

AGREEMENT TO FURNISH ENGINEERING SERVICES

FOR

DESIGN OF CITRUS AVENUE AND ROOSEVELT
TRUNK SEWERS

This AGREEMENT is made and entered into as of this 21st day of February, 1989,

by and between City of Redlands Municipal
Utilities Department herein
after referred to as "OWNER"

and Krieger & Stewart, Inc.,
hereinafter referred to as
"ENGINEER"

In consideration of the mutual promises, covenants and conditions hereinafter set forth, the parties do hereby agree as follows:

ARTICLE 1 - ENGAGEMENT OF THE ENGINEER

- 1.1 The OWNER hereby engages the ENGINEER and the ENGINEER hereby accepts the engagement to perform Engineering services in connection with design of approximately 2700 feet of trunk sewer in Citrus Avenue, between Orange Street and Church Street and 2700 feet of trunk sewer in Roosevelt, between Ardmore Avenue and Fern, hereinafter called the Project.
- 1.2 All work under this AGREEMENT shall be done in a professional manner, and ENGINEER represents that he is skilled in the professional expertise necessary to provide high quality services under this AGREEMENT.
- 1.3 The ENGINEER shall be responsible, to the level of competency presently maintained by other practicing professional engineers performing the same type of work for the professional and technical soundness, accuracy and adequacy of all designs, drawings, specifications, and other work and materials furnished under this AGREEMENT.

ARTICLE 2 - SERVICES OF THE ENGINEER

- 2.1 The ENGINEER will perform the services in connection with the Project as defined in Attachment A, Scope of Work.
- 2.2 The following additional services may be provided by the ENGINEER when requested and approved by the OWNER:
 - 1. Construction survey
 - 2. Additional copies of plans and specifications
 - 3. Bidding Services
 - 4. Construction services
 - 5. Construction Inspection services
 - 6. Miscellaneous services not specified elsewhere in the AGREEMENT.

ARTICLE 3 - RESPONSIBILITIES OF THE OWNER

- 3.1 The OWNER will place at the disposal of the ENGINEER all available information pertinent to the Project, including previous reports and any other data relative to the Project.
- 3.2 The OWNER will provide access to and make all provisions for the ENGINEER to enter upon public and private lands as required for the ENGINEER to perform his work under this AGREEMENT.
- 3.3 The OWNER will provide an environmental assessments or impact reports required for this project.
- 3.4 The OWNER will designate in writing a person to act as the OWNER's representative with respect to the work to be performed under this Agreement, such person to have complete authority to transmit instructions, receive information, interpret and define the Owner's policies and decisions with respect to materials, equipment, elements and systems pertinent to the work covered by this AGREEMENT.

ARTICLE 4 - PERIOD OF SERVICE

- 4.1 The ENGINEER shall proceed with the engineering services set forth in Article 2 in accordance with the schedule defined in Attachment B.
- 4.2 The ENGINEER shall proceed with the services under this AGREEMENT promptly and will prosecute them diligently.

ARTICLE 5 - PAYMENTS TO THE CONSULTANT

- 5.1 For the services performed under Article 2, OWNER will pay the CONSULTANT on a time and materials basis at the hourly rates shown in Attachment C, Rate Schedule. The manhour estimates and total budgets are shown on Attachment D, Fee Proposal.
- 5.2 Payment for additional services requested by the OWNER per Article 2.2 will be in accordance with a separately negotiated fee or in accordance with the hourly fees shown in Attachment C, Rate Schedule.
- 5.3 CONSULTANT agrees that at the point 75-percent of budgeted costs have been expended for each scope project, the CONSULTANT will notify the OWNER in writing, including a brief report on job status, percent complete, analysis of budget, and envisioned expenses to complete the contractual effort. Budgets shall not be exceeded except if previously approved by OWNER.
- 5.4 The CONSULTANT shall bill the OWNER within ten days following the close of each month by submitting an invoice indicating the work performed, who performed the work, and the detailed cost of all work including backup material, if requested.

Payments by OWNER to CONSULTANT shall be made within 30 days after receipt and approval of CONSULTANT'S hereinabove invoice, by warrant payable to KRIEGER & STEWART, *Inc*

All notices, bills and payments shall be made in writing and may be given by personal delivery or by mail. Notices, bills and payments sent by mail should be addressed as follows:

TO OWNER:	CITY OF REDLANDS Municipal Utilities Department P. O. Box 3005 30 Cajon Street Redlands CA 92373
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TO CONSULTANT:	KRIEGER & STEWART, INC. 3602 University Avenue Riverside CA 92501 Attention: Mark Messersmith
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When so addressed, such notices shall be deemed given upon deposit in the United States Mail, In all other instances, notices, bills and payments shall be deemed given at the time of actual delivery. Changes may be made in the names and addresses of the person to whom notices, bills and payments are to be given by giving notice pursuant to this paragraph.

ARTICLE 6 - INSURANCE AND INDEMNIFICATION

- 6.1 ENGINEER shall maintain worker's compensation insurance and, in addition shall maintain insurance to protect OWNER from claims for damage due to bodily injury, personal injury, or death and claims for injury to or destruction of tangible property while performing the services covered by this AGREEMENT. Said public liability and property damage insurance shall be in a minimum combined single limit of \$1,000,000 per occurrence. The OWNER shall be named a primary additional insured on insurance coverage for public liability and property damage. The ENGINEER shall provide OWNER with a certificate evidencing such insurance coverage.
- 6.2 ENGINEER agrees to maintain professional liability insurance pursuant to this paragraph to protect OWNER from negligent acts, errors or omissions of a professional nature; the total aggregate of ENGINEER'S professional liability insurance coverage shall be a minimum of \$1,000,000.
- 6.3 ENGINEER agrees to indemnify, hold harmless and defend OWNER and any and all of their officers, agents and employees from and against all claims, loss, damage, charge or expense, to which they or any of them may be put or subjected to arising out of or resulting from any willful or negligent act or actions, omission or failure to act on the part of the ENGINEER, his contractors, his suppliers, anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable in the performance of the services described in this AGREEMENT.

ARTICLE 7 - GENERAL CONSIDERATIONS

- 7.1 In the event of any legal action brought by either party against the other to enforce any of the obligations hereunder or arising out of any dispute concerning the terms and conditions hereby created, the losing party shall pay the prevailing party such reasonable amounts for fees, costs, expenses, including attorney's fees, as may be set by the Court.
- 7.2 The ENGINEER shall not sublet or assign any of the work covered by this AGREEMENT, except with the prior written approval of the OWNER and in strict compliance with the terms, provisions, and conditions of the CONTRACT.

- 7.3 The key ENGINEER'S personnel proposed for this project are as follows:

Mark E. Messersmith - Project Manager
Michael Thornton - Project Engineer

ENGINEER agrees that these key people will be made available and assigned to the OWNER'S project, and that they will not be replaced without concurrence from the OWNER.

- 7.4 It is understood and agreed by and between the parties that all documents, records, drawings, designs and specifications, cost estimates, and other project documents developed by the ENGINEER pursuant to this AGREEMENT shall become the property of OWNER and shall be delivered to OWNER if and when requested upon completion of services. Any reuse of such documents for other projects and any use of incomplete documents will be at the OWNER's sole risk.
- 7.5 ENGINEER is for all purposes an independent contractor. All qualified personnel provided by ENGINEER pursuant to the provisions of this AGREEMENT are to be employed by ENGINEER for his account only, and in no event shall ENGINEER or any personnel retained by him be deemed to have been employed by the OWNER or engaged by the OWNER for the account of or on behalf of the OWNER.
- 7.6 Unless earlier terminated as stipulated below, this agreement shall terminate upon completion and acceptance by the OWNER of all work approved for performance under Article 2 of this AGREEMENT.
- 7.7 This AGREEMENT may be terminated in writing by either party in the event of failure by the other party to fulfill its obligations under this AGREEMENT through no fault of the terminating party: PROVIDING, that no such termination may be effected unless the other party is given (1) not less than thirty (30) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate, and (2) an opportunity for consultation with the terminating party prior to termination.
- 7.8 If this AGREEMENT is terminated by the OWNER for reasons of default by the ENGINEER, an adjustment to ENGINEER'S compensation shall be made, but (1) no amount shall be allowed for anticipated profit or unperformed services,

and (2) any payment due to the ENGINEER at the time of termination may be adjusted to the extent of any additional costs to the OWNER occasioned by the ENGINEER'S default. If termination for default is effected by the ENGINEER, the adjustment in compensation shall provide for payment to the ENGINEER to include a reasonable profit for services rendered and reimbursement for expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by the ENGINEER relating to commitments which had become firm and approved by OWNER prior to the termination.

- 7.9 Upon receipt of a termination notice, the ENGINEER shall (1) promptly discontinue all services affected (unless the notice directs otherwise), and (2) deliver or otherwise make available to the OWNER, copies of data, design calculations, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the ENGINEER in performing this AGREEMENT.
- 7.10 ENGINEER shall maintain books and accounts of all project related payroll costs and all expenses and incidental expense. Books shall be available at all reasonable times for examination by the OWNER at the office of the ENGINEER.
- 7.11 This AGREEMENT, including attachments incorporated herein by reference, represents the entire AGREEMENT and understanding between the parties and any negotiations, proposals or oral agreements are intended to be integrated herein and to be superseded by this written AGREEMENT. Any supplement or amendment to this AGREEMENT to be effective shall be in writing and signed by the OWNER and ENGINEER.
- 7.12 This AGREEMENT is to be governed by and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, duly authorized representatives of the parties have signed in confirmation of this AGREEMENT.

CITY OF REDLANDS

KRIEGER & STEWART, INC.

By

Carole Desautels
Mayor

By

M. J. McManus
Vice President

ATTEST

Sandra Pappas
City Clerk

Date

2/14/89

ATTACHMENT A

DETAILED SCOPE OF WORK

We propose to organize the work into the following components:

1. Initial Meeting with City Staff.
2. Record Search.
3. Alignment Study.
4. Design Survey (Horizontal and Vertical Control).
5. Base Construction Drawing Preparation.
6. Alignment Selection.
7. Preliminary Design Submittal and Alignment Review Meeting (50%) with City Staff.
8. Soils Investigation.
9. Utility Verification (Potholing).
10. Preliminary Construction Drawing and Specification Preparation.
11. Preliminary Construction Drawing and Specification Review Meeting (90%) with City Staff.
12. Construction Drawing and Specification Completion.

Each of the components is discussed in the following paragraphs:

1. Initial Meeting with City Staff

This meeting will be used to discuss the proposed facilities prior to initiating project design. We will obtain all City furnished materials at this meeting.

2. Record Search

The record search will consist of obtaining copies of all records of survey, tract maps, parcel maps, monument ties, bench mark data, and utility information. Utility information will include Atlas sheets from Southern California Gas Company, Southern California Edison Company, General Telephone, City of Redlands, cable TV, irrigation companies, and any other affected utilities.

3. Alignment Study

An alignment study will be provided for the Redlands Boulevard/Roosevelt trunk sewer. The alignment study will include a map of existing wastewater collection facilities, design criteria, drawings showing existing utilities, existing rights-of-way, proposed trunk sewer location for each alternative alignment considered, construction cost estimates and a recommended alignment alternative. Said alternative will be selected based on construction costs, construction conditions, and easement requirements.

4. Design Survey (Horizontal and Vertical Control)

Design Survey will consist of locating and measuring distances and elevations of existing survey monuments to provide centerline control. Thereafter, we will provide a topographic survey of the construction area to define existing improvements.

If coordinated monuments are available near the alignment, we will tie our survey to said coordinates to ensure horizontal closure. If coordinated monuments are not available, we will either complete a traverse, or, if sufficient record distances are available, compare our measured distances to record distances to ensure reasonable horizontal closure. The vertical control will be tied to existing benchmarks to ensure vertical closure.

Once the centerline control is established, all existing surface improvements within the existing right-of way (sidewalk, curb and gutter, driveways, sewer manholes, power poles, gate valves, fire hydrants, water meters, gas valves and vaults, Edison vaults, and telephone vaults) will be located by our survey crew.

Because of the traffic on Citrus Avenue, we propose to perform our design survey early mornings (6 a.m. to 10 a.m.) and will work weekends if necessary to avoid traffic and maintain project schedule.

5. Base Construction Drawings Preparation

Once the design survey is completed, the data will be plotted on standard City plan and profile sheets. The drawings will be prepared at a horizontal scale of 1 inch = 40 feet and a vertical scale of 1 inch = 4 feet.

Required signature blocks, utility data, property lines, public and private rights-of-way, street centerlines, and survey data will be added to complete the base construction drawings. Once the base construction drawings are completed, Project Manager and Project Engineer will field review construction area to insure all existing conditions are correctly represented.

At this time, a Krieger & Stewart Design Review Committee will review project components and conditions and provide comments regarding design criteria and critical design factors. Said committee will be composed of registered engineers who have areas of expertise pertinent to project details.

6. Alignment Selection

After completion of the base construction drawings, the preliminary alignment will be selected. Said alignment will be selected to maintain proper separation from existing and proposed waterlines, and separation from existing utilities or improvements to allow construction with minimum disruption of same. Providing adequate construction space and space for local traffic will also be considered in the alignment selection.

7. Preliminary Design Submittal and Alignment Review Meeting (50%) with City Staff

Upon completion of the preliminary alignment selection, we will arrange a preliminary design review meeting with City staff for review and approval of same. At this meeting, we will present our preliminary design submittal which will include design criteria, easement requirements, utility interferences (including those to be potholed), typical cross-sections, proposed type, size, and class of pipe (including bedding requirements), special appurtenances, special construction conditions, special permits required, and a preliminary construction cost estimate.

8. Soils Investigation

As discussed in Section II, the soils investigation will be performed by John R. Byerly, Incorporated. Approximately 6 test borings to an approximate depth of 3' to 4' below proposed sewer flow line are proposed. Said investigation will be used to determine excavation characteristics of the soil, safe trench side slopes, lateral load requirements for trench shoring, pipe bedding requirements, existing soil for use as backfill, presence of groundwater, and appropriate backfill compaction procedures.

9. Utility Verification (Potholing)

After the alignment has been reviewed and approved by City staff, critical utility interferences should be potholed for verification of utility data. For our proposal, we have assumed said potholes will be provided by City forces and our survey crew will field locate same with reference to the horizontal and vertical control.

10. Preliminary Construction Drawing and Specification Preparation

Based on the approved alignment and potholed utilities, the preliminary construction drawings and specifications will be prepared.

During profile design, hydraulic calculations will be performed to determine required pipe diameter for peak flows. The profile section of the drawings will show existing ground surface over the centerline of the sewer, flow line, top of sewer, flow line elevation at all manholes, flow line slope, utilities (with elevations of utilities potholed), maximum width of trench and required bedding factor for each reach of the sewer.

The preliminary draft specifications will include the bid schedule and special requirements. For our proposal, we have assumed the specifications will be similar to the specifications prepared for the Lugonia Avenue and San Bernardino Avenue Trunk Sewer project. The bid schedule will include quantity cost take-off and an engineer's cost estimate. Special Requirements will address working hours and days, completion schedule, permits, insurance requirements, construction water, traffic control, payment requests, and sequence of work for connections. Technical specifications will be provided for concrete, paving, and sewer.

11. Preliminary Construction Drawing and Specification Review Meeting (90%) With City Staff

Upon completion of the preliminary construction drawings and specifications, we will arrange a meeting with City staff to review and obtain approval and/or comments regarding same.

12. Construction Drawings and Specification Completion

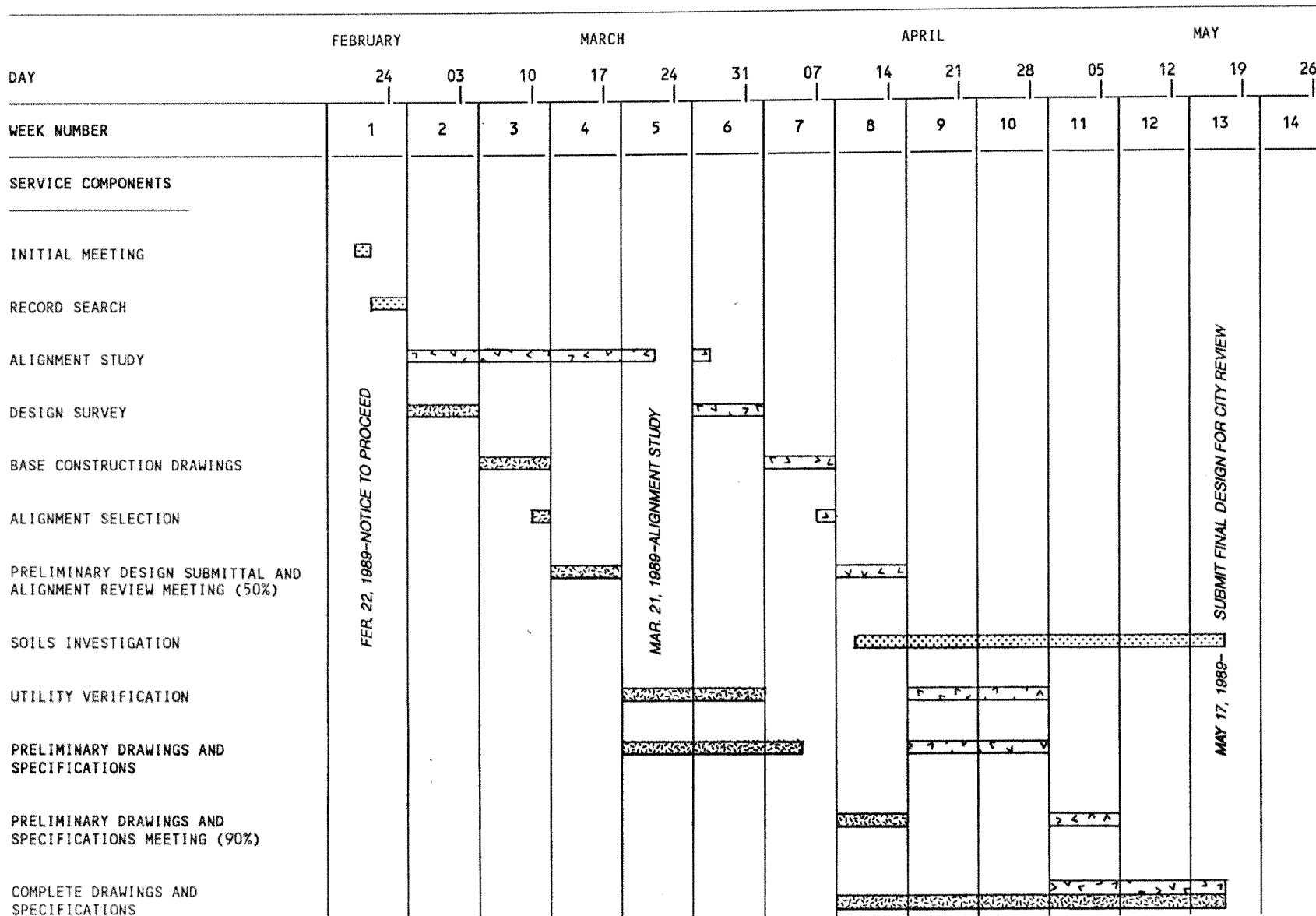
Based on City staff comments from the 90% design meeting, the final drawings, specifications, and cost estimate will be completed. We envision the project to consist of a title sheet, a construction note sheet, a detail sheet, 6 plan and profile sheets, and 2 traffic control plan sheets.

The note sheet will address pipe materials, tolerances, utilities, backfill and compaction requirements, traffic control, and street restoration requirements. The detail sheet will show connections to existing manholes including elevations, distances, construction notes, and construction material requirements. The traffic control plan will show required traffic signs, number and spacing of delineators, and construction sequence.

Once the construction drawings and specifications are approved by the City staff, we will furnish 25 sets of same for bidding purposes.

ATTACHMENT B
PROJECT SCHEDULE

1989

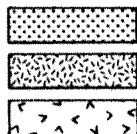


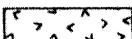
FEB. 22, 1989-NOTICE TO PROCEED

MAR. 21, 1989-ALIGNMENT STUDY

SUBMIT FINAL DESIGN FOR CITY REVIEW

MAY 17, 1989-



 CITRUS AVE. TRUNK SEWER & REDLANDS BLVD./ROOSERVELT TRUNK SEWER
 CITRUS AVE. TRUNK SEWER
 REDLANDS BLVD./ROOSERVELT TRUNK SEWER

ATTACHMENT C

FEE SCHEDULE
88/89

<u>CLASSIFICATION</u>	<u>RATES</u> \$/Hr.
<u>Engineering Services</u>	
Consulting Engineer	85.00
Principal Engineer	77.00
Senior Engineer	71.00
Staff Engineer	65.00
Associate Engineer	57.00
Assistant Engineer	50.00
Junior Engineer	44.00
Senior Designer	52.00
Staff Designer	48.00
Junior Designer	42.00
Senior Drafter	46.00
Staff Drafter	40.00
Junior Drafter	36.00
Senior Construction Inspector	38.00
Staff Construction Inspector	34.00
Junior Construction Inspector	30.00
Utility Technician	25.00
<u>Surveying Services</u>	
Principal Surveyor	71.00
Senior Surveyor	65.00
Staff Surveyor	58.00
Associate Surveyor	50.00
Survey Technician	40.00
3 Man Crew and Equipment	145.00
2 Man Crew and Equipment	116.00
1 Man Crew and Equipment	66.00
<u>Support Services</u>	
Senior Secretary	29.00
Staff Secretary	27.00
Junior Secretary	23.00
Utility Clerk	19.00
<u>Outside Services</u>	
Special Consultants and Purchased Services	Cost + 15%
<u>Reimbursable Expenses</u>	
Mileage	
Automobile and Truck (2WD)	0.35/Mile
Truck (4WD)	0.50/Mile
Subsistence, where applicable (Field Services)	Cost
Copies, prints, telephone, delivery charges	Cost

The above rates are subject to change on or about July 1 each year due to salary and cost increases.

A FINANCE CHARGE of one and one half percent (1-1/2%) per month (18% per year) will be added to any unpaid amount commencing thirty (30) days from date of invoice.

ATTACHMENT D

CITY OF REDLANDS

TRUNK SEWERS

ESTIMATED COST FOR ENGINEERING SERVICES

MEM = MARK E. MESSERSMITH	@	\$77.00/hr.
JCR = JON C. REYNOLDS	@	\$77.00/hr.
MPT = MICHAEL P. THORNTON	@	\$57.00/hr.
ASSISTANT ENGINEER	@	\$50.00/hr.
DRAFTER	@	\$40.00/hr.
CLERICAL	@	\$29.00/hr.
2-MAN SURVEY CREW	@	\$116.00/hr.

* ASSUMED TO BE PROVIDED BY CITY FORCES.