

AGREEMENT TO FURNISH ENGINEERING SERVICES
FOR

THE WABASH GROUNDWATER RECHARGE BASINS PROJECT

This AGREEMENT is made and entered into as of this 11th day of March, 1996, by and between

City of Redlands Municipal Utilities
Department, hereinafter referred to as
"OWNER"

and

Krieger & Stewart, 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 for design of the Wabash Groundwater Recharge Basins Project, hereinafter referred to as Project.
- 1.2 All services under this AGREEMENT shall be done in a professional manner, and the ENGINEER represents that the firm employs those with the demonstrated skill and 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 providing the same type of services, for the professional and technical soundness, accuracy and adequacy of all reports, designs, drawings, specifications, and other services and materials furnished under this AGREEMENT.

ARTICLE 2 - SERVICES OF THE ENGINEER

- 2.1 The ENGINEER shall perform the services required for the Project as defined in Attachment A, Scope of Work.
- 2.2 Additional services may be provided by the ENGINEER when requested and approved by the OWNER and agreed to by the ENGINEER.

ARTICLE 3 - RESPONSIBILITIES OF THE OWNER

- 3.1 The OWNER shall 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 shall 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 services under this AGREEMENT.
- 3.3 The OWNER shall provide all environmental assessments or impact reports required for this project and not otherwise specifically required to be provided by the ENGINEER.
- 3.4 The OWNER shall designate in writing a person to act as the OWNER'S representative with respect to the services 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 services 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: Schedule.
- 4.2 The ENGINEER shall proceed with the services under this AGREEMENT promptly and shall prosecute them diligently.

ARTICLE 5 - PAYMENTS TO THE ENGINEER

- 5.1 For the services performed under Article 2, Owner shall pay the ENGINEER on a time and materials basis at the hourly rates shown in Attachment D, Schedule of Rates, except as provided herein. The manhour estimates and total project budget are shown in Attachment C, Fee Proposal. The total amount of compensation for the Project shall not exceed the total shown in Attachment C, Fee Proposal, unless the scope of the Project is materially changed and agreed to by the Parties.
- 5.2 Payment for additional services requested by the OWNER per Article 2.2 shall be in accordance with a separately negotiated fee or in accordance with the hourly rates shown in Attachment D: Schedule of Rates.

- 5.3 ENGINEER agrees that at the point 75 percent of budgeted costs have been expended for the Project, the ENGINEER 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. The budget shall not be exceeded except if previously approved by OWNER.
- 5.4 The ENGINEER shall bill the OWNER within ten (10) days following the close of each month by submitting an invoice indicating the work performed, who performed the work, under which subtask in the Project budget the work was performed, indirect costs, and if requested, the detailed cost of all work including back-up documentation. Payments by OWNER to ENGINEER shall be made within 30 days after receipt and approval of ENGINEER'S invoice, by warrant payable to the ENGINEER.
- 5.5 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 shall be addressed as follows:

TO OWNER: Michael Huffstutler
Municipal Utilities Department
P.O. Box 3005
Redlands CA 92373

TO ENGINEER: Mark Messersmith, P.E.
Krieger & Stewart
3602 University Ave
Riverside CA 92501-3380

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, and in the aggregate. 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 elected officials, officers, agents, engineers, 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 misconduct 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 services 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 AGREEMENT.
- 7.3 The key ENGINEER'S personnel proposed for the Project are as follows:

Mark E. Messersmith - Principal in Charge
Patrick M. Watson - Project Manager

ENGINEER agrees that these key people shall be made available and assigned to the OWNER'S Project, and that they shall 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 upon completion of services. Any reuse of such documents for other projects and any use of incomplete documents shall be at the OWNER'S sole risk.

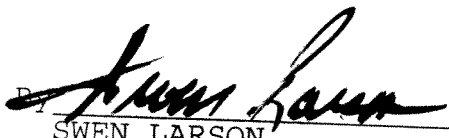
- 7.5 ENGINEER is for all purposes an independent contractor. All qualified personnel provided by ENGINEER pursuant to the provisions of this AGREEMENT are to be employed by ENGINEER for his account only, and in no event shall ENGINEER or any personnel retained by him be deemed to have been employed 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 services 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 services under 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.

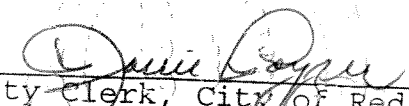
7.12 This AGREEMENT shall be governed by and construed in accordance with the laws of the State of California.

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

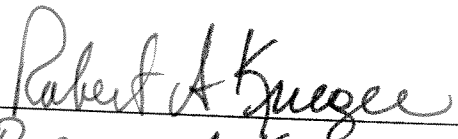
CITY OF REDLANDS


SWEN LARSON
Mayor

ATTEST:


City Clerk, City of Redlands

KRIEGER & STEWART

BY 
ROBERT A. KRIEGER
PRESIDENT

BY 
MARK G. MESSERSMITH
SECRETARY



SECTION III SCOPE OF SERVICES

We propose to organize our services into the following components:

- A. Initial Meeting with City Staff
- B. Records Search
- C. Design Survey (Horizontal and Vertical Control)
- D. Base Construction Drawing
- E. Preliminary Grading Plan
- F. Review Meeting (40%) with City Staff
- G. Compliance with Storm Water Pollution Control Requirements
- H. Construction Drawings and Specifications (100%)
- I. Review Meeting (100%) with City Staff
- J. Final Construction Drawings and Specifications

Each of the components are discussed in the following paragraphs:

A. Initial Meeting with City Staff

The project, including design criteria, will be discussed with City staff before Krieger & Stewart begins providing services. A detailed project schedule and contract document format will also be presented for City staff comments and/or approval. We will request that the City furnish us with applicable materials at this meeting, particularly City facility drawings.

B. Records Search

The records search will consist of obtaining copies of all assessor's maps, records of survey, tract maps, parcel maps, monument ties, benchmark data, and utility information which pertain to the project. Utility information will include atlas sheets from Southern California Gas Company, Southern California Edison Company, General Telephone, cable television companies, and other affected utilities.

C. Design Survey (Horizontal and Vertical Control)

We propose to use aerial photogrammetry for the project. The design survey will consist of locating existing property corners for the City's site and setting aerial targets at said property corners. If property corners do not exist, then we will set the aerial targets at the approximate property corners. We have assumed the City will provide a legal description for the site. Each target will be elevated and the vertical control will be tied to existing benchmarks to ensure vertical closure. In addition, all water valves, utility vaults, and other visible facilities will be painted for ease in photo identifying same.

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, again to ensure reasonable horizontal closure.

D. Base Construction Drawing

Aero Tech Surveys will provide Krieger & Stewart with aerial topographic data for the project site in a digital AutoCAD Version 13 format. The base construction drawing including aerial topography will be prepared on 24" x 36" mylar sheets with standard City title block at a horizontal scale of 1" equals 40' with 1' contours.

Required signature blocks, existing improvements (including pavement limits, curb, gutter, sidewalks, fences, landscaping, storm drains, mail boxes, and utilities), property lines, public and private rights-of-way, street centerlines, and survey data will be added to complete the base construction drawing. After the base construction drawing is completed, the project engineer will field review the project site to ensure that existing conditions are correctly represented.

When the base construction drawings are complete, 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 expertise pertinent to project details.

E. Preliminary Grading Plan

We will prepare the preliminary grading plan after completing the base construction drawing. The preliminary grading plan will include dimensions and elevations for each of the proposed percolation basins and berms, a typical section of the entire site, and preliminary earthwork calculations.

Based upon the preliminary design, orientation of the percolation basins, existing utilities, and location of the existing waterline in Wabash Avenue. The preliminary design of the pipeline to the basins will be completed.

F. Review Meeting (40%) with City Staff

We will arrange a review meeting with City staff to review the preliminary grading plan. Prior to the meeting, we will provide City staff with copies of preliminary drawings showing the proposed grading plan and supply pipeline. The purpose of this meeting will be to review and obtain comments and/or approval regarding the preliminary grading plan and supply pipeline. In addition, we will review possible utility interferences, system connections, required permits, and right-of-way requirements.

G. Compliance with Storm Water Pollution Control Requirements

Since the project involves more than five acres of ground surface disturbance, it is subject to the requirements of the State General NPDES Permit No. CAS000002 for Storm Water Discharges Associated With Construction Activity (Permit). In conformance with the requirements of said Permit we will prepare a Notice of Intent to Comply with the Terms of the General Permit (No. I) for submittal by the City to the State Water Resources Control Board (SWRCB) along with the standard \$250.00 fee; and a Storm Water Pollution Prevention Plan (SWPPP) and Storm Water Monitoring Program for implementation by the Contractor.

The SWPPP will include all elements required by the Permit, including a topographic map of the site vicinity and site map showing impacted areas, control practices and drainage courses; a list of potential storm water pollutants; runoff coefficients; and a description of erosion and sediment control practices and other Best Management Practices (BMP) to prevent and/or control pollutants of storm water runoff by construction activities.

H. Construction Drawings and Specifications (100%)

We anticipate that the construction drawings will consist of four sheets as follows:

1. Cover Sheet

The cover sheet will include project title, vicinity map, location map, signatures, general notes, and an index to sheets.

2. Construction Note Sheet

The construction note sheet will address permits, site preparation (including clearing and grubbing), excavation requirements, and embankment requirements including compaction requirements for berms.

3. Site Grading Plan

The site grading plan will consist of one sheet. The site grading plan will show all existing improvements and utilities (all based on survey data, record maps, and field reviews), adjacent street centerline control, topographic data, dimensions and elevations for the bottom of each of the basins, dimensions and elevations for each of the berms, slopes for each of the berms, connecting pipeline between basins, supply pipeline, site access, site fencing, and landscaping. It is our understanding that landscaping will consist of landscaping along Wabash Avenue with drip irrigation and hydroseeding of berms.

4. Detail Sheet

The detail sheet will consist of one sheet and will address connection to the existing water system, discharge outlet and splash pad, and section view of percolation basins.

The construction specifications will be prepared using the City's standard format. We will prepare bid sheets, special conditions, and provide any required technical specifications.

I. Review Meeting (100%) With City Staff

Upon completion of the construction drawings and specifications, we will arrange a meeting with City staff to review and obtain approval and/or comments regarding same. One week prior to said meeting, we will submit copies of the construction drawings, and specifications, and a preliminary construction cost estimate for City review. At this meeting we envision reviewing in detail with City staff all site grading, connection details, appurtenance details, construction sequence, and construction notes.

J. Final Construction Drawings and Specifications

Based on City staff comments from the 100% design review meeting, the final construction drawings and specifications will be completed and a detailed construction cost estimate will be prepared. Once the final construction drawings and specifications and cost estimate are completed, we will schedule a final project design meeting with City staff to present the completed documents. At the final meeting, we will furnish the City with the original (wet signed and stamped) construction drawing mylars, a computer disk copy of same, and a master set of specifications.

"ATTACHMENT B"

**TABLE V-1
CITY OF REDLANDS
PERCOLATION BASINS FOR GROUNDWATER RECHARGE
PROPOSED PROJECT SCHEDULE**

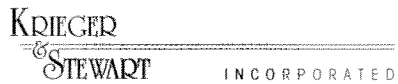
DAYS	0	10	20	30	40	50	60	70	80			
WEEK BEGINNING	3/4	3/11	3/18	3/25	4/1	4/8	4/15	4/22	4/29	5/6	5/13	5/20
<u>SERVICE COMPONENTS</u>												
INITIAL MEETING WITH CITY STAFF		■										
RECORDS SEARCH	■	■										
DESIGN SURVEY		■										
BASE CONSTRUCTION DRAWING				■	■							
PRELIMINARY GRADING PLAN					■	■						
CITY STAFF REVIEW (40%)							■					
STORMWATER POLLUTION PREVENTION PLAN							■	■				
CONSTRUCTION DRAWINGS & SPECIFICATIONS (100%)							■	■	■			
CITY STAFF REVIEW (100%)										■		
FINAL CONSTRUCTION DRAWINGS & SPECIFICATIONS											■	■

"ATTACHMENT C"

**TABLE I
CITY OF REDLANDS
PERCOLATION BASINS FOR GROUNDWATER RECHARGE
ESTIMATED FEES FOR ENGINEERING SERVICES**

COMPONENT	PRINCIPAL IN CHARGE		PROJECT MANAGER		STAFF ENGINEER		COMPUTER OPERATOR		CLERICAL		SURVEY PARTY		OUTSIDE SERVICES	TOTAL
	HOURS	\$	HOURS	\$	HOURS	\$	HOURS	\$	HOURS	\$	HOURS	\$	\$	\$
INITIAL MEETING WITH CITY STAFF	2	214	2	174										388
RECORDS SEARCH					12	792								792
DESIGN SURVEY			2	174	12	792					12	1,896		2,862
BASE CONSTRUCTION DRAWING			2	174	12	792	16	1,088					1,000 (1)	3,054
PRELIMINARY GRADING PLAN	4	428	8	696	24	1,584	16	1,088						3,796
REVIEW MEETING (40%) WITH CITY STAFF	2	214	2	174										388
STORMWATER POLLUTION PREVENTION PLAN			4	348	16	1,056	8	544	8	312				2,260
CONSTRUCTION DRAWINGS & SPECIFICATIONS (100%)	4	428	12	1,044	40	2,640	16	1,088	8	312			500 (2)	6,012
REVIEW MEETING (100%) WITH CITY STAFF	2	214	2	174										388
FINAL CONSTRUCTION DRAWINGS & SPECIFICATIONS	4	428	4	348	8	528	8	544	8	312				2,160
SUBTOTAL:	18	1,926	38	3,306	124	8,184	64	4,352	24	936	12	1,896	1,500	\$22,100
													REIMBURSABLES @ 5%:	\$1,105
PRINCIPAL IN CHARGE	@ \$107.00/HR													
PROJECT MANAGER	@ \$87.00/HR													
STAFF ENGINEER	@ \$66.00/HR													
COMPUTER OPERATOR	@ \$68.00/HR													
CLERICAL	@ \$39.00/HR													
SURVEY PARTY	@ \$158.00/HR													
													ENGINEERING SERVICES TOTAL:	\$23,205
													ENGINEERING SERVICES TOTAL (ROUNDED):	\$23,200

(1) AERO TECH SURVEYS
(2) RCB & SONS, INC.



**FEE SCHEDULE
95/96**

CLASSIFICATION	RATES \$/Hr.
Forensic Services (4 hr. minimum)	
Senior Expert Witness	
Testimony	200.00
Investigation	155.00
Associate Expert Witness	
Testimony	155.00
Investigation	130.00
Engineering Services	
Consulting Engineer	128.00
Principal Engineer	107.00
Senior Engineer	97.00
Associate Engineer	87.00
Staff Engineer I	77.00
Staff Engineer II	66.00
Staff Engineer III	56.00
Surveying Services	
Principal Surveyor	107.00
Senior Surveyor	97.00
Associate Surveyor	87.00
Staff Surveyor I	77.00
Staff Surveyor II	66.00
Staff Surveyor III	56.00
3 Man Crew with Survey Truck (including mileage) and Standard Equipment <u>or</u>	
2 Man Crew with Robotic Equipment	194.00
2 Man Crew with Survey Truck (including mileage) and Standard Equipment <u>or</u>	
1 Man Crew with Robotic Equipment	158.00
Geologic Services	
Principal Geologist	107.00
Senior Geologist	97.00
Associate Geologist	87.00
Staff Geologist I	77.00
Staff Geologist II	66.00
Staff Geologist III	56.00
Environmental Services	
Senior Specialist	87.00
Associate Specialist	77.00
Staff Specialist I	66.00
Staff Specialist II	56.00
Staff Specialist III	46.00

Automated Design Services

Operations Supervisor	
Chief Operator	70.00
Senior Operator	68.00
Staff Operator I	63.00
Staff Operator II	59.00
Staff Operator III	55.00
	51.00

Construction Services

Resident Engineer	
Senior Inspector	75.00
Staff Inspector I	53.00
Staff Inspector II	49.00
Staff Inspector III	45.00
	41.00

Support and Technical Services

Senior Secretary	
Staff Secretary I	39.00
Staff Secretary II	37.00
Staff Technician	35.00
Utility Technician	46.00
Utility Clerk	35.00
	29.00

Outside Services

Special Consultants and Purchased Services	Cost + 15%
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Reimbursable Expenses

Vehicle Mileage (excluding survey trucks)	0.35/Mile
Air Fare, Ground Fare, Parking, and Subsistence	Cost
Copies, Prints, Telephone, Delivery, and Sundry Charges	Cost

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

C5540/96-FEES

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