initiated Cost Reduction Incentive Proposals (CRIP) where the contractor propose alter the design for a reduction in price to the project but still provide the intended performance and application of the element for which the CRIP is applicable, either in part or in whole to the project.

These items are not limited to the items noted here. The estimated budget for these tasks are contingent are the number of submittals the contractor makes. The budget for this task will need to be evaluated during the process of the work in construction.

DEA will make itself available for meeting with the contractor as the budget for this task will allow.

Prepare Final Report (WBS 295)

DEA will prepare the required As-Built Plans under this task. This task is limited to the preparation of the as built plans as noted on the cost proposal.

The as built plans will be prepared based on the RCTC supplied red line drawings from the field revisions noted during construction. The as-builts will be prepared on the original electronic drawings and will retain the original information. Items noted as stricken will be stricken and the new information added to the plans. The original RE seal will be retained. Signature on the new electronic drawing for the as builts will be provided by the field personnel responsible for the red line drawings, the DEA engineer in responsible charge for reviewing the as builts, and the DEA individuals responsible for preparing the revisions.

DAVID EVANS AND ASSOCIATES INC.

Cost Proposal for the SR-74/I-215 I/C Plans, Specifications, and Estimate

	Classifications	Principal	Project Manager / QC	Prof. Engineer	Assistant Civil Engineer	Civil CAD Drafter	Prof. Bridge Engineer	Bridge Designer	Bridge CAD Drafter	Prof. Landscape Architect	Landscape Designer	Prof. Land Surveyor	Survey Analyst	3-Man Survey Crew	Clerical	DEA Roll Up			Subconsultants	
	Average Direct Hourly Rate by classification	$80	$75	$65	$40	$32	$75	$40	$28	$48	$32	$55	$30	$105	$25					
Task Descriptions	Number of sheets	Hours per sheet	Estimated Hours per Task													Hrs,	Fee	ODCs	Hrs.	Fee + ODCs
100 PROJECT MANAGEMENT																				
100 . 20 Project Management PS&E Phase																				
100 . 20 . 05 Project Management and Coordination			24	240											100	364	$67,860	$700		
185 . 20 . 10 PDT Meetings				52	12										48	112	$17,797	$200		
185 . 20 . 15 Coordination Meetings				52	24	28									48	152	$23,548	$200		
185 . 20 . 20 Project Schedule				48											48	96	$14,528	$100		
185 . 20 . 25 Progress Reports and Invoices				96											48	144	$25,425	$300		
185 . 20 . 30 Quality Assurance Program			24	100											32	156	$30,933	$300		
185 PREPARE BASE MAPS AND PLAN SHEETS																				
185 . 05 Review and Update Project Information				8	8											16	$3,390	$0		
185 . 10 Perform Design Surveys and Photogrammetric Mapping				2								16			4	22	$3,420	$0		
185 . 10 . 05 Perform Control Surveys for Design				4									4	12		20	$5,085	$100		
185 . 10 . 15 Perform Design Data Surveys				8									12	32		52	$13,076	$100		
185 . 10 . 20 Perform Pavement Elevation Surveys				4									12	12		28	$5,811	$100		
185 . 15 Perform Preliminary Design																				
185 . 15 . 05 Perform Roadway and Misc. Design				8	8											16	$3,390	$0		
185 . 15 . 10 Review Proposed Geometrics				8	8											16	$3,390	$0		
185 . 15 . 15 Prepare Request for Exceptions to Design Standards				8	8	24										40	$6,296	$100		
185 . 15 . 18 Prepare Conceptual Landscape Plan				8	8	36				64	100					216	$26,732	$300		
185 . 20 Prepare Engineering Reports																				
185 . 20 . 10 Prepare Hydrology and Hydraulic Reports				8	48	56										112	$18,039	$200		$0
186 . 20 . 12 Prepare Storm Water Data Report				4	12	24										40	$6,175	$100		
185 . 20 . 15 Prepare Geotechnical Design Report				4												4	$908	$0	58	$30,000
185 . 20 . 20 Prepare Pavement Design Report				4												4	$908	$0	48	$25,000
185 . 20 . 25 Prepare Materials Report				4												4	$908	$0	48	$25,000
185 . 20 . 35 Review/Update TMP for Design Phase				12	24	40	32									108	$15,388	$200		
185 . 25 Determine Right of Way Requirements																				
185 . 25 . 05 Review Project With Affected Agencies				16	16											32	$6,780	$100		
185 . 25 . 10 Determine Fee and Easement Requirements				8	36	40	32									116	$16,841	$200		
185 . 25 . 15 Prepare Right of Way Requirements Maps	11	17		8	24	40	120									192	$23,003	$200		
190 PREPARE STRUCTURE SITE PLANS																				
190 . 30 Prepare Site Plans for Bridges and Structures	1	44		8				8	12	16						44	$6,441	$100		
200 COORDINATE UTILITIES																				
200 . 05 Perform Preliminary Utility Verification				8	20	60	32									120	$16,114	$200		
200 . 10 Determine Utility Locations (Potholing) and Prepare Conflict Maps																				
200 . 10 . 05 Prepare Notices and Obtain Agreements for Potholing				8	8	12										28	$4,843	$0		
200 . 10 . 10 Perform Potholing				4	4	8										16	$2,664	$0		
200 . 10 . 15 Perform Utility Surveys												2	4	16		22	$5,781	$100		
200 . 10 . 20 Review for Conflicts after Utility Surveys				4	4	16	12									36	$4,794	$0		
200 . 10 . 25 Prepare Utility Conflict Maps	11	24		8	24	42	188									262	$29,832	$300		
200 . 15 Utility Conflict Resolution				8	12	20	12									52	$7,761	$100		
200 . 20 Implement Utility Relocation Plan				8	16											24	$4,964	$0		
205 OBTAIN PERMITS, AGREEMENTS, AND ROUTE ADOPTIONS																				
205 . 05 Determine Required Permits				4	12											16	$3,269	$3,000		
205 . 10 Obtain Permits																				
205 . 10 . 30 Obtain Local Agency Concurrence/Permit				8	8											16	$3,390	$500		
205 . 10 . 40 Obtain Waste Discharge Permit (NPDES)				8	8											16	$3,390	$500		
205 . 10 . 50 Obtain Regional Water Quality Control Board Permit (401)				8	8											16	$3,390	$500		
210 PREPARE PRELIMINARY STRUCTURES DESIGN DATA																				
210 . 01 Prepare Preliminary Structures Design Data for Overcrossing																				
210 . 01 . 10 Perform Structures Site Investigation				2	2			8	8							20	$3,632	$0		
210 . 01 . 15 Prepare Preliminary Structure Report				2				4	12							18	$2,815	$0		
210 . 01 . 20 Prepare Draft Foundation Plan				2				4	12	24						42	$4,849	$0		
210 . 01 . 25 Prepare Preliminary Structures Foundation Report				2				4	4							10	$1,846	$0	54	$25,000
215 PREPARE STRUCTURES GENERAL PLANS																				
215 . 01 Prepare Structure General Plans for Overcrossing																				
215 . 01 . 05 Develop Preliminary Design								8	12							20	$3,269	$0		
215 . 01 . 10 Prepare Preliminary Plan Sheets	18	13						16	24	200						240	$23,488	$200		
215 . 01 . 15 Develop Preliminary Quantities								4	12							16	$2,361	$0		
215 . 01 . 20 Perform Foundation Field Investigation								2	2							4	$696	$0	30	$22,383
215 . 01 . 25 Prepare Foundation Report and Log of Test Borings				2				2	2							6	$1,150	$0	100	$15,000
215 . 90 Prepare Structure General Plans for "Overall" Project																				
215 . 90 . 05 Develop Preliminary Estimates								2	4							6	$938	$0		
215 . 90 . 10 Approve Preliminary Plans (Type Selection/Strategy Mtg.)				8				8	8	48						72	$8,669	$100		
220 PERFORM RIGHT OF WAY ENGINEERING																				
220 . 05 Retrace and Perpetuate Existing Land Net for R/W Acquisition																				
220 . 05 . 05 Perform Record Data Search													8			8	$726	$0		

DAVID EVANS AND ASSOCIATES INC.

Cost Proposal for the SR-74/I-215 I/C Plans, Specifications, and Estimate

		Classifications	Principal	Project Manager / QC	Prof. Engineer	Assistant Civil Engineer	Civil CAD Drafter	Prof. Bridge Engineer	Bridge Designer	Bridge CAD Drafter	Prof. Landscape Architect	Landscape Designer	Prof. Land Surveyor	Survey Analyst	3-Man Survey Crew	Clerical	DEA Roll Up			Subconsultants	
		Average Direct Hourly Rate by classification	$80	$75	$65	$40	$32	$75	$40	$28	$48	$32	$55	$30	$105	$25					
	Task Descriptions	Number of sheets	Hours per sheet	Estimated Hours per Task													Hrs,	Fee	ODCs	Hrs.	Fee + ODCs
220 . 05 . 10	Perform Land Net Recovery and Field Ties													8	32		40	$10,896	$100		
220 . 05 . 20	Perform Monument Perpetuation Surveys												2	8	48		58	$16,314	$200		
220 . 05 . 25	Prepare and File Perpetuation Documents												16	20			36	$4,480	$0		
220 . 10	**Prepare Land Net Map**												40	144			184	$19,734	$200		
220 . 15	**Prepare Right of Way Maps**			8									24	160			192	$20,340	$200		
230	**PREPARE DRAFT PS&E**																				
230 . 05	**Prepare Draft Roadway Plans**																				
230 . 05 . 05	Prepare Title Sheet	1	14	2	4	4	4										14	$2,113	$0		
230 . 05 . 10	Prepare Typical Cross Sections	4	19	4	16	20	36										76	$9,964	$100		
230 . 05 . 15	Prepare Key Map and Line Index	1	22	2	4	8	8										22	$2,984	$0		
230 . 05 . 20	Prepare Roadway Layouts	11	47	8	88	160	260										516	$63,683	$600		
230 . 05 . 25	Prepare Profile and Superelevation Sheets	9	28	8	48	100	100										256	$33,052	$300		
230 . 05 . 30	Prepare Construction Details	4	80	8	48	100	164										320	$39,251	$400		
230 . 05 . 35	Prepare Contour Grading Plans	11	25	2	48	100	120										270	$33,627	$300		
230 . 05 . 40	Prepare Summary of Quantities Sheets	4	30	2	20	32	64										118	$14,462	$100		
230 . 05 . 50	Prepare Retaining Wall Plans	12	35	8	48	160	200										416	$50,002	$500		
230 . 05 . 52	Prepare Sound Wall Plans	16	18	4	32	100	144										280	$33,258	$300		
230 . 05 . 55	Select Standard Plans	2	24	8	12	16	12										48	$7,276	$100		
230 . 05 . 60	Prepare Stage Construction and Detour Plans or Traffic Handling Plans	16	17	4	72	80	120										276	$36,382	$400		
230 . 05 . 65	Prepare Water Pollution Control Plan	11	19	8	36	58	112										214	$26,769	$300		
230 . 10	**Prepare Draft Highway Planting Plans**																				
230 . 10 . 05	Prepare Highway Planting Plans	11	28	8							96	200					304	$35,135	$400		
230 . 10 . 15	Prepare Plant List	3	24	8							24	40					72	$9,177	$100		
230 . 10 . 20	Prepare Irrigation Plans	13	38	8							160	320					488	$56,056	$600		
230 . 10 . 30	Prepare Irrigation Quantity Sheets	1	56	8							12	36					56	$7,046	$100		
230 . 15	**Prepare Draft Traffic Plans**																				
230 . 15 . 05	Prepare Signing and Pavement Delineation Plans	12	0														0	$0	$0	264	$28,000
230 . 15 . 10	Prepare Construction Area Signs Plans	4	22	4	16	20	48										88	$11,126	$100		
230 . 15 . 15	Prepare Traffic Electrical Plans	17	0														0	$0	$0	480	$45,000
230 . 20	**Prepare Transportation Management Plan (TMP)**	1	44	12	32												44	$9,020	$100		
230 . 25	**Prepare Draft Utility Plans**	11	32	16	48	144	144										352	$44,457	$400		
230 . 30	**Prepare Draft Drainage Plans**	20	31	16	120	240	240										616	$79,543	$800		
230 . 35	**Prepare Draft Specifications**																				
230 . 35 . 05	Develop Roadway Specifications			12	48	64											124	$19,916	$200		
230 . 35 . 10	Develop Highway Planting Specifications			4							20	36					60	$7,301	$100		
230 . 35 . 15	Develop Traffic Specifications			4													4	$908	$0	20	$2,820
230 . 35 . 20	Develop Electrical Specifications			4													4	$908	$0	20	$2,820
230 . 35 . 25	Develop Utility Specifications																0	$0	$0		
230 . 35 . 30	Develop Hydraulic Specifications			4	24	32											60	$9,504	$100		
230 . 35 . 35	Develop Water Pollution Control Specifications			4	16	20											40	$6,477	$100		
230 . 35 . 40	Develop Erosion Control Specifications			4	12	20											36	$5,690	$100		
230 . 40	**Prepare Draft PS&E Quantities and Estimates**																				
230 . 40 . 05	Calculate Roadway Quantities and Estimate			4	8	12											24	$3,935	$0		
230 . 40 . 10	Calculate Highway Planting Quantities and Estimate			4							12	36					52	$6,138	$100		
230 . 40 . 15	Calculate Drainage Quantities and Estimate			4	8	12											24	$3,935	$0		
230 . 40 . 20	Calculate Traffic Quantities and Estimate			4													4	$908	$0	101	$12,000
230 . 40 . 25	Calculate Electrical Quantities and Estimate			4													4	$908	$0	101	$12,000
230 . 40 . 30	Calculate Utility Quantities and Estimate			4	8	12											24	$3,935	$0		
230 . 40 . 35	Calculate Water Pollution Control Quantities and Estimate			4	8	12											24	$3,935	$0		
230 . 40 . 40	Calculate Erosion Control Quantities and Estimate			4	8	12											24	$3,935	$0		
230 . 55	**Incorporate Structures Draft PS & E**			8	12												20	$4,177	$0		
230 . 60	**Review and Update Project Information for PS &E Package**			8	12												20	$4,177	$0		
240	**PREPARE DRAFT STRUCTURES PS&E**																				
240 . 01	**Prepare Draft Structure PS&E for Overcrossing**	18	110	8													8	$1,816	$0		
240 . 01 . 05	Perform Design			2				100	360								462	$66,740	$700		
240 . 01 . 10	Prepare Plan Sheets			2				64	320	700							1086	$113,049	$1,100		
240 . 01 . 15	Check Design and Plan Sheets			2				100	72								174	$31,872	$300		
240 . 01 . 20	Prepare Quantities			2				8	64	12							86	$11,036	$100		
240 . 85	**Overall Draft PS&E Development**			4				4	4								12	$2,300	$0		
240 . 90	**Prepare Draft Structure PS&E for "Overall" Project**																				
240 . 90 . 15	Perform Foundation Review			2				8	12								22	$3,723	$0		
240 . 90 . 20	Prepare Draft Specifications			2				8	64								74	$10,019	$100		
240 . 90 . 25	Prepare Estimate			2				8	36								46	$6,629	$100		
240 . 90 . 30	Review Draft Plans, Specifications, and Estimate			2				8									10	$2,270	$0		
250	**PREPARE FINAL STRUCTURES PS&E PACKAGE**																				
250 . 10	**Finalize Structures PS&E Package**			2				36	52	64							154	$20,346	$200		
255	**CIRCULATE, REVIEW, AND PREPARE FINAL DISTRICT PS&E PACKAGE**																				
255 . 05	**Circulate & Review Draft District PS&E Package**			2	2	2	2										8	$1,283	$0		

DAVID EVANS AND ASSOCIATES INC.

Cost Proposal for the SR-74/I-215 I/C Plans, Specifications, and Estimate

	Classifications	Principal	Project Manager / QC	Prof. Engineer	Assistant Civil Engineer	Civil CAD Drafter	Prof. Bridge Engineer	Bridge Designer	Bridge CAD Drafter	Prof. Landscape Architect	Landscape Designer	Prof. Land Surveyor	Survey Analyst	3-Man Survey Crew	Clerical	DEA Roll Up			Subconsultants	
	Average Direct Hourly Rate by classification	$80	$75	$65	$40	$32	$75	$40	$28	$48	$32	$55	$30	$105	$25					
Task Descriptions	Number of sheets	Hours per sheet	Estimated Hours per Task													Hrs,	Fee	ODCs	Hrs.	Fee + ODCs
255 . 10 Update PS&E Package				2												2	$454	$0		
255 . 10 . 05 Update Roadway PS&E				8	24	56	64									152	$19,517	$200		
255 . 10 . 10 Update Highway Planting PS&E				8							40	88				136	$16,151	$200		
255 . 10 . 15 Update Traffic PS&E																0	$0	$0	60	$7,500
255 . 10 . 20 Update Hydraulics PS&E				8	16	56	64									144	$17,943	$200		
255 . 10 . 25 Update Technical Reports				8	16	32										56	$8,838	$100		
255 . 10 . 30 Update Utility PS&E				8	12	24	24									68	$9,407	$100		
255 . 10 . 35 Update Electrical PS&E																0	$0	$0	100	$12,000
255 . 20 Prepare Final District PS&E Package				4	12	24	12									52	$7,337	$100		
255 . 20 . 10 Incorporate Final Structures Specifications and Estimate into Final District PS&E				8	8			4								20	$4,298	$0		
Stakeholder Communication (Arellano Associates)																				$30,000
260 PREPARE CONTRACT DOCUMENTS																				
260 . 15 Prepare Draft Contract Documents				4	8	12		8	12		8	12				8	72	$10,134	$100		
Total Project Sheet Count and Hours per sheet	264	55																		
265 ADVERTISE, OPEN BIDS, AWARD, AND APPROVE CONTRACT																				
265 . 25 Respond to Inquiries & Open Bids																0	$0	$0		
270 PERFORM CONSTRUCTION ENGINEERING AND GENERAL CONTRACT ADMINISTRATION																				
270 . 05 Prepare Resident Engineer's File				8	24	48		8	48	24	4	8				172	$23,367	$200		
270 . 20 . 01 Review Shop Plans				20	42			48	56		24	60				250	$39,778	$400		
270 . 20 . 01 Review Cost Reduction Incentive Proposals (CRIPS)				12	42	24		24	56							158	$26,121	$300		
270 . 20 . 01 Review Contractors' Water Pollution Control Program				8	24						12	24				68	$10,606	$100		
295 ACCEPT CONTRACT, PREPARE FINAL CONSTRUCTION ESTIMATE, AND PREPARE FINAL REPORT																				
295 . 15 Prepare As-Built Plans	264	1		8	12	12	188	4	4	80	4	80				392	$40,341	$400		
Subtotal Hours by Classification			48	1202	1460	2274	2558	510	1272	1168	480	1040	112	540	152	336	13152			1484	
			0.4%	9.1%	11.1%	17.3%	19.4%	3.9%	9.7%	8.9%	3.6%	7.9%	0.9%	4.1%	1.2%	2.6%					
Subtotal Direct Labor by Classification			$3,840	$90,150	$94,900	$90,960	$81,856	$38,250	$50,880	$32,704	$23,040	$33,280	$6,160	$16,200	$15,960	$8,400		$586,580			
Subtotal Overhead Costs by Classification			$6,726	$157,907	$166,227	$159,326	$143,379	$66,999	$89,121	$57,284	$40,357	$58,293	$10,790	$28,376	$27,956	$14,713		$1,027,454			
Subtotal Fee by Classification			$1,057	$24,806	$26,113	$25,029	$22,523	$10,525	$14,000	$8,999	$6,340	$9,157	$1,695	$4,458	$4,392	$2,311		$161,405			
			$11,623	**$272,863**	**$287,240**	**$275,315**	**$247,758**	**$115,774**	**$154,001**	**$98,987**	**$69,737**	**$100,730**	**$18,645**	**$49,034**	**$48,308**	**$25,424**		**$1,775,439**	**$21,700**		**$294,523**

DEA Overhead Rate = 175.16%

DEA Profit= 10%

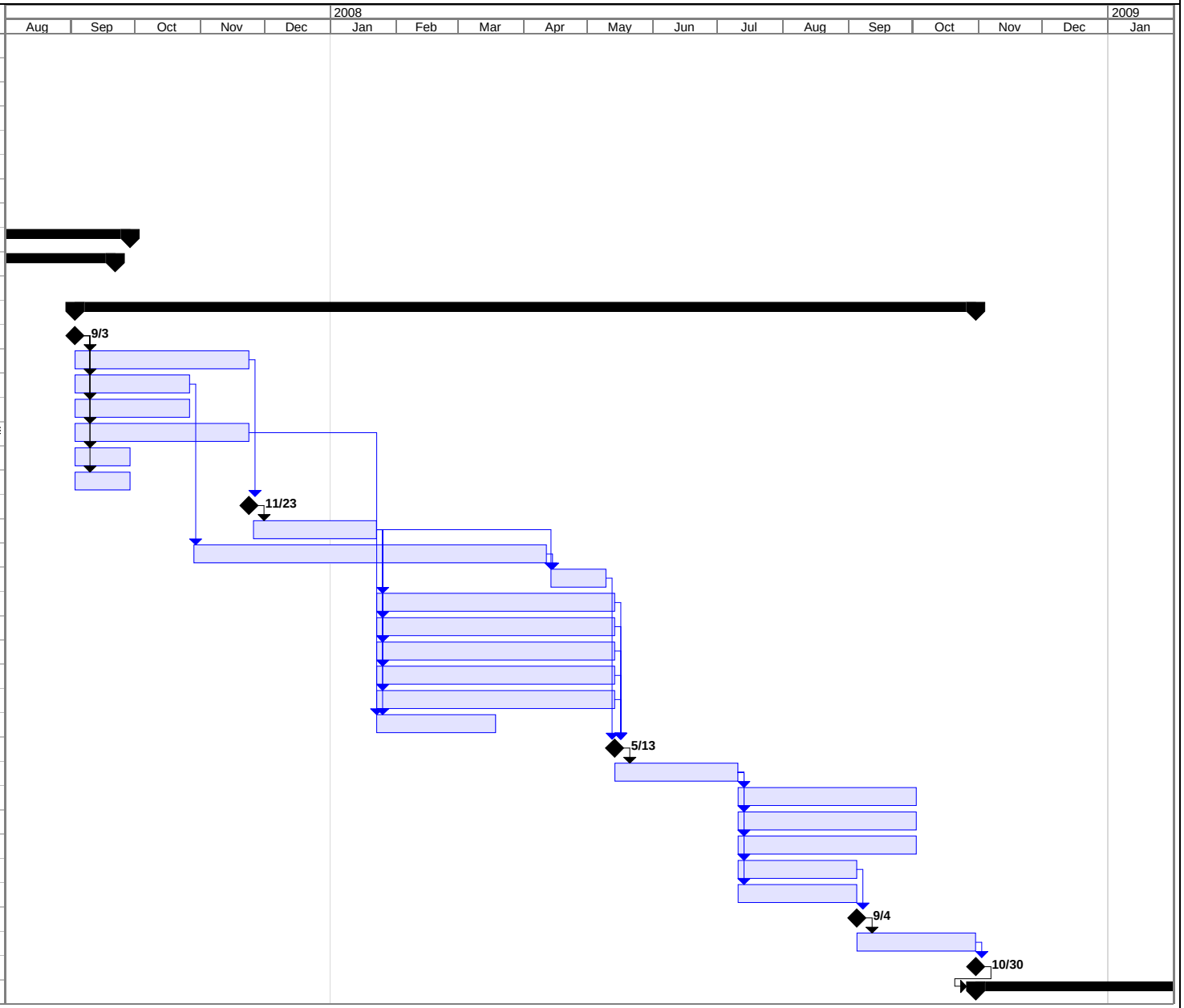
TOTAL FEE = $2,091,662

This cost proposal is submitted in response to RCTC's request for the subject project. The supporting Scope of Work for this proposal will be provided upon request to negotiate for a contract to provide these services. This proposal is an estimate of the services

Richard A. Hart, PE
Vice President

Interstate 215 / State Route 74 Interchange PA & ED Phase

ID	Task Name
1	**Notice to Proceed**
2	**Project Report**
3	**Draft Project Report**
33	**Design Exception Reports**
39	**Geometric Approval Drawing**
44	**Modified Access Report**
57	**Environmental Documentation**
58	**Studies**
91	**CEQA Approval**
103	**NEPA Approval**
111	
112	**Final Design Phase**
113	NTP
114	Prepare Initial 35% Plan Set
115	Prepare Bridge Type Selection Report
116	Prepare Copnceptual Landscape Plan
117	Perform Geotechnical investigations for Foundation des
118	Update Storm Water Data Report
119	Perform Initial Drainage Layouts
120	Submit 35% Plan set
121	Caltrans Review
122	Prepare UnChecked Bridge Plans
123	Prepare Complete Plan Set Package
124	Prepare Traffic Plans
125	Prepare Landscape Plans
126	Revise Highway Plans
127	Prepare Electrical Plans
128	Prepare Retaining and Sound Wall Plans
129	Revise Reports from 35% Submittal
130	Submit 65% Plan Set
131	Caltrans Review
132	Perform Bridge Independet Plan Chack
133	Revise Plans for 95% Submittal
134	Prepare Draft specifications
135	Prepare draft bid list ofr construction
136	Update Engineers Estimate for 95% PSE
137	Submit 95% PSE
138	Revise for Final Submittal
139	Final Submittal
140	**Construction Phase**



EA 46420
David Evans & Associates

Task		Milestone		External Tasks	
Split		Summary		External Milestone	
Progress		Project Summary		Deadline	