), K

1/30/98

PHASE II - STRATEGY PHASE

SCOPE OF WORK SUMMARY:

Produce necessary Plans, Specifications and Cost Estimate for the following bridges:

- 1. Rings Creek Road Bridge (Br. No. 36C-0064) -- See Note 1
- 2. Larkspur Street Bridge (Br. No. 36C-0068)
- 3. Either Way Bridge (Br. No. 36C-0073)
- 4. Soquel Drive @ Aptos Bridge (Br. No. 36C-0075)
- 5. Soquel Drive @ Soquel Bridge (Br. No. 36C-0078)
- 6. Irwin Way Bridge (Br. No. 36C-0083)
- 7. Aptos Overhead (Br. No. 36C-0114)
- 8. Valencia Creek Bridge (Br. No. 36C-0116)

T. Y. Lin International - Structural

Project Management

- Overall Management
- Team Meeting
- Startup/Estimate
- Reporting / Invoice

QA/QC

Perform Design

- Field Review (Exclude Material Testing for Existing Member Strength and Steel Corrosion)
- Prepare Un-Checked Details
- Perform Independent Check
- Prepare Checked Details
- Right of Way and Utility Coordination (Exclude Traffic Engineering and Detour Plans for Construction) -- See Note 2
- Prepare Specifications
- Prepare and Check Quantities
- Response to Review Comments / Finalize PS&E

Delineate Plans: For Structural Work Only.

Others: Word Processing, etc.

ATTACHMENT No. 1

32 ne lof 6



Ayres Associates -- Hydrology and Hydraulics

- Preliminary Degradation Reports: For seven bridges (Excluding Two Bar Road Bridge and Aptos Overhead).
- Seismic Retrofit Hydraulic Impact: For Soquel Drive @ Aptos Bridge and Valencia Creek Bridge.

Geotechnical Consultants, Inc. -- Geotechnical Engineering

- Site Reconnaissance
- Subsurface Exploration and Laboratory Testing: At abutments of all bridges. See Note 3
- Engineering Analysis: Soquel Drive @ Aptos Creek Bridge and Valencia Road Bridge.
- Final Soil Reports for all bridges.
- Review and Consultation

Robert L. DeWitt and Associates, Inc. -- Survey and Right of Way

- Part A: Site Survey and Right of Way Investigation
- Part B (As Needed): Exhibit Map and Legal Descriptions.

Kleinfelder, Inc. -- Biological Assessment and Wetlands Delineation

- Biological Assessment: For Soquel Drive at Aptos Bridge and Valencia Creek Bridge.
- Wetlands Delineation: For Soquel Drive at Aptos Bridge Only.

Notes:

1. Santa Cruz County (or other firm retained by the County) will regularly perform necessary material testing and inspection of the existing pontoon and other steel members to verify that the extent of the steel corrosion does not adversely effect the live load rating of the bridge. T. Y. Lin International's seismic retrofit of the existing bridge will be based on the full cross sections of all existing steel members unless noted otherwise in writing by the Santa Cruz County.

page 3 of 69
227

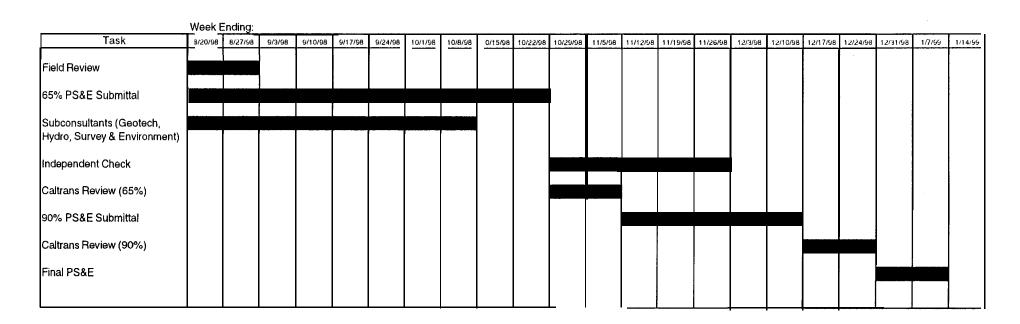
- 2. Santa Cruz County considers partial or **full** closure of the bridge during construction acceptable; therefore, the need of performing traffic engineering design for temporary detour is eliminated.
- 3. Excludes services related to identification, verification, testing and/or remedial measures of contaminated soils and hazardous waste on or near the bridge sites. It is assumed that Santa Cruz County will take full charge of these issues.





Santa Cruz County Seismic Retrofit Project PS&E Schedule

T.Y. Lin International



County of Santa Cruz Seismic Retrofit Design Program

T. Y. Lin International Team

Summary of Costs (Rev. 27/11/98)

PS&E Phase

| | County | Structural | Geotech* | Hydrolics/Hydrology* | Survey/Civil* | Environmental* | |
|-----------------------|-----------------|--------------|-------------|----------------------|---------------|----------------|--------------|
| Bridge Name | Bridge Number | TYLI | GTC | AYRES | ROBERT DEWITT | KLEINFELDER | Subtotal |
| Kings Creek Road | 43026-BR.0.6 | \$35,512.52 | \$7,093.84 | \$2,737.00 | \$12,096.30 | \$0.00 | \$57,439.66 |
| Larkspur Street | 43018-BR.0.2 | \$31,870.44 | \$7,093.84 | \$2,737.00 | \$10,181.30 | \$0.00 | \$51,882.58 |
| Either Way Lane | 42030-BR.0.1 | \$33,958.55 | \$7,093.84 | \$2,737.00 | \$10,181.30 | \$0.00 | \$53,970.69 |
| Soquel Drive @ Aptos | 02416-BR.5.9 | \$104,176.55 | \$11,393.70 | \$13,865.00 | \$12,504.06 | \$7,892.00 | \$149,831.31 |
| Soquel Drive @ Soquel | 02416-BR.2.5 | \$34,030.87 | \$7,506.88 | \$2,737.00 | \$9,893.18 | \$0.00 | \$54,167.93 |
| Irwin Way | 43030-BR.0.2 | \$38,623.79 | \$7,093.84 | \$2,737.00 | \$10,681.37 | \$0.00 | \$59,136.00 |
| Aptos Overhead | 02510-BR.0.8 | \$35,171.83 | \$7,093.84 | \$0.00 | \$8,208.41 | \$0.00 | \$50,474.08 |
| Valencia Road | 02503-BR.2.7 | \$47,684.07 | \$12,864.56 | \$13,865.00 | \$11,260.92 | \$3,792.00 | \$89,466.55 |
| | Labor Total | \$361,028.62 | \$67,234.34 | \$41,415.00 | \$85,006.84 | \$11,684.00 | \$566,368.80 |
| | Direct Expenses | \$4,767.50 | \$25,325.00 | \$4,210.00 | \$1,225.00 | \$477.00 | \$36,004.50 |
| | Subtotal | \$365,796.12 | \$92,559.34 | \$45,625.00 | \$86,231.84 | \$12,161.00 | \$602,373.30 |

Notes:

TOTAL

\$602,373.30

ge 5 of 69

() ()

^{*} Refer to Fee-and-Scope Proposal from Sub-Consultant for Details.



County of Santa Cruz Seismic Retrofit Design Program T. Y. Lin International

230

Fee Schedule (Applicable through 12/31/98)

(Rev. 2, 7/1/98)

| - | | T | | 1 |
|-------------------|---------|----------|---------|----------|
| | HOURLY | OVERHEAD | PROFIT | LOADED |
| NAME | RATE | 161.94% | 10% | RATE |
| Tom Ho | \$44.23 | \$71.63 | \$11.59 | \$127.44 |
| Rafael Manzanarez | \$56.25 | \$91.09 | \$14.73 | \$162.08 |
| Dennis Jang | \$44.23 | \$71.63 | \$11.59 | \$127.44 |
| Nhan Vo | \$29.62 | \$47.97 | \$7.76 | \$85.35 |
| John Chan | \$38.75 | \$62.75 | \$10.15 | \$111.65 |
| Mark Chen | \$37.28 | \$60.37 | \$9.77 | \$107.42 |
| Stephen Gee | \$31.97 | \$51.77 | \$8.37 | \$92.12 |
| Alex Sanjines | \$29.90 | \$48.42 | \$7.83 | \$86.15 |
| Chung-Hao Lee | \$29.57 | \$47.89 | \$7.75 | \$85.20 |
| Jian Ren Tao | \$28.70 | \$46.48 | \$7.52 | \$82.69 |
| Alex Lee | \$26.78 | \$43.37 | \$7.01 | \$77.16 |
| Ruchen Xu | \$21.20 | \$34.33 | \$5.55 | \$61.08 |
| King Bor Tam | \$25.75 | \$41.70 | \$6.74 | \$74.19 |
| Ann Lee | \$24.96 | \$40.42 | \$6.54 | \$71.92 |
| Amanda Barbante | \$19.47 | \$31.53 | \$5.10 | \$56.10 |
| Joe Tai | \$19.24 | \$31.16 | \$5.04 | \$55.44 |
| Perry Schacht | \$36.35 | \$58.87 | \$9.52 | \$104.74 |
| Roya Golchoobian | \$31.37 | \$50.80 | \$8.22 | \$90.39 |
| James Orie | \$32.92 | \$53.31 | \$8.62 | \$94.85 |
| Steven Drahota | \$24.36 | \$39.45 | \$6.38 | \$70.19 |
| Gregory Morris | \$16.54 | \$26.78 | \$4.33 | \$47.66 |
| Oscar Colcol | \$22.00 | \$35.63 | \$5.76 | \$63.39 |
| Andres Toledo | \$22.36 | \$36.21 | \$5.86 | \$64.43 |

| | COMPANY: T Y Lin International | Bridge Name | | | | | - | | PS&E F | Phase | | | | | | | | | | | Date: | | 21-Jul-98 | |
|------------------|---|------------------------------|-------------|---------------------|---------------|---|--------------|-------------|---|-----------------|-----------|-----------------|----------------|------------|-------------|--------------|----------------|-----------|-------------------|------------------|---------------|---|------------------------|---|
| | Contract No | Bridge No | | | | | | | | | | | | | | | | | | | tart Date | - | 20-Aug-98 13.Jan-99 | |
| | Labor | | | | | | | | | | , | | | 1 | ı | 1 | 1 | | 1 | | | | | ı |
| * Subtask Number | Description | E E E | ъ Тот Но | σ Rafael Manzanarez | O Dennis Jang | O Gene Bougdanos | □ John Chan | O Mark Chen | C Stephen Gee | O Alex Sanjines | O Nhan Vo | O Chung-Hao Lee | O Jian Ren Tao | O Alex Lee | O Ruchun Xu | Q √oe Tai | т King Bor Tam | m Ann Lee | п Amanda Barbante | | Total Hours | | Total Cost by Subtask | |
| | | | | | | | | | | | | | | | | | | | | **** | | | | ı |
| 1 | Project Management | | 1 | | | | | | | | | | | | | L | | | | | | | | ı |
| | a. Overall Management | Hrs | 0 | 0 | 20 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | lo 10 | | 0 | 0_1 | 0 | 0 | <u>.</u> | ∭ [| 28 | | \$3,408.16 | ı |
| | b. Team Meetings c. Startup/Estimates | Hrs | 0 | 0 | 66 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 92 | | \$11,203.98 | 1 |
| | | Hrs | | 0 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ▓ | 10 | | \$1,234.37 | 1 |
| | d. Reports/Invoice | Hrs | 0 | 0 | 26 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 28 | | \$3,528.32 | ı |
| | Sub-total #1 | Hrs | 0 | 0 | 120 | 0 | 0 | 38 | 0 | 0_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 158 | | \$19,374.82 | i |
| 2 | QA/QC | | | | | | | | | | | <u> </u> | | L | | | | | 1 | | | | | ł |
| | a. Reviews | Hrs | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 32 | | \$5,186.41 | į |
| | Sub-total #2 | Hrs | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 32 | | \$5,186.41 | 1 |
| 3 | Perform Design | | | | | | | | | | | | | | | | | 1 | 1 | | | | | ĺ |
| | a. Field Review | Hrs | 2 | 0 | 16 | 0 | 0 | 8 | 6 | 8 | 18 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | | 66 | | \$6,580.87 | l |
| | b. Prepare Un-Checked Details | Hrs | 2 | 0 | 50 | 0 | 0 | 236 | 240 | 120 | 230 | 20 | 0 | 20 | 170 | 0 | 0 | 0 | 0 | ₩ | 1088 | | \$97,684.46 | l |
| | c. Perform Independent Check | Hrs | 1 | 0 | 12 | 0 | 0 | 0 | 70 | 160 | 100 | 230 | 0 | 140 | 50 | 0 | 0 | 0 | 0 | ₩ | 763 | | \$63.876.97 | ł |
| | d. Prepare Checked Details | Hrs | 2 | 0 | 30 | 0 | 0 | 70 | 84 | 40 | 70 | 0 | 0 | 8 | 40 | 0 | 0 | 0 | 0 | ▓╊ | 344 | | \$31,815.99 | ĺ |
| | e. R/W and Utility Coordination | Hrs | 1 | 0 | 62 | 0 | 0 | 48 | 0 | 40 | 16 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | **** | 171 | | \$18,305.07 | l |
| | f. Prepare Specifications | Hrs | 76 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | [| 94 | | \$11,979.52 | ĺ |
| | g. Prepare and Check Quantities h. Response to Review Comments Final PS | Hrs Hrs | 16 | 0 | 21 | 0 | 0 | 22 | 60 | 32 | 44 | 32 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | ₩ | 231 | | \$21,348.17 | l |
| | Sub-total #3 | Hrs | 100 | 0 | 49 258 | 0 | 0 | 32 416 | 0 460 | 20 420 | 36 514 | 286 | 0 | 196 | 260 | 0 | 0 | 0 | 0 | ₩ | 153 | | \$16,516.50 | i |
| 4 | Delineate Plans | | 1.00 | | 200 | | _ <u></u> | -410 | 400 | 420 | 314 | 200 | | 196 | 200 | 0 | 0 | 0 | 0 | ∰ | 2910 | | \$268,107.53 | ı |
| | a. Drafting | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 570 | 350 | 0 | ₩. | 920 | | \$67,462.25 | i |
| | Sub-total #4 | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 570 | 350 | 0 | ₩. | 920 | | \$67,462.25 | į |
| 5 | Other | | | | | | | | | | | | | | | | | | | [| | | | |
| | a. Word Processing/Spreadsheets/Filing. Sub-total #5 | Hrs Unc. | 0 | 0 | 0 | 0 | 0_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 0 | 0 | 1 0 | 16 | | 16 | | \$897.60 | |
| - | Sub-total #3 | HINC. | . u | U I | 0 1 | 0 | 0 | 0 | D | 0 | 0 | 0 | 0 — | | - - | | | | 16 | | 16 | | \$897.60 | |
| | - | 1 | 1 | | | | | | | | } | | 1 | | | 1 | | | | **** | —— | | | |
| | | | } | | | | | | | | | | | | | | | | | ## | | | | 1 |
| | | | | | | | | | *************************************** | **** | | | | ********* | | *********** | | | | ### | | | | ĺ |
| Section Control | Total Hours by Employee | | 100 | 32 | 378 | 0 | 0 | 454 | 460 | 420 | 514 | 286 | 0 | 196 | 260 | 0 | 570 | 350 | 16 | | 4036 | | | - |
| | Loaded Hourly Rate | T | L 407 44 | 400.00 | 407.44 | | | | | | | | | | | | | , | | | | | | ĺ |
| | Loaded Hoully Rate | | 127.44 | 162.08 | 127.44 | 600000000000 | 111.65 | 107.42 | 92.12 | 86.15 | 85 35 | 85.20 | 82 69 | 77.16 | 61.08 | 55.44 | 74.19 | 71.92 | 56.10 | | | | | r |
| | Total Labor Cost | | | | pro100000000 | *************************************** | 000444440000 | | | | | | | | | . | | | ···· | | ************* | | \$361 028 62 | Λ |
| | | | | , | | | -:- | | | | | | | _ | | | | | | | | _ | 3.51,028.52 | ĺ |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Project Manager | _ | | E= | | Technic | | | | - | | | = | | | | | | | | | | 1 |
| | - | QA/QC | _ | | F= | | Adminis | stration | | | _ | | | J≔ | | | | | | | | | - | 1 |
| | | Project Engineer Engineer | _ | | G= H= | | | | | | - | | | K= L≕ | | | | | | | | | | l |
| |] - | - II SIII GGI | _ | | | | | | | | - | | | | | | | | | | | | • | L |
| | · | | | | | | | | | | | | | | | | | | | | | | | * |

%

83

FILENAME:PS&EFEE(post audit)

න ?ව

COMPANY:

T.Y. Lin International

Contract No.

| Date: | 21-Jul-98 | |
|-------------|-----------|--|
| Start Date: | 20.Aug.98 | |
| Finish Date | 13-Jan-99 | |

| Travel | | | | |
|---------------|-------|------|-------|-----------|
| Туре | units | Unit | cost | Cost |
| Mileage | 2,500 | \$ | 0315 | 8787.50 |
| Meals | 60 | \$ | 1200 | \$720 00 |
| Lodging | 12 | \$ | 80.00 | \$960 OG |
| Parking/Tolls | 4 | \$ | 50 00 | \$200.00 |
| Total Travel | | | | \$2667.50 |

| Other Direct Costs | | | |
|--------------------------|------------|-------|------------|
| Description | Unit Cost | Units | Cost |
| Copies | \$0.40 | 3000 | \$1,200.00 |
| Fax | \$300.00 | 1 | \$300.00 |
| Mail . | \$15.00 | 40 | \$600.00 |
| | | | |
| Total Other Direct Costs | \$2,100.00 | | |

| Subconsultants | |
|-------------------------------|--------------|
| Name | Cost |
| Ayres Associates | \$45,625.00 |
| Bob DeWitt & Associates, Inc. | \$86,231.84 |
| GTC, Inc. | \$92,559.34 |
| Environmental | \$12,161.00 |
| Total Subconsultant Costs | \$236,577.18 |

| Total Cost | |
|-------------------|--------------|
| Labor | \$361,028.62 |
| Travel | \$2,667.50 |
| Other Direct Cost | \$2,100.00 |
| Subconsultants | \$236,577.18 |
| Total Cost | \$602,373.30 |

| | COMPANY: T Y Lin International | Bridge Name | Kings C | reek Ro | ad | | | PS&E P | hase | | | | | | | | | | | Date: | - | 21-Jul-98 |
|------------------|--|--|------------------|---------------------|------------------|----------------------|--------------|---------------|-----------------|-----------|-----------------|----------------|----------------------|---|----------|---|---|-------------------|------------|-------------------|-----------|--|
| | Contract No. | Bridge No.' | 42026 B | D 0 6 | | | | | | | | | | | | | | | c | Start Date | | 20-Aug-98 |
| | Contract No | Briage No. | 43026-B | DR.U.0 | | | | | | | | | | | | | | | | inish Date | _ | 13-Jan-99 |
| | Labor | | | | | | | | | | | | | | | | | | • • • | man Dat | Ĭ | 15 0411 00 |
| # Subtask Number | Description | e E E E E E E E E E E E E E E E E E E E | V Tom Ho | υ Rafael Manzanarez | O Dennis Jang | O John Chan | □ Mark Chen | ☐ Stephen Gee | □ Alex Sanjines | U Nhan Vo | □ Chung-Hao Lee | U Jian Ren Tao | O Alex Lee | O Ruchun Xu | ⊡Joe Tai | m King Bor Tam | .m.Ann Lee | ா Amanda Barbante | = - | Total Hours | | Total Cost by Subtask |
| - 1 | Project Management | | 1 | | | | | | | | | | | | | | | | - | | | |
| | a. Overall Management b. Team Meetings c. Startup/Estimates d. Reports/Invoice | Hrs Hrs Hrs Hrs | | | 2 8 1 3 | | 1 3 | | | | | | | | | | | | <u>-</u> | 3 11 1 3 | | \$362.30 \$1,341.78 \$127.44 \$382.33 |
| | Sub-total #1 | Hrs | 0 | 0 | 14 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 18 | | \$2,213.85 |
| 2 | QA/QC | 1,7.2 | | 1 | | | | | | | | | | | | | | |] | | | |
| | a Reviews | Hrs | | 4 | | | | | | | | | | | | | | | | 4 | | \$648.30 |
| | Sub-total #2 | Hrs | 0 | 4 | 0 | ø | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _ | 4 | | \$648.30 |
| 3 | Perform Design | | ļ | | | <u> </u> | | | _ | | | | | | | | | | - | <u> </u> | | A750 50 |
| | a. Field Review | Hrs | | 1 | 2 | | | | _ | 4 | | | 2 | | | | | | _ | 8 | | \$750.59 |
| | b. Prepare Un-Checked Details | Hrs | | | 2 | | | | | 100 | 20 | | | | | | | | - | 122 | | \$10,493.44 |
| ļ | c. Perform Independent Check | Hrs | | | | | | | | | | | 70 | | | | ļ ··- | | - | 70 | | \$5,401.36 |
| | d. Prepare Checked Details | Hrs | | | 2 | <u> </u> | | | _ | 20 | ļ | | | | | | | | - | 22 8 | | \$1,961.79 \$1,019.53 |
| | e. R/W and Utility Coordination | Hrs | 8 | | 8 2 | | | | <u> </u> | | | | | | | | | | - | 10 | | \$1,274.42 |
| <u> </u> | f. Prepare Specifications | Hrs Hrs | | - | 4 | | | | | 8 | | | 8 | | | | | - | - | 20 | | \$1,809.83 |
| <u> </u> | g. Prepare and Check Quantities h. Response to Review Comments Final PS& | Hre | 2 | - | 12 | | | | | 16 | | | - | | | | | | - | 30 | | \$3,149.71 |
| | Sub-total #3 | Hrs | 10 | 0 | 32 | 0 | 0 | 0 | 0 | 148 | 20 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | - | 290 | | \$25,860.66 |
| 4 | Delineate Plans | 7113 | 10 | | 32 | | | | | 140 | 1 | | | , . | | | 1 | | + | | | <u> </u> |
| | a.Drafting | Hrs | | | | | | | | | | | | | | 90 | | | 1 | 90 | | \$6,677.51 |
| | Sub-total #4 | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | 0 | | 90 | | \$6,677.51 |
| 5 | Other | | | | | | | | | | | | | | | | | | | | | |
| | a. Word Processing/Spreadsheets/Filing | | | | | | | | l | | | | | | | | | 2 | | 2 | | \$112.20 |
| | Sub-total #5 | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | 2 | | \$112.20 |
| | | | ļ | | | | | | | | <u> </u> | | | <u> </u> | <u> </u> | ļ | 1 | | - | | | |
| | | | | | | ļ | | | | | ļ <u> </u> | ├ ── | <u> </u> | ļ | | | ļ | | - | ├ | | |
| ************ | | | | | | | ~ | <u> </u> | | | | | |] ************************************ | 1 | <u> </u> | | <u> </u> | ا | | | |
| | | | 40 | 4 | 40 | • | | 0 | 0 | 148 | 20 | 0 | 80 | 0 | 0 | 90 | 0 | 2 | 4 | 404 | ŀ | |
| | Total Hours by Employee | | 10 | 4 | 46 | 0 | 4 | 0 | , U | 140 | 1 20 | 0 | 00 | 0 | | 30 | | 1 2 | _ | | <u> </u> | |
| | Landad Haurly Data | I I | 127.44 | 162.00 | 127.44 | 111 65 | 107.42 | 92.12 | 86.15 | 85.35 | 85.20 | 82.69 | 77.16 | 61,08 | 55.44 | 7/ 10 | 71.92 | 56.10 | ٦ | | | |
| | Loaded Hourly Rate | <u> </u> | 121.44 | 102.08 | 127.44 | 111.00 | 107.42 | 32.12 | 1 00.10 | 1 60.30 | 1 65.20 | 02.03 | 1 //.10 | 1 01.06 | J 33.44 | 1 1-113 | 1,1.34 | 33.10 | ₩ | | | |
| | Total Labor Cost | | 20200000000000 | | | | | | | <u></u> | | ************ | .00.000000000 | | <u> </u> | 200000000000000000000000000000000000000 | (0.000000000000000000000000000000000000 | | 2000000000 | 200020000000 | 200220022 | \$35,512.52 |
| E000000000 | 1 Otal Eabor Cost | | | | | | | | | | | | | | | - | | | | | | 700,012.02 |
| | Function Codes: A= B= c= D= | Project Manager QA/QC Project Engineer Engineer | - - - - | | | Technici Administ | | | | - | | | I= J= K= L= | | | | | | | | | |

ge 9 of 69

| (| C | ٥ |
|---|---|---|
| | • | • |

| COMPANY: | T Y. Lin International | Bridge | Name | Larkspur | Street |
|----------|------------------------|--------|------|----------|--------|
| | | | | | |

PS&E Phase

| Date: | 21-Jul-98 |
|-------|-----------|
| | |

Contract No

Total Labor Cost

Bridge No. 4301%BR.0.2

Start Date Finish Date 20-Aug-98 13-Jan-99

Labor Cost by Subtask afael Manzanarez Amanda Barbante Subtask Number hung-Hao Lee Ren Tao Bor Tam Nex Sanjines Gee Description Chen Total Hours Chan Ruchun Xu ja John (gui ota ā Ď D D D D D # Function Α В С D D D 1 Project Management 3 \$362.30 a, Overall Management Hrs 2 11 \$1.341.78 b. Team Meetings Hrs 8 3 \$127,44 1 c. Startup/Estimates Hrs 3 \$382.33 3 d. Reports/Invoice Hrs \$2,213,85 0 18 Sub-total #1 0 0 0 0 0 0 0 0 0 Hrs 0 0 14 0 4 0 2 QA/QC \$648.30 a Reviews Hrs 4 4 \$648.30 Sub-total #2 Hrs 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 4 3 Perform Design \$921.28 2 6 2 10 a. Field Review Hrs 2 60 20 82 \$6,597.29 b. Prepare Un-Checked Details Hrs 70 70 \$5,401,36 c. Perform Independent Check Hrs 2 30 32 \$2,815.24 d. Prepare Checked Details Hrs 8 16 \$1,702.30 8 e. R/W and Utility Coordination Hrs 10 \$1,274.42 8 2 Prepare Specifications Hrs 12 26 \$2,204.97 2 12 g. Prepare and Check Quantities Hrs 20 \$2,043.68 h. Response to Review Comments -- Final PS& 6 12 Hrs 84 20 0 0 0 0 266 \$22,960.53 Sub-total #3 Hrs 10 0 24 0 0 0 0 128 0 0 4 Delineate Plans 80 \$5,935.56 80 a. Drafting Hrs 80 \$5,935.56 0 0 0 ō 80 0 0 Sub-total #4 Hrs 0 0 0 0 0 0 0 0 0 5 Other a. Word Processing/Spreadsheets/Filing 2 2 \$112.20 2 \$112.20 2 Sub-total #5 Hrs 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 370 10 4 38 0 0 128 0 0 84 20 0 80 0 2 Total Hours by Employee 55.44 74.19 71.92 56.10 Loaded Hourly Rate 127.44 162.08 127.44 111.65 107.42 92.12 86.15 85.35 85.20 82.69 77.16 61.08

| Function Codes: | A= | Project Manager | E= Technician | l= | |
|-----------------|----|------------------|--------------------|----|----------|
| | B= | QA/QC | F = Administration | J= | _ |
| | c= | Project Engineer | G= | K= | <u> </u> |
| | D= | Engineer | H= | L= | |
| | | | | • | |

7296

1 at 6

\$31,870,44

| | COMPANY: T.Y. Lin International | Bridge Name | Either V | Vay Lane | e | | | PS&E P | hase | | | | | | | | | | | Date: | _ | 21-Jul-98 |
|------------------|--|---|----------------|--|---------------|---------------------------------------|--|---------------|-----------------|------------|-----------------|----------------|------------|-------------|--|----------------|--|-------------------|----------|--|------------------|--------------------------|
| | Contract No | Bridge No. | 42030-B | R.0.1 | | | | | | | | | | | | | | | | Start Date: | | 20-Aug-98 |
| | Labor | | | | | | | | | | | | | | | | | | F | inish Date | , г | 13-Jan-99 |
| # Subtask Number | Description | Ë E Z Function | V Tom Ho | ω Rafael Manzanarez | O Dennis Jang | U John Chan | O Mark Chen | O Stephen Gee | O Alex Sanjines | U Nhan Vo | O Chung-Hao Lee | U Jian Ren Tao | □ Alex Lee | O Ruchun Xu | O Joe Tai | m King Bor Tam | п Апп Lee | ா Amanda Barbante | | Total Hours | E | Total Cost by Subtask |
| | | | | | | | | | | | | | | | | | | | | | | |
| | Project Management | | | | <u> </u> | | | | | | | | | | | | | | - | | ## - | |
| | a. Overall Management | Hrs | | | 2 | | 1 | | | | | | | | | | | | - | 3 | ₩ - | \$362.30 |
| | b. Team Meetings | Hrs | 1 | 1 | 8 | | 3 | | 1 | - | | | | | | | | | - | 11 | ###H | \$1,341.78 \$127.44 |
| | c. Startup/Estimates | Hrs | | 1 | 3 | ! | - | - | - | | | | | | 1 | | | | - | 3 | ****** - | \$382.33 |
| | d. Reports/Invoice | Hrs | n | 0 | 14 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 18 | - | \$2,213.85 |
| | QA/QC | 513 ~ | <u> </u> | , | | • | ~ | 111 | | | • | | | • | | | 1 | _ | - | '' | ₩ | ΨZ,Σ13,03 |
| | a. Reviews | Hrs | + | 4 | | | | | | | | | | | | | 1 | | 1 | 4 | ‱} − | \$648.30 |
| | Sub-total #2 | Hrs | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ┪ | 4 | } | \$648.30 |
| 3 | Perform Design | 1 | Ť | | Ť | · · · · · · · · · · · · · · · · · · · | | Ť | † Ť | | Ť | <u> </u> | | | <u></u> | Ť | Ť | Ť | 1 | | <i></i> ₩ | |
| | a. FieldReview | Hrs | ĺ | i | 2 | | | 1 | 1 | 8 | | | | | 1 | 1 | | 1 | │ | 10 | ***** | ₹03.7., .65 |
| | b. Prepare Un-Checked Details | Hrs | | | 2 | | | | | 70 | | | | 30 | | | | | | 102 | ### | \$8,061.59 |
| | c. Perform Independent Check | Hrs | | | | | | | | | 70 | | | | | | | | | 70 | | \$5,964.09 |
| | d. Prepare Checked Details | Hrs | | i | 6 | | | | | 20 | | | | | | | | | | 26 | <i></i> ∭∏ | \$2,471.56 |
| | e. R/W and Utility Coordination | Hrs | | | 8 | | | | | 8 | | | | | | | | | | 16 | ∭∏ | \$1,702.30 |
| | f. Prepare Specifications | Hrs | 8 | | 2 | | | | | | | | | | | | | | | 10 | L | \$1,274.42 |
| | g. Prepare and Check Quantities | Hrs | | | 2 | | | | | 12 | 8 | | L | | | | | | _ | 22 | ‱L | \$1,960.64 |
| | h. Response to Review Comments Final PS& | Hrs | 2 | | 2 | | | | | 8 | | | | | | | | | - ‱ | 12 | L | \$1,192.53 |
| | Sub-total #3 | Hrs | 10 | 0 | 24 | 0 | 0 | 0 | 0 | 126 | 78 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | - | 268 | ### | \$23,564.75 |
| | Delineate Plans | | - | | ļ | | | | | | | | | | | 400 | | | - | J | | |
| | a. Drafting | Hrs | ļ <u>.</u> _ | | - | | <u> </u> | | | ļ <u>.</u> | | | | | <u> </u> | 100 | | | - ‱ | 100 | <i>.</i> | \$7,419.45 \$7,419.45 |
| | Sub-total #4 | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | - | 100 | <i>.</i> | \$7,419.45 |
| | Other a. Word Processing/Spreadsheets/Filing | | - | ļ | - | | | <u> </u> | | | | | | | ļ | | | 2 | - | 2 | <i></i> ₩₩⊦ | \$112.20 |
| | Sub-total #5 | H r s | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | O | 0 | 0 | 0 | 0 | 0 2 | - | 2 | <i></i> ₩₩+ | \$112,20 |
| | ous-total #0 | " | ' | Ť | 1 | 1 | 1 | Ĭ | <u> </u> | Ĭ | <u> </u> | Ī | | | ľ | ` | ľ | Ť | - | | - | V112.20 |
| | | | | | 1 | | 1 | | | | | | | 1 | | | | | - | | <i></i> | |
| | | | 1 | | 1 | | , | 1 | | | | | | | — | | † | | | | <i>-</i> | |
| | | | | | | | | | | | | | | | | | | | | | <u></u> | |
| | Total Hours by Employee | | 10 | 4 | 38 | 0 | 4 | 0 | 0 | 126 | 78 | 0 | 0 | 30 | 0 | 100 | 0 | 2 | | 392 | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | Loaded Hourly Rate | | 127.44 | 162.08 | 127.44 | 111.65 | 107.42 | 92.12 | 86.15 | 85.35 | 85.20 | 82.69 | 77.16 | 61.08 | 55.44 | 74.19 | 71.92 | 56.10 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | Total Labor Cost | | | | | | | | | | | | | | | | | | | | | \$33,958.55 |
| | _ | Project Manager | | | | Technic | | | | _ | | | l= | | | | | | | | · | |
| | - | QA/QC | _ | | | dminist | ration | | | _ | | | J= K- | | | | | | | | | |
| | | Project Engineer | _ | | G≂ H≈ | | | | | - | | | K= L= | | | | | | | | | |
| | υ= | Engineer | _ | | T | | | | | _ | | | L= | | | | | | | | | , |
| | | | | | | | | | | | | | | | | | | | | | | |





rage 11

| w |
|----------|
| 3 |

COMPANY:

T Y Lin International

Bridge Name Soquel Drive @ Aptos

PS&E Phase

| Date: | 21-Jul-98 |
|-------------|-----------|
| Stort Date: | 20 Aug 99 |

contract NO

Bridge No: 02416-BR.5.9

13-Jan-99 Finish Date

| | Labor | | | | | | | | | | | | | | | | | | | | _ | |
|--|--|---|-------------|---|------------------------------------|-------------------|---------------------------|---------------|-----------------|--------------|---------------------------------------|----------------|---------------------|-------------|--------------|----------------|--------------|---|----------|---|----------------------|-----------------------|
| # Subtask Number | Description | E E E Function | A Tom Ho | το Rafael Manzanarez | റ Dennis Jang | □ John Chan | □ Mark Chen | O Stephen Gee | □ Alex Sanjines | O Nhan Vo | □ Chung-Hao Lee | ט Jian Ren Tao | □ Alex Lee | O Ruchun Xu | ⊖ Joe Tai | m King Bor Tam | т Алп Lee | ா Amanda Barbante | | Total Hours | | Total Cost by Subtask |
| - | | | | | | | | | | | | | 1 | | | | | i | | | | |
| 1 | Project Management | | | | | | | | | | ļ | | | | | | | | | | | , |
| <u> </u> | a. Overall Management | Hrs | | | 6 | | 1 | | | | | | | | | | | | | 7 | | \$872.07 |
| | b. Team Meetings | Hrs | + | | 14 | | 5 | | | | | | | | | | | | | 19 | | \$2,321.27 |
| | c. Startup/Estimates | Hrs | - | | 1 | | 1 | - | | | 1 | | <u> </u> | | | | | | | 2 | | \$234.86 |
| | d. Reports/Invoice | Hrs | - | | 5 | | - | | | | | - | | | | - | | | - | 6 | € | \$744.62 |
| | Sub-total #1 | Hrs | 0 | 0 | 26 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 34 | ₩₩ | \$4,172.81 |
| | QA/QC | nis | | | 26 | | | U | - | | U | | - | - | - | | , · | - | - | 34 | ₩₩ | ₽4,172.01 |
| - | a. Reviews | Hrs | - | 4 | | | ļ | | | | | | | | | | | | - | 4 | ₩₩ | \$648.30 |
| L | | | 1 - | | | | | | | | — | _ | | _ | | | | | - | 4 | - | \$648,30 |
| | Sub-total #2 | Hrs | 0 | 4 | 0 | 0_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 4 | ₩₩ | \$648.30 |
| 3 | Perform Design | | | | | | | | | ļ | | | | | | | | ļ | | | | |
| | a. Field Review | Hrs | 2 | | 6 | | 4 | 4 | | | 4 | | | | | | | | | 20 | | \$2,158.47 |
| | b. Prepare Un-Checked Details | Hrs | | | 20 | | 160 | 120 | | | | | | 80 | | | | | | 380 | | \$35,676.18 |
| | c. Perform Independent Check | Hrs | | | | | | | | | 160 | | | 20 | | | | | | 180 | | \$14,853.88 |
| | d. Prepare Checked Details | Hrs | | | 8 | | 40 | 40 | | | | | | 20 | | | | | | 108 | | \$10,222.53 |
| | e. R/W and Utility Coordination | Hrs | | | 8 | | 36 | | 20 | | | | | | | | | | | 64 | | \$6,609.56 |
| | f. Prepare Specifications | Hrs | 16 | | 3 | | | | | | | | | | | | | | | 19 | | \$2,421.39 |
| | g. Prepare and Check Quantities | Hrs | | | 6 | | 8 | 30 | | | 24 | | | | | Ì | | | 7 | 68 | Г | \$6,432.30 |
| | h. Response to Review Comments Final PS& | Hrs | 2 | | 16 | | - 8 | | | | | | | | | | | | 1 | 26 | | \$3,153.28 |
| | Sub-total #3 | Hrs | 20 | 0 | 67 | 0 | 256 | 194 | 20 | 0 | 188 | 0 | 0 | 120 | 0 | 0 | 0 | 0 | | 865 | | \$81,527.60 |
| 4 | Delineate Plans | | | | | | | | | | | | | | | | | | | : | | |
| | a Drafting | HE | | | | | | | | 1 | | | | | | 200 | 40 | | | 240 | | \$17,715.63 |
| | Sub-total #4 | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 40 | 0 | 1 | 240 | | \$17,715,63 |
| 5 | Other | | | | | _ | | | | | | | | | | | | | | | | |
| | a Word Processing/Spreadsheets/filing | | | | | - | | | - | | · · · · · · · · · · · · · · · · · · · | | | | | | | 2 | | 2 | | \$112.200 |
| | Sub-total #5 | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | 2 | | \$112.20 |
| | 0.0.00.00.00.00 | | 1 | | Ť | | | <u> </u> | | | 1 | | | | | <u> </u> | | | ┪ | | | |
| | | | | | | | l | <u> </u> | i | | † | | | | | | | | 1 | / | | |
| | | | + | | | | - | - | | | | | 1 | | | | | | ₩ | - | | |
| :00000000 | | <u> </u> | | l :::::::::::::::::::::::::::::::::::: | | | | | | | | | | | | . | | | . | | | |
| ********* | Total Hours by Employee | ΙΙ | 20 | 4 | 93 | 0 | 264 | 194 | 20 | 0 | 188 | 0 | 0 | 120 | 0 | 200 | 40 | 2 | 1 | 1145 | 1 | |
| 2000000000 | | | | | | 990000000000 | 204 | 134 | | | 1 100 | | | 120 | ************ | 200 | *********** | | J. | *************************************** | <u> </u> | |
| | I and add I and a Data | I I | 127.44 | 460.00 | 140744 | 444.05 | 107.40 | 92.12 | T 06 45 | 85.35 | 85.20 | 82.69 | 77.16 | 61.08 | 55.44 | 74.40 | 71.92 | EC 10 | 1 | | | |
| | Loaded Hourly Rate | | 127.44 | 162.08 | 127.44 | 111.65 | 107.42 | 92.12 | 86.15 | 85.35 | | | 17.16 | 61.08 | 55.44 | 74.19 | 11.92 | 56.10 | J | | | |
| | | | | | | | | | | | | ********* | | | | 4,600,000,000 | | 466000000000000000000000000000000000000 | | ******* | <u>*************</u> | 8484 477 77 |
| | Total Labor Cost | | | | | | | | | | | | | | | | | | | | | \$104,176.55 |
| | | | | | | | | | | | | | | | | | | | | | | |
| | Function Codes: A= B= C= D= | Project Manager cwc?c Project Engineer Engineer | - - - | | E= ⁻ F = G≌ H= | Fechnici Admir | i an nistration | | | - - - | | | ≔ J= K= L= | | | | | | | | <u> </u> | |
| | | · | | | | | | | | | | | | | | | | | | | _ | |

| · · · · · · · · · · · · · · · · · · · | Bridge Name: | | | | | | | | | | | | | | | | | | Date: | 21-Jul-98 |
|--|---|---|--|--|--|---|--|---|--|--|--|--|--|---|--|--|--|--|--|--|
| Contract No | Bridge No.: | 02416-B | R.2.5 | | | | | | | | | | | | | | | St | art Date: | 20-Aug-98 |
| | | | | | | | | | | | | | | | | | | | | 13-Jan-99 |
| Labor | | , , | | | | | | | | | | | | | | | | 00000000 | Esso. | |
| Description | Name | Tom Ho | Rafael Manzanarez | Dennis Jang | John Chan | Mark Chen | Stephen Gee | Alex Sanjines | Nhan Vo | Chung-Hao Lee | Jian Ren Tao | Alex Lee | Ruchun Xu | Joe Tai | King Bor Tam | Ann Lee | Amanda Barbante | L | Total Hours | Total Cost by Subtask |
| | Function | A | В | | U | <u> </u> | | U | _ U | | U | U | لستسم | | | _= | ┝╌┩ | - | ₩ | <u> </u> |
| Project Management | + | + | 1 | | | | | | | | | | , | | 1 | | | ₩ | | ₩—— |
| | Hrs | ┼──┤ | | - | - | 1 | | | | | | \vdash | \vdash | \vdash | — | | | ₩H | 3 | \$362.30 |
| | | | \vdash | | | | | | | | | | / - | $\vdash \!$ | | | | /////// | 2000 | \$832.02 |
| | | | | | | الت | | | | \vdash | | \vdash | $\overline{}$ | | - | ····· | | - | | \$127.44 |
| | | | | | | l | ļl | \vdash | \vdash | | | | | | | | | | | \$382.33 |
| | | <u> </u> | | | 0 | | ├ ~ | | | $\vdash \uparrow$ | | | | 0 | | | | - | | \$1,704.08 |
| | - nrs | ' | | 10 | | | | | | | | | | | | - | ├ ` | / | -'7- | \$1,704.00 |
| | 1100 | | \vdash | | | | ├ ── | - | \vdash | ' | | <u> </u> | ············· | | | | | / | | \$648.30 |
| | | | 1 | | <u> </u> | · | | 1-2- | | <u> </u> | | | <u> </u> | ─ ~ | <u> </u> | - | ڵڝؚڵ | | | ****** |
| | Hrs | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | U | 0 | ₩₩ - | 4 | \$648.30 |
| | | | $oxed{oxed}$ | لــــــا | لــــــا | ' | ļ! | | | | ļ | <u> </u> | | | | <u> </u> | ļ' | ₩ | | ——— |
| | | | \perp | | لــــــا | | | | | - | | | | <u> </u> | | ļ | <u> </u> | | | \$399.07 |
| b. Prepare Un-Checked Details | Hrs | 1 | | 6 | | 16 | 50 | L | | | | | <u> </u> | | | ' | L | | | \$7,216.58 |
| c. Perform Independent Check | Hrs | | | | L_J | | | 80 | | | | | | | | | | | | \$6,892.17 |
| d. Prepare Checked Details | Hrs | 1 | | | | 10 | 20 | | | | | | | | | | L' | | | \$3,043.93 |
| e. R/W and Utility Coordination | Hrs | | | 8 | | 8 | | | | | | | | | | | | J | 16 | \$1,878.86 |
| f. Prepare Specifications | Hrs | 8 | | 2 | | | | | | | | | | | | | | J | 10 | \$1,274.42 |
| g. Prepare and Check Quantities | Hrs | | | 2 | | 2 | 10 | 8 | | | | [| | | | | | | 22 | \$2,080.10 |
| h. Response to Review Comments Final PS& | Hrs | 2 | | 6 | | 12 | | | , | | | | | | | | | <u> </u> | 20 | \$2,308.53 |
| Sub-total #3 | Hrs | 12 | 0 | 24 | 0 | 50 | 82 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ₩₩ҍ | 256 | \$25,093.65 |
| | | 1 | | | | | | | | | | | | 1 | | | | | | *** |
| | Hrs | | | | ļ | | | | | | 1 | | | 1 | | 90 | | | 90 | \$6,472.64 |
| | | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | | 90 | \$6,472.64 |
| | + | + | | <u> </u> | - | | — <u> </u> | | | _ _ _ | _ <u>-</u> | | | | | | | | | *************************************** |
| | + | + | + | | \vdash | | | | \vdash | | | | | <u> </u> | | | 2 | t H | 2 | \$112.20 |
| | Hre | | 1 | <u> </u> | 1 | 0 | 0 | - | | 0 | 0 | | | | 10 | 0 | | | | \$112.20 |
| Sub-total #0 | Пэ | + | + - | _ - | | <u> </u> | _ | | - | | | ' | | | — — | — | ' | | - | *************************************** |
| | | + | + | $\vdash \vdash \vdash$ | \vdash | | | \vdash | | + | | | | + | + | — | t | | | *** |
| | + | + | | | \vdash | | | | | | | | | + | + | | | ₩₩ | ——₩ | |
| | | | | 50000000000 | | <u> </u> | 1 | | 1 | <u> </u> | <u> </u> | <u> </u> | | <u> </u> | <u> </u> | <u> </u> | <u> </u> | ₩, | | <u> </u> |
| Total University Employee | | T 42 | | 24 | | 20000000000000000000000000000000000000 | | 00 | | 20000000000000000000000000000000000000 | | | | | | I an | | ı | 366 T | |
| Total nours by Employee | | 12 | | 54 | | 54 | 62 | 66 | | | _ U | l U | | | | 1 30 | | <u> </u> | 300 | |
| | <u></u> | | 1.00 | 1 487 | *************************************** | 40- :- | A | | 7 05 05 | 45.00 | T | ********** | | 7 55 11 | 74.10 | 74.00 | T 50 10 | | | |
| *************************************** | | 127.44 | 162.08 | 127.44 | 111.65 | 107.42 | 92.12 | 86.15 | 85.35 | 85.20 | 1 82.69 | 1 (1.16 | 61.08 | 1 55.44 | /4.19 | 1 /1.92 | J 56.10 | 1 | | |
| | | | | | | <u> </u> | | | <u> </u> | | | | <u> </u> | | | <u> </u> | <u> </u> | | <u> </u> | |
| Total Labor Cost | | | | | | | | | | | | | | | | | | | | \$34,030.87 |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Function Codes: A= P | roject Manager | | | E= T | echnicia | an | | | | | | = | | | | | | | | |
| _ | CWQC | - | | _ | dministr | | | | • | | | J= | • | | | | | | | _ |
| - | Project Engineer | - | | G= | | | | | | | | K= | • | | | | | | | _ |
| | | | | | | | | | | | | | | | | | | | | |
| | | - | | _ | | | | | = | | | 1 - | | | | | | | | |
| | Engineer | - - | | H= | | | | | | | | L= | | | | | | | | _ |
| | Project Management a Overall Management b Team Meetings c Startup/Estimates d Reports/Invoice Sub-total #1 QA/QC a Reviews Sub-total #2 Perform Design a Field Review b Prepare Un-Checked Details c Perform Independent Check d Prepare Checked Details e. R/W and Utility Coordination f Prepare Specifications g Prepare and Check Quantities h. Response to Review Comments Final PS& Sub-total #3 Delineate Plans a. Drafting Sub-total #4 Other a. Word Processing/Spreadsheets/Filing Sub-total #5 Total Hours by Employee Loaded Hourly Rate | Project Management a Overall Management b Team Meetings c Startup/Estimates d Reports/Invoice | Labor Project Management | Project Management Project | Project Management Project | Labor Project Management Prunction A B C D | Project Management Project | Project Management Project Manager Project Manager Project Management Project Manager Project Manager | Project Management | Project Management Project | Project Management | Project Management Hrs 2 1 1 1 1 1 1 1 1 1 | Project Management Project | Project Management | Project Management | Project Management Project | ## Project Management Function A B C D D D D D D D D D | Project Management Her Project Management Project Management Project Management Her Project Management Proj | ## Project Management Projec | ## Project Management Projec |

හ හ FILENAME: PS&EFEE(post audit)



| | COMPANY: T Y Lin International | Bridge Name | irwin Wa | ay | | | | PS&E P | hase | | | | | | | | | | | Date: | _ | 21-Jul-98 |
|------------------|--|-------------------------|-------------------|---------------------|---------------|--|-------------|---------------|--|--|--|----------------|--|--------------|--------------|--|---|-------------------|-------|---|-------|---|
| | Occupant No. | Deidas N. | 42020 B | B 0.0 | | | | | | | | | | | | | | | | Start Date | •• | 20-Aug-98 |
| | Contract No | Bridge No.: | 43030-D | rk.v.z | | | | | | | | | | | | | | | | inish Da | _ | 13-Jan-99 |
| | Labor | | | | | | | | | | | | | | | | | | • | iiiioii Du | _ | 10 0411 00 |
| # Subtask Number | Description | e E N Function | ▶ Tom Ho | ω Rafael Manzanarez | ဂ Dennis Jang | U John Chan | □ Mark Chen | □ Stephen Gee | O Alex Sanjines | U Nhan Vo | ⊖ Chung-Hao Lee | ⊖ Jian Ren Tao | O Alex Lee | O Ruchun Xu | O Joe Tai | m King Bor Tam | т Апп Lee | न Amanda Barbante | | Total Hours | | Total Cost by Subtask |
| | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | | | | | | ļ | | | | <u> </u> | | | | ļ | - | } | - | |
| | Project Management | | | | | | | | | | | | | ļ | ļ | | ļ | | - | <u> </u> | | #202.20 |
| | a. Overall Management | Hrs | | | 2 | | 1 | | ļ | <u> </u> | | | | | | | | ļ | - | 3 | - | \$362.30 |
| | b. Team Meetings | Hrs | | | 8 | | 3 | | | | | | | | | | | | - | 11 | - | \$1,341.78 |
| | c. Startup/Estimates | Hrs | | | 1 | | | · | | ļ <u>.</u> | | | - | | ļ | | | | - | 1 | - | \$127.44 |
| | d. Reports/Invoice | Hrs | | | 3 | | | | | | | | | | | | | - | - | 3 | - | \$382.33 |
| | Sub-total #1 | Hrs | 0 | 0 | 14 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 18 | - | \$2,213.85 |
| | QA/QC | - | | | | | | | ļ | | | <u></u> | ļ <u>.</u> | | | l | - | - | - | 4 | - | \$648.30 |
| | a. Reviews | Hrs | | 4 | | | | | | <u> </u> | | | | | | | | 0 | - | 4 | | \$648.30 |
| | Sub-total #2 | Hrs | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | · · · | - | 4 | - | \$648.30 |
| | Perform Design | | | | | | | | ! | | ļ | | ļ | | | | | 1 | - | | - | \$469.72 |
| | a. Field Review | Hrs | | | 2 | | 2 | | | | | | ļ | | | | | | - | 4 | | |
| | b. Prepare Un-Checked Details | Hrs | | | 2 | | 60 | | | | | | ļ <u>.</u> | 40 | | | | | - | 102 | - | \$9,143.24 |
| | c. Perform Independent Check | Hrs | | | 12 | | | 70 | | ļ | | | | | | | | ļ | - | 82 | -1888 | \$7,977.45 |
| | d. Prepare Checked Details | Hrs | | | 2 | | 20 | | | ļ | <u> </u> | | | 20 | - | ļ | ļ | | - | 42 12 | - | \$3,624.90 \$1,449.20 |
| | e. R/W and Utility Coordination | Hrs | | ļ | 8 | | 4 | | | | <u> </u> | | - | | | | | | - | 10 | - | \$1,274.42 |
| | f. Prepare Specifications | Hrs | 8 | | 2 | | | | ļ | | | ļ | - | | | - | 1 | ļ | - | 25 | - | \$2,592.49 |
| | g. Prepare and Check Quantities | Hrs | | ļ | 3 | | 12 | 10 | | | <u> </u> | | | <u> </u> | ļ | | | | - | | - | \$1,926.20 |
| | h. Response to Review Comments Final PS& | Hrs | 2 | | 3 | | 12 | | | | | | — | - 00 | <u> </u> | | | | -1888 | 17 | - | \$28,457.61 |
| | Sub-total #3 | Hrs | 10 | 0 | 34 | 0 | 110 | 80 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | - ‱ | 294 | - | \$20,407.01 |
| 4 | Delineate Plans | 11 | | | ļ | | | | | | | | - | | | | 100 | - | - ‱ | 100 | - | \$7,191.82 |
| | a. Drafting Sub-total #4 | Hrs Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | - ‱ | 100 | - | \$7,191.82 |
| | Other | nrs | - | | | | | | - | - | - | - | - · · - | - | - | | 100 | | - | 100 | - | ψ1,131.UZ |
| | a. Word Processing/Spreadsheets/Filing | | | | | | | | | - | | | | | | | | 2 | - | 2 | ┨ | \$112.20 |
| | a. Word Processing/Spreadsheets/Filling Sub-total #5 | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | - | 2 | ┨ | \$112.20 |
| | Sub-total #0 | 1115 | <u> </u> | | | | | | | | ····· | | Ť | Ť | <u> </u> | | | - | - | - | ┪ | *************************************** |
| | | | | + | | | | | | | | | | | | | | | - ‱ | | - ‱ | |
| | | | | | | | | | | | | | 1 | | | | <u> </u> | | - ‱ | 1 | ┨ | |
| ******** | I | _1 | I ************ | | 1 | 1 | | | | | | | | | | 1 | | | _ | | | |
| 2000000000 | Total Hours by Employee | T | 10 | 4 | 48 | 0 | 114 | 80 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 100 | 2 | ٦ | 418 | ٦ | |
| 3000000000 | Total Hours by Employee | | ********* | *********** | | *********** | | ********** | ********* | | | | | ************ | | | | | | | | |
| | Loaded Hourly Rate | | 127.44 | 162.08 | 127.44 | 111.65 | 107.42 | 92.12 | 86.15 | 85.35 | 85.20 | 82.69 | 77.16 | 61.08 | 55.44 | 74.19 | 71.92 | 56.10 | 7 | | | |
| | | | | 1 | | | | | <u> </u> | | | | <u> </u> | | | | *************************************** | | | | | |
| | Total Labor Cost | | <u> </u> | <u></u> | *********** | <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u> | | | | | <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u> | | ······· | | | ********** | ******* | ************ | | 000000000000000000000000000000000000000 | | \$38,623.79 |
| 00000000000 | , 500, 2000, 5000 | | | | | | | | | | | | | | - | | | | | | | ,, |
| | | | | | | | | | | | | | | | | | | | | | | |
| | Function Codes: A= | Project Manager | | | F= 7 | Technici | an | | | | | | l= | | | | | | | | | |
| | | QA/QC | - | | | dminist | | | | - | | | .= J= | | | | | | | | | |
| | - | Project Engineer | - | | G= | | | | | _ | | | K= | | | | | | | | | |
| | | Engineer | - | | H= | | | | | - | | | L= | | | | | | | | | |
| | <u>-</u> | g | - | | - • | | | | | - | | | - | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |

| COMPANY: T Y Lin International | Bridge Name: | Aptos O | verhead | 1 | - | | PS&E P | nase | | | | | | | | | | | Date: | _ | 21-Jul-98 |
|---|------------------|--|---------------------|---------------|-------------|--|----------------------|-----------------|--|---|--|------------|-------------|--------------|----------------|---|--|-----|----------------|--------------------|------------------------|
| Contract No | Bridge No.: | 02510- B | R.0.8 | | - | | | | | | | | | | | | | | tart Date | _ | 20-Aug-98 13-Jan-99 |
| Labor | | | | | | | | | | | | | | | | | | F1 | nish Date | _ | 13-Jan-9 |
| Description | e E R | > Tom Ho | ω Rafael Manzanarez | O Dennis Jang | U John Chan | □ Mark Chen | □ Stephen Gee | □ Alex Sanjines | □ Nhan Vo | ⊖ Chung-Hao Lee | ر Jian Ren Tao | O Alex Lee | O Ruchun Xu | U Joe Tai | m King Bor Tam | m Ann Lee | ո Amanda Barbante | | Total Hours | | Total Cost by Subtask |
| | Tunction | - ^- | +- | | | | | | | | | | | - | - | | | ┪ | | ₩ | |
| Project Management | | | | | | l | | | | \Box | | | | | | | | 7 | | **** | |
| a. Overall Management | Hrs | | | 2 | | 1. | | | | | | | | | | | | | 3 | ***** _ | \$362.30 |
| b. Team Meetings | Hrs | | | 8 | | 3 | | | | | | | | | | | | | 11 | | \$1,341.78 |
| c. Startup/Estimates | Hrs | | | 1 | | 1 | | | | | | | | | | | ļ | _ | 2 | _ | \$234.86 |
| d. Reports/Invoice | Hrs | L | | 3 | | 1 | | | <u> </u> | | | | - | | | | ļ <u>.</u> | - | 4 | | \$489.74 |
| Sub-total #1 | Hrs | 0 | 0 | 14 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 20 | | \$2,428.6 |
| QA/QC | | | | | + | | | | | | | | - | | ļ | ļ | | - | 4 | - | \$648.30 |
| a. Reviews | Hrs | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 4 | | \$648.30 |
| Sub-total #2 | Hrs | | 4 | | + | | - | | | - | | | | - | - 0 | | + - | - | _ | | 4070.30 |
| Perform Design | Hrs | | | 2 | | + | | 4 | | | | | | | | - | | - | 6 | | \$599.49 |
| a. Field Review b. Prepare Un-Checked Details | Hrs | | + | 8 | + | | 70 | + | | | | 20 | | - | | | | - | 98 | | \$9,010.9 |
| c. Perform Independent Check | Hrs | | | 1 | | + | -70 | 80 | | | | 20 | 1 | | <u> </u> | - | | - | 80 | - T | \$6,892.1 |
| d. Prepare Checked Details | Hrs | | † | 2 | + | | 24 | | ļ — | | | 8 | | | | | | Τ‱ | 34 | | \$3,082.9 |
| e. R/W and Utility Coordination | Hrs | | † | 8 | | 1 | | | | | | 4 | | | | | 1 | 7 | 12 | | \$1,328.1 |
| f. Prepare Specifications | Hrs | 8 | | 2 | 1 | | | | | | | | | | | | | | 10 | <u> </u> | \$1,274.4 |
| g. Prepare and Check Quantities | Hrs | | | 2 | | | 10 | 8 | | | L | | L | | | | | _ | 20 | | \$1,865.2 |
| h. Response to Review Comments Final PS& | Hrs | 2 | | 2 | <u> </u> | ļ | | <u> </u> | ļ | <u> </u> | | | | | <u> </u> | | | - | 4 | | \$509.77 |
| Sub-total #3 | Hrs | 10 | 0 | 26 | 0 | 0 | 104 | 92 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | - | 264 | - | \$24,563.1 |
| Delineate Plans | | | | | | - | | — | - | | ļ | ļ | - | ļ | 100 | | | - ‱ | 100 | | \$7,419.4 |
| a. Drafting | Hrs | | | | | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | - | 100 | | \$7,419.4 |
| Sub-total #4 Other | Hrs | 0 | 0 | 0 | 0 | 0 | 1 0 | 0 | ļ <u>U</u> | | U | - U | 1 | 1 | 100 | U | - 0 | - | 100 | ₩# | 37,413.4 |
| a. Word Processing/Spreadsheets/Filing | Hrs | | + | + | + | | | | | | | <u> </u> | | | | | 2 | - | 2 | | \$112.20 |
| a. Word i rocessing opicad sheets inng | Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | 2 | | \$112.20 |
| | | | <u> </u> | <u> </u> | <u> </u> | <u> </u> | | | | | | | | | | | | } | | l t | |
| Total Hours by Employee | | 10 | 4 | 40 | 0 | 6 | 104 | 92 | 0 | 0 | 0_ | 32 | 0 | 0 | 100 | 0 | 2 | ٦ | 390 | 1 | |
| Loaded Hourly Rate | T | 127.44 | 162.00 | 127 44 | 111.65 | 107.42 | 92.12 | 86.15 | 85.35 | 85.20 | 82.69 | 77.16 | 61.08 | 55.44 | 74.19 | 71.92 | 56.10 | ٦ | | | |
| Loaded Fiddity Nate | | 1.27.44 | 1 102.00 | | | 101.72 | 1 52.12 | 1.00.10 | <u> </u> | 1.00.20 | | <u> </u> | | | | | 1 00.10 | | | | |
| Total Labor Cost | | <u>00000000000000</u> | ********** | <u> </u> | | **************** | <u>yyyssessesses</u> | <u></u> | <u> </u> | 200000000000000000000000000000000000000 | <u> </u> | <u> </u> | ********** | ****** | ************* | *************************************** | | | ************** | | \$35,171. |
| 1.000.000 | | | | *- | | | | | | | | | | | | | | | | | |
| | Project Manager | - | | E= ' | Technici | ian inistration | | | - | | | l= J= | | | | | | | | | |
| _ | Project Engineer | - | | G= | Adilli | mon anon | | | - | | | 5= К= | | | | | | | | | |
| | Engineer | - | | H= | | | | | - | | | L= | | - | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

Total Hours by Employee

Loaded Hourly Rate

Total Labor Cost

| | COMPANY: T Y Lin International | Bridge Name | Valenci | a Road | | - | | PS&E P | hase | | | | | | | | | | | Date: | _ | 21-Jul-98 |
|---|--|------------------------------|------------------|---------------------|---------------|--------------|--------------|--|-----------------|--------------|--|----------------|--|--|-----------|----------------|--------------|--|----------|--------------|---------|--------------------------|
| | Contract No | Bridge No. | 02503- | 3R.2.7 | | _ | | | | | | | | | | | | | | Start Date | _ | 20-Aug-98 |
| | Labor | | | | | | | | | | | | | | | | | | Fi | inish Date | e: [| 13-Jan-99 |
| | Description | e E E E Function | ➤ Tom Ho | ω Rafael Manzanarez | O Dennis Jang | O John Chan | O Mark Chen | C Stephen Gee | □ Alex Sanjines | □ Nhan Vo | □ Chung-Hao Lee | C Jian Ren Tao | C Alex Lee | G Ruchun Xu | C Joe Tai | m King Bor Tam | т Ann Lee | т Amanda Barbante | | Total Hours | | Total Cost by Subtask |
| _ | | | | | | | | | | | | | | | | | | | 1 | | | |
| 1 | Project Management | | | | | | | | | | | | | | | | | | _ | | | |
| _ | a. Overall Management | Hrs | | | 2 | | 1 | | | | | | | | | | | | | 3 | | \$362.30 |
| | b. Team Meetings | Hrs | | | - 8 | | 3 | | | | | | | | | | | | 1 | 11 | | \$1,341.78 |
| | c. Startup/Estimates | Hrs | | | 1 | | | | | | | | | | | | | | - | 1 | | \$127.44 |
| | d Reports/Invoice Sub-total #1 | Hrs | 0 | 0 | 134 | 0 | 4 | 0 | 0 | 0_ | 0_ | 0_ | 0_ | 0 | 0 | 0 | 0 | _ |] | 3 | | \$382.33 |
| | | | | | | | | | | | | | | | | | | 0 | - | 18 | | \$2,213.85 |
| 2 | QA/QC | | 1 | <u> </u> | 1 | ļ | ļ | | ļ | ļ | | | ļ | | | | | | - | | | 0040.00 |
| | a. Reviews | Hrs | | 4 | <u> </u> | <u> </u> | | | | | | | | | | | | | - | 4 | | \$648.30 |
| | Sub-total #2 | Hrs | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 4 | | \$648.30 |
| 3 | Perform Design | | | | <u> </u> | ļ | | | | | | | | | | | | ļ | - | | | 0044.04 |
| | a. Field Review | Hrs | | ļ | ļ | ļ | ļ | <u> </u> | 4 | | | | | | | | | | - | 4 | | \$344.61 |
| | b. Prepare Un-Checked Details | Hrs | 1 1 | | 8 | | | ļ | 120 | | | | | | | | | ļ | - | 129 | | \$11,485.22 |
| | c. Perform Independent Check | Hrs | 1 1 | | | ļ | ļ | ļ | | 100 | ļ <u>-</u> | | | 30 | | | | <u> </u> | - | 131 | | \$10,494.50 |
| | d. Prepare Checked Details | Hrs | 1 | - | 8 | | ↓ | | 40 | ļ | | 1 | ļ | | | | | | - | 49 27 | | \$4,593.06 \$2,615.13 |
| | e. R/W and Utility Coordination | Hrs | 1 1 | | 6 | ļ | ļ | - | 20 | | | ļ | ļ | 1 | ļ | | | | - | 15 | | \$2,613.13 |
| _ | f. Prepare Specifications | Hrs | 12 | | 3 | ļ | - | ļ | 40 | 40 | | | | - | | | | | - | 28 | | \$1,911.63 |
| | g. Prepare and Check Quantities | Hrs | _ | ļ | | | 1 | ļ | 16 | 12 | | | ļ | ļ | ļ | | | | - | 28 | | |
| _ | h. Response to Review Comments Final PS& | Hrs | 2 | <u> </u> | 2 | | | | 20 | 110 | | | - | | - | ļ | | _ | - | | | \$2,232.81 |
| _ | Sub-total #3 | Hrs | 18 | 0 | 27 | 0 | 0 | 0 | 220 | 112 | 0 | 0_ | 0 | 30 | 0 | 0 | 0 | 0 | - ‱ | 407 | | \$36,079.53 |
| 4 | Delineate Plans | 11 | | · | | | | | | 1 | - | - | ļ | | 1 | | 120 | - | - | 120 | - | |
| | a. Drafting Sub-total #4 | Hrs Hrs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 0 | - | 120 | | \$8,630.19 |
| _ | Sup-total #4 | HIS | ' - | " | " | <u> </u> | U | " | , v | - U | | ļ <u>"</u> | | | + | - | 120 | | - ‱ | <u> 120</u> | | \$8,630.19 |
| - | a. Word Processing/Spreadsheets/Filing | | | 1 | | | | | | | ļ | | + | + | 1 | - | | 2 | - | 2 | | \$112.20 |
| | a. word rrocessing/opreadsheets/riling | Una | _ | _ | _ | | <u> </u> | | | | | | | | | | | - | - | 2 | | \$112.20 \$142.20 |

| Function Codes: | A= | Project Manager | E= Technician | I= | |
|-----------------|----|------------------|--------------------|----|--|
| | B= | QA/QC | F = Administration | | |
| | c= | Project Engineer | G= | к- | |
| | D= | Engineer | H= | L= | |
| | | | <u></u> | _ | |

127.44 162.08 127.44 111.65 107.42 92.12 86.15 85.35 85.20 82.69 77.16 61.08 55.44 74.19 71.92 56.10

\$47,684.07



GEOTECHNICAL CONSULTANTS, INC.

Mr. Dennis Jang T.Y. Lin International 825 Battery Street San Francisco, CA 94111 February 4, 1998 (revised 6/24/98)

M97028

Subject:

Proposed Geotechnical Services

Seismic Retrofit Program - Phase 2

Santa Cruz County

Dear Dennis:

The following scope of work is proposed for providing Phase 2 geotechnical services for the seismic retrofit design of eight bridges in Santa Cruz County. The bridges addressed by this study include the following:

| Bridge Name | State Number | County Number |
|-----------------------|--------------|---------------|
| Kings Creek Road | 36C-0064 | 43026-BR.0.6 |
| Larkspur Street | 36C-0068 | 43018-BR.0.2 |
| Either Way Lane | 36C-0073 | 42030-BR.0.1 |
| Soquel Drive @ Aptos | 36C-0075 | 02416-BR.5.9 |
| Soquel Drive @ Soquel | 36C-0078 | 02416-BR.2.5 |
| Irwin Way | 36C-0083 | 43030-BR.0.1 |
| Aptos Overhead | 36C-0114 | 02510-BR.0.8 |
| Valencia Road | 36C-0116 | 02530-BR.2.7 |

• Subsurface Exploration. Subsurface exploration is proposed for all eight bridges. Two borings are proposed for each bridge; one boring behind each abutment. Valencia Road bridge is the only bridge where new, below-grade foundation work is proposed (new CIDH piles at abutments 1 and 4). Boring depths of 70 to 100 feet are proposed for the Valencia Road bridge. Borings at all other bridge locations are intended to confirm ultimate passive resistance values of the abutment soils. Boring depths of 20 to 30 feet are proposed at these locations. Boring locations will be marked in the field and checked for utilities by means of Underground Service Alert.

The majority of our borings will be located along the roadway shoulder areas to avoid blocking the flow of traffic. However, we anticipate providing a traffic lane closure with flagmen for our borings located at the Aptos Creek bridge. Encroachment and other permits required for all our field operations should be provided by the County.

page 18 of 69



242

Mr. Dennis Jang Page 2 February 4, 1998 (revised 6/24/98)

Drill holes will be logged in the field by our field geologist/engineer. Sampling methods will include standard penetration tests and modified California split spoons. Exploratory borings will be backfilled with soil cuttings mixed with cement grout. For the safety of the drilling crew, soil samples will be tested in the field for organic vapors using a photo-ionization detector. Although we do not anticipate the presence of contaminated soil, should any be encountered, the boring will be terminated.

- Geologic Field Mapping. Geologic field mapping is proposed for the Soquel Drive @ Aptos Creek bridge. Geologic mapping will primarily focus on identifying bedrock characteristics and strength parameters.
- Laboratory Testing. Laboratory tests will be performed on soil samples obtained during subsurface exploration to measure pertinent index and engineering properties.
 Tests will evaluate moisture content and dry density, shear strength, compressibility, Atterberg limits and grain-size distribution, as appropriate.
- Engineering Analysis. Design-level recommendations for proposed foundation retrofit
 will be prepared using new subsurface exploration and geologic field data. For the
 Valencia Road bridge, analysis will evaluate the ultimate foundation capacities for the
 new CIDH piles. Analysis will also the evaluate ultimate passive resistance values of
 the abutments soils for all eight bridges.
- Reports. Supplemental foundation design reports will be prepared for the bridges. The
 reports will contain new Log of Test Boring sheets and laboratory test data.

Our estimated costs for completing the Phase 2 geotechnical work outlined above is \$92,559. A breakdown of our estimate and labor rate summary are presented on the attached spreadsheets. Actual costs will be billed on a time and expense basis.

Sincerely,

GEOTECHNICAL CONSULTANTS, INC.

Tim Huber Vice President

I'm Anh

TH/ip Attachments

Cc: Patrice Johnson

1

| - 110 | COST ESTIMAT | TE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC. | 243 |
|--------------|--------------------|--|----------------------|
| Project No.: | M97028 | Client: T.Y. Lin International | 19 1 0 |
| Project: | Santa Cruz County | Bridge Seismic Retrofit Project | |
| Phase: | PS&E Preparation (| (Phase 2) - EIGHT BRIDGE SUMMARY | |
| Date: | 24-Jun-98 | File: C:\123R5W\WORK\97028.WK4 | |
| | | | |

LABOR

| PERSONNEL> | J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|----------------------------|-----------------|---|---------------|----------------|-------------------|--|
| | Prin. Geologist | Proj. Manager | Sr. Geologist | Sr. Engineer | Proj. Coordinator | CAD |
| HOURLY RATE> | \$162.62 | \$129.00 | \$103.26 | \$115.86 | \$104.12 | \$59.40 |
| TASKS | | | | | | |
| PHASE 1 - STRATEGY | | Marie | | | | |
| PHASE 2 - PS&E PREPARATION | | | | | | |
| Locate Borings | | 16 | ! | 16 | | |
| Locate Utilities | | | 36 | | | |
| Field Exploration/Mapping | | | 110 | | | |
| Engineering Analysis | | 18 | 24 | 128 | | |
| Report + LOTB | | 18 | 18 | 64 | | 172 |
| QA/QC | 3 | 18 | | | | |
| Project Management | | 18 | | | 16 | |
| | | | | | | and in the second state of our methods to the first particular and a second second second second second second |

| Subtotal (Hours) | 3 | 88 | 188 | 208 | 16 | 172 |
|--------------------|----------|-------------|-------------|-------------|------------|-------------|
| Subtotal (Dollars) | \$487.86 | \$11,352.00 | \$19,412.88 | \$24,098.88 | \$1,665.92 | \$10,216.80 |

| Total Labor Charges | \$67,234.34 |
|---------------------|-------------|
| | |

| ITEM | UNITS | RATE | AMOUNT |
|----------------------|-------|------------|-------------|
| Drill Rig | 82 | \$185.00 | \$15,170.00 |
| Field Supplies/Grout | 620 | \$2.00 | \$1,240.00 |
| Traffic Control | 1 | \$1,660.00 | \$1,660.00 |
| Laboratory | 620 | \$9.00 | \$5,580.00 |
| Mileage | 2500 | \$0.31 | \$775.00 |
| Repro./Misc. | 1 | \$900.00 | \$900.00 |
| | | | \$0.00 |
| | | | \$0.00 |

| | THE PROPERTY OF THE PROPERTY OF THE PARTY OF |
|------------------------------|--|
| Subcontracts & Other Charges | \$25,325.00 |
| | CHARLES COLORED TO COLORED TO COLORED COLOR |

| | CONTRACTOR DESCRIPTION OF STREET |
|---|----------------------------------|
| Estimated Total Cost of Geotechnical Services | \$92,559,34 |
| | 40-,000. |
| | |

page 20 of 69

LABOR

| J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|--|--|---|--|--|---|
| Prin. Geologist | Proj. Manager | Sr. Geologist | Sr. Engineer | Proj. Coordinator | CAD |
| \$162.62 | \$129.00 | \$103.26 | \$115.86 | \$104.12 | \$59.40 |
| SPECIAL CONTRACTOR OF THE SECOND CONTRACTOR OF | NAME OF THE PROPERTY OF THE PR | 2/7/ | | | |
| | A STATE OF THE STA | | | | |
| | | | | | |
| | 2 | | 2 | | |
| | | 4 | | | |
| | | 10 | | | |
| | 2 | 2 | 12 | | |
| | 2 | 2 | 8 | | 20 |
| | 2 | | | | |
| | 2 | | | 2 | |
| | | | 1 22 | | 2(|
| | | | | 4 | \$1,188.00 |
| | Prin. Geologist \$162.62 | Prin. Geologist Proj. Manager \$162.62 \$129.00 | Prin. Geologist Proj. Manager Sr. Geologist \$162.62 \$129.00 \$103.26 | Prin. Geologist Proj. Manager Sr. Geologist Sr. Engineer \$162.62 \$129.00 \$103.26 \$115.86 | Prin. Geologist Proj. Manager Sr. Geologist Sr. Engineer Proj. Coordinator \$162.62 \$129.00 \$103.26 \$115.86 \$104.12 |

| | Subtotal (Hours) | U | 101 | 10 | | | 27 |
|---|--------------------|--|-----|----|--|----------|------------|
| | Subtotal (Dollars) | \$0.00 | | | \$2,548.92 | \$208.24 | \$1,188.00 |
| ٠ | | TO A THE EAST OF THE PARTY OF T | | | THE COLUMN TO SHAPE THE CO | | |

| | \$7.093.84 |
|----------------------|--------------|
| Total Labor Charges | 1 37.093.041 |
| Trotal Edbor Straigs | 7.1000. |
| | |

| ITEM | UNITS | RATE | AMOUNT |
|------------------------------------|-------|----------|------------|
| Drill Rig | 8 | \$185.00 | \$1,480.00 |
| Field Supplies/Grout | 60 | \$2.00 | \$120.00 |
| Traffic Control (Shoulder Closure) | 1 | \$45.00 | \$45.00 |
| Laboratory | 60 | \$9.00 | \$540.00 |
| Mileage | 300 | \$0.31 | \$93.00 |
| Repro./Misc. | 1 | \$100.00 | \$100.00 |
| | | | \$0.00 |
| | | | \$0.00 |

| Subcontracts & Other Charge | s \$2,378.00 |
|-----------------------------|--------------|
|-----------------------------|--------------|

| 是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是 | THE PROPERTY OF THE PROPERTY O |
|---|--|
| Estimated Total Cost of Geotechnical Services | \$9 471.84 |
| Estillated Total Cost of Cotconnical Corvices | ΨΟ, 11 1.0 1 |



| | COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC. | | | | | | |
|--------------|---|---------------------------------|-----|--|--|--|--|
| Project No.: | M97028 | Client: T.Y. Lin International | 290 | | | | |
| Project: | ect: Santa Cruz County Bridge Seismic Retrofit Project | | | | | | |
| Phase: | PS&E Preparation (Phase 2) - Larkspur Street Bridge (36C-0068) | | | | | | |
| Date: | 24-Jun-98 | File: C:\123R5W\WORK\97028B.WK4 | | | | | |
| | | | | | | | |

LABOR

| PERSONNEL> | J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|----------------------------|--|---------------|---------------|--|---|------------|
| | Prin. Geologist | Proj. Manager | Sr. Geologist | Sr. Engineer | Proj. Coordinator | CAD |
| HOURLY RATE> | \$162.62 | \$129.00 | \$103.26 | \$115.86 | \$104.12 | \$59.40 |
| TASKS | | | | | | |
| PHASE 1 - STRATEGY | | | | | | |
| PHASE 2 - PS&E PREPARATION | | | | | | |
| Locate Borings | | 2 | | 2 | | · |
| Locate Utilities | | | 4 | | | |
| Field Exploration | | | 10 | | | |
| Engineering Analysis | | 2 | 2 | 12 | | |
| Geotech Report + LOTB | | 2 | 2 | 8 | | 20 |
| QA/QC | | 2 | | | | |
| Project Management | | 2 | | | 2 | |
| | A STATE OF THE STA | | | | | |
| Subtotal (Hours) | 0 | 10 | 18 | PARTICIPATION OF THE PARTY OF T | THE RESERVE OF THE PERSON NAMED IN COLUMN 1 | 20 |
| Subtotal (Dollars) | \$0.00 | \$1,290.00 | \$1,858.68 | \$2,548.92 | \$208.24 | \$1,188.00 |

| Total Labor Charges | \$7.093.841 |
|---------------------|-------------|

| ITEM | UNITS | RATE | AMOUNT |
|------------------------------------|--|----------|------------|
| Drill Rig | 8 | \$185.00 | \$1,480.00 |
| Field Supplies/Grout | 60 | \$2.00 | \$120.00 |
| Traffic Control (Shoulder Closure) | 1 | \$45.00 | \$45.00 |
| Laboratory | 60 | \$9.00 | \$540.00 |
| Mileage | 300 | \$0.31 | \$93.00 |
| Repro./Misc. | 1 | \$100.00 | \$100.00 |
| | | | \$0.00 |
| | A STATE OF THE STA | | \$0.00 |

| Subcontracts & Other Charges | \$2,378,00 |
|--|--|
| Comments of the control of the contr | STATE OF THE PROPERTY OF THE P |

| Estimated Total Cost of Geotechnical Services | \$9,471,84 | | | | | |
|--|---------------------------|--|--|--|--|--|
| insulfated lotal book of beoleonings, bollions | φυ ₁ -7, 1,0-1 | | | | | |
| | | | | | | |

page 22 of 69246

| COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC. | | | | | | | |
|---|----------------------|---|--|--|--|--|--|
| Project No.: | M97028 | Client: T.Y. Lin International | | | | | |
| Project: | Santa Cruz County Bi | ridge Seismic Retrofit Project | | | | | |
| Phase: | PS&E Preparation (Ph | nase 2) - Either Way Lane Bridge (36C-0073) | | | | | |
| Date: | 24-Jun-98 | File: C:\123R5WWORK\97028C.WK4 | | | | | |
| Date: | 24-Jun-98 | File: C:\123R5W\WORK\97028C.WK4 | | | | | |

LABOR

| PERSONNEL> | J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|----------------------------|--|--|---|--|-------------------|--|
| | Prin. Geologist | Proj. Manager | Sr. Geologist | Sr. Engineer | Proj. Coordinator | CAD |
| HOURLY RATE> | \$162.62 | \$129.00 | \$103.26 | | | \$59.40 |
| TASKS | (i) i (ii) i (ii | The state of the s | NO. CO. CO. CO. CO. CO. CO. CO. CO. CO. C | SOMEON CONTRACTOR OF THE CONTR | | The state of the s |
| PHASE 1 - STRATEGY | | | | | | |
| PHASE 2 - PS&E PREPARATION | | | | | | |
| Locate Borings | | 2 | | 2 | | |
| Locate Utilities | | | 4 | | | |
| Field Exploration | | | 10 | | | |
| Engineering Analysis | | 2 | 2 | 12 | ! | |
| Geotech Report + LOTB | | 2 | 2 | 8 | | 20 |
| QA/QC | | 2 | | | | |
| Project Management | | 2 | | | 2 | |
| | | | | | | |
| Subtotal (Hours) | 0 | 10 | 18 | 22 | | 20 |
| Subtotal (Dollars) | \$0.00 | \$1,290.00 | \$1,858.68 | \$2,548.92 | \$208.24 | \$1,188.00 |

| Subtotal (Hours) | 01 | 10 | 18 | 22 | 2 | 20 |
|--------------------|--------|------------|----|------------|---|------------|
| Subtotal (Dollars) | \$0.00 | \$1,290.00 | | \$2,548.92 | | \$1,188.00 |

| Total Labor Charges | \$7,093.84 |
|--|--|
| The second secon | THE RESIDENCE OF THE PARTY OF T |

| ITEM | UNITS | RATE | AMOUNT |
|------------------------------------|-------|----------|------------|
| Drill Rig | 8 | \$185.00 | \$1,480.00 |
| Field Supplies/Grout | 60 | \$2.00 | \$120.00 |
| Traffic Control (Shoulder Closure) | 1 | \$45.00 | \$45.00 |
| Laboratory | 60 | \$9.00 | \$540.00 |
| Mileage | 300 | \$0.31 | \$93.00 |
| Repro./Misc. | 1 | \$100.00 | \$100.00 |
| | | | \$0.00 |
| | | | \$0.00 |

| Subcontracts & Other Charges | \$2,378.00 |
|------------------------------|------------|
| Subcontracts & Other Onarges | Ψ2,070.00 |

| | CAN TANK THE PROPERTY OF THE P | Diam's history of the second second |
|----------------------|--|-------------------------------------|
| Estimated Total Cost | of Geotechnical Services | \$9,471.84 |

page 23 of 69 247

| COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC. | | | | | | |
|---|------------------------|---|--|--|--|--|
| | | | | | | |
| Project No.: | M97028 | Client: T.Y. Lin International | | | | |
| Project: | Santa Cruz County Brid | lge Seismic Retrofit Project | | | | |
| Phase: | PS&E Preparation (Pha | ase 2) - Soquel Drive @ Aptos Creek Bridge (36C-0075) | | | | |
| Date: | 24-Jun-98 | File: C:\123R5W\WORK\97028D.WK4 | | | | |
| - | | | | | | |

LABOR

| PERSONNEL> | J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|------------------------------|-----------------|--|---|----------------|---------------------------------|--|
| | Prin. Geologist | Proj. Manager | Sr. Geologist | | Proj. Coordinator | CAD |
| HOURLY RATE> | \$162.62 | \$129.00 | \$103.26 | \$115.86 | \$104.12 | \$59.40 |
| TASKS | | | | | | |
| PHASE 1 - STRATEGY | | | | | | |
| PHASE 2 - PS&E PREPARATION | | | | | | |
| Locate Borings | | 2 | - | 2 | | |
| Locate Utilities | | | 6 | | | |
| Field Exploration (Drilling) | | | 12 | | | |
| Field Exloration (Mapping) | | | 12 | | | |
| Engineering Analysis | | 2 | 8 | 24 | | |
| Geotech Report + LOTB | | 2 | 2 | 8 | | 28 |
| QA/QC | 1 | 2 | | | | |
| Project Management | | 2 | | | 2 | |
| Subtotal (Hours) | 1 | 10 | менти и под при в менти в мен | 1 | 21 | ************************************** |
| Subtotal (Dollars) | \$162.62 | THE RESERVE OF THE PARTY OF THE | | | Commence of the Commence of the | \$1,663.20 |

| Subtotal (Hours) | 1 | 10 | 40 | 34 | 2] | 28 |
|--------------------|----------|------------|------------|------------|----------|------------|
| Subtotal (Dollars) | \$162.62 | \$1,290.00 | \$4,130.40 | \$3,939.24 | \$208.24 | \$1,663.20 |

| Total Labor Charges | \$11,393.70 |
|---------------------|---|
| | THE PARTY AND PERSONS ASSESSMENT |

| ITEM | UNITS | RATE | AMOUNT |
|------------------------------------|-------|------------|------------|
| Drill Rig | 10 | \$185.00 | \$1,850.00 |
| Field Supplies/Grout | 60 | \$2.00 | \$120.00 |
| Traffic Control (T13 Lane Closure) | 1 | \$1,345.00 | \$1,345.00 |
| Laboratory | 60 | \$9.00 | \$540.00 |
| Mileage | 300 | \$0.31 | \$93.00 |
| Repro./Misc. | 1 | \$150.00 | \$150.00 |
| | | | \$0.00 |
| | | | \$0.00 |

| THE RESERVE OF THE PROPERTY OF | TALE BELLEVILLE BELLEVILLE STREET STREET |
|--|--|
| Subcontracts & Other Charges | \$4,098.00 |
| | THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AND ADDRESS O |

| · · · · · · · · · · · · · · · · · · · | , , , , , , , | |
|---------------------------------------|---------------------|----------------|
| Estimated Total Cost of | CANTANDIANI SABUARA | \$ 64E 404 701 |
| Estimated Total Cost of | GEORGOOGAL SERVICES | \$15.491.70 |
| | | |
| | | |

COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC. Project No.: M97028 Client: T.Y. Lin International Project: Santa Cruz County Bridge Seismic Retrofit Project Phase: PS&E Preparation (Phase 2) - Soquel Drive @ Soquel Creek Bridge (36C-0078) File: C:\123R5W\WORK\97028E.WK4 **Date:** 24-Jun-98

LABOR

| PERSONNEL> | J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|----------------------------|-----------------|--|---|----------------|-------------------|--|
| | Prin. Geologist | Proj. Manager | Sr. Geologist | Sr. Engineer | Proj. Coordinator | CAD |
| HOURLY RATE> | \$162.62 | \$129.00 | \$103.26 | \$115.86 | \$104.12 | \$59.40 |
| TASKS | | PORTING AT THE STATE OF THE STA | | | | |
| PHASE 1 - STRATEGY | | | | | | The state of the s |
| PHASE 2 - PS&E PREPARATION | | | | | | |
| Locate Borings | | 2 | | 2 | | |
| Locate Utilities | | | 6 | | | |
| Field Exploration | | | 12 | | | |
| Engineering Analysis | | 2 | 2 | 12 | | |
| Geotech Report + LOTB | | 2 | 2 | 8 | | 20 |
| QA/QC | | 2 | | | | |
| Project Management | | 2 | | | 2 | |
| | | | et passe ka anglika Militi (dalama), ma kalama caram dala Militi (dalama) | | | |
| Subtotal (Hours) | 1 0 | 10 | 22 | 22 | 2 | 20 |
| Subtotal (Dollars) | \$0.00 | \$1,290.00 | \$2,271.72 | \$2,548.92 | \$208.24 | \$1,188.00 |

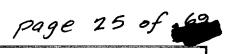
| Subtotal (Hours) | 0 | 101 | 22 | 221 | 2 | 20 |
|--------------------|--------|------------|------------|------------|----------|------------|
| Subtotal (Dollars) | \$0.00 | \$1,290.00 | \$2,271.72 | \$2,548.92 | \$208.24 | \$1,188.00 |

Total Labor Charges \$7,506.88

| ITEM | UNITS | RATE | AMOUNT |
|------------------------------------|--|----------|------------|
| Drill Rig | 10 | \$185.00 | \$1,850.00 |
| Field Supplies/Grout | 60 | \$2.00 | \$120.00 |
| Traffic Control (Shoulder Closure) | 1 | \$45.00 | \$45.00 |
| Laboratory | 60 | \$9.00 | \$540.00 |
| Mileage | 300 | \$0.31 | \$93.00 |
| Repro./Misc. | 1 | \$100.00 | \$100.00 |
| | | | \$0.00 |
| | NATIONAL STATE CHOOLIST HAVE THE REAL PROPERTY OF THE PARTY OF THE PAR | | \$0.00 |

| The state of the s | WESTERN TO THE PARTY OF THE PROPERTY OF THE PARTY OF THE |
|--|--|
| Outrouse of Other Chauses | 60.740.00 |
| Subcontracts & Other Charges | \$2,748.00 |
| THE PARTY OF THE P | CHARLES AND AND AND ADDRESS OF THE PROPERTY OF |

| | Charles and the second |
|---|---|
| Estimated Total Cost of Geotechnical Services | \$10.254.88 |
| indica lotal oost of ocotooning of those | Ψ10,204.00 j |
| | |



COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.

Project No.: M97028 Client: T.Y. Lin International

Project: Santa Cruz County Bridge Seismic Retrofit Project

Phase: PS&E Preparation (Phase 2) - Irwin Way Bridge (36C-0083)

Date: 24-Jun-98 File: C:\123R5W\WORK\97028F\WK4

LABOR

| PERSONNEL> | J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|----------------------------|-----------------|---------------|---|----------------|-------------------|----------|
| | Prin. Geologist | Proj. Manager | Sr. Geologist | Sr. Engineer | Proj. Coordinator | CAD |
| HOURLY RATE> | \$162.62 | \$129.00 | \$103.26 | \$115.86 | \$104.12 | \$59.40 |
| TASKS | | | | | | |
| PHASE 1 - STRATEGY | | | | | | |
| PHASE 2 - PS&E PREPARATION | | | : : | | | |
| Locate Borings | | 2 | | 2 | | |
| Locate Utilities | | | 4 | | | |
| Field Exploration | | | 10 | | | |
| Engineering Analysis | | 2 | 2 | 12 | | |
| Geotech Report + LOTB | | 2 | 2 | 8 | | 20 |
| QA/QC | | 2 | | | | |
| Project Management | | 2 | | | 2 | |
| | | | ners was transfer that and read to see know we con- | | | |

| Subtotal (Hours) | Ō | 10 | 18 | 22 | 2 | 20 |
|--------------------|--------|------------|------------|------------|----------|------------|
| Subtotal (Dollars) | \$0.00 | \$1,290.00 | \$1,858.68 | \$2,548.92 | \$208.24 | \$1,188.00 |

Total Labor Charges \$7,093.84

| ITEM | UNITS | RATE | AMOUNT |
|------------------------------------|-------|--|------------|
| Drill Rig | 8 | \$185.00 | \$1,480.00 |
| Field Supplies/Grout | 60 | \$2.00 | \$120.00 |
| Traffic Control (Shoulder Closure) | 1 | \$45.00 | \$45.00 |
| Laboratory | 60 | \$9.00 | \$540.00 |
| Mileage | 300 | \$0.31 | \$93.00 |
| Repro./Misc. | 1 | \$100.00 | \$100.00 |
| | | | \$0.00 |
| | | THE PARTY OF THE P | \$0.00 |

| | I |
|------------------------------|--|
| Subcontracts & Other Charges | \$2,378.00 |
| | Contract to a parameter of the first of the contract of the co |

| | Sall without over the street and states all the little and an extension of the states |
|--|---|
| Estimated Total Cost of Geotechnical Services | \$9,471,84 |
| Estimated Total Cost of Geolechilical Services |) \$9,471.04 |
| | |

page 26 of 69

| | COST ESTIMATE | FOR GEOTECH | NICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC. | | |
|--------------|----------------------|----------------|--|----|-----|
| Project No.: | M97028 | Client: | T.Y. Lin International | 25 |) (|
| Project: | Santa Cruz County Br | idge Seismic R | Retrofit Project | | |
| Phase: | PS&E Preparation (Ph | ase 2) - Aptos | Overhead Bridge (36C-0114) | | |
| Date: | 24-Jun-98 | File: | C:\123R5W\WORK\97028G.WK4 | | |
| | | | | | |

LABOR

| PERSONNEL> | J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|----------------------------|-----------------|--|---|--|-------------------|------------|
| | Prin. Geologist | Proj. Manager | Sr. Geologist | Sr. Engineer | Proj. Coordinator | CAD |
| HOURLY RATE> | \$162.62 | \$129.00 | \$103.26 | \$115.86 | \$104.12 | \$59.40 |
| TASKS | | | | | | |
| PHASE 1 - STRATEGY | | | | | | |
| PHASE 2 - PS&E PREPARATION | | | | | | |
| Locate Borings | | 2 | | 2 | | |
| Locate Utilities | | | 4 | | | |
| Field Exploration | | | 10 | | | |
| Engineering Analysis | | 2 | 2 | 12 | | |
| Geotech Report + LOTB | | 2 | 2 | 8 | | 20 |
| QA/QC | | 2 | | | | |
| Project Management | | 2 | | | 2 | |
| Subtotal (Hours) | 1 0 | 10 | 18 | 1 22 | 21 | 20 |
| Subtotal (Pollars) | \$0.00 | XI MANAGORINE MENERAL MANAGORINA (C. 1. WILLIAM CO. | ARTHURAN SON CONTRACTOR OF THE PARTY OF THE | CONTRACTOR OF THE PERSON NAMED IN CONTRA | <u> </u> | \$1,188.00 |

| Subtotal (Hours) | 0 | 10 | 18 | 22 | 2 | 20 |
|--------------------|--------|------------|------------|------------|----------|------------|
| Subtotal (Dollars) | \$0.00 | \$1,290.00 | \$1,858.68 | \$2,548.92 | \$208.24 | \$1,188.00 |

| Total Labor | Charges | \$7,093.84 |
|-------------|---------|---|
| | | Character in the National Action in the Company of |

| ITEM | UNITS | RATE | AMOUNT |
|------------------------------------|-------|----------|------------|
| Drill Rig | 8 | \$185.00 | \$1,480.00 |
| Field Supplies/Grout | 60 | \$2.00 | \$120.00 |
| Traffic Control (Shoulder Closure) | 1 | \$45.00 | \$45.00 |
| Laboratory | 60 | \$9.00 | \$540.00 |
| Mileage | 300 | \$0.31 | \$93.00 |
| Repro./Misc. | 1 | \$100.00 | \$100.00 |
| | | | \$0.00 |
| | | | \$0.00 |

| Subcontracts & 0 | Other Charges | \$2,378.00 |
|------------------|---------------|------------|
|------------------|---------------|------------|

| | CHARLES OF STREET, STR |
|--|--|
| Estimated Total Cost of Geotechnical Services | \$9 471 84 |
| lestimated lotal Cost of Geotechnical Services | 39,4/1.04; |
| | THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER. |

page 27 of 69

COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC. Project No.: M97028 Client: T.Y. Lin International Project: Santa Cruz County Bridge Seismic Retrofit Project Phase: PS&E Preparation (Phase 2) - Valencia Road Bridge (36C-0116) File: C:\123R5W\WORK\97028H.WK4 24-Jun-98

LABOR

| PERSONNEL> | J. Gonzalez | Tim Huber | Neal Mace | G. Neelakantan | Susan Zoya | J. Hulse |
|----------------------------|-----------------|---------------|---------------|----------------|-------------------|------------|
| | Prin. Geologist | Proj. Manager | Sr. Geologist | Sr. Engineer | Proj. Coordinator | CAD |
| HOURLY RATE> | \$162.62 | \$129.00 | \$103.26 | \$115.86 | \$104.12 | \$59.40 |
| TASKS | | | | | | |
| PHASE 1 - STRATEGY | | | | | | |
| PHASE 2 - PS&E PREPARATION | | | | | | |
| Locate Borings | | 2 | | 2 | | |
| Locate Utilities | | | 4 | | | |
| Field Exploration | | | 24 | | | |
| Engineering Analysis | | 4 | 4 | 32 | | |
| Geotech Report + LOTB | | 4 | 4 | 8 | | 24 |
| QA/QC | 2 | 4 | | | | |
| Project Management | | 4 | | | 2 | |
| | | | | | | |
| Subtotal (Hours) | 2 | 18 | 36 | 42 | 2] | 24 |
| Subtotal (Dollars) | \$325.24 | \$2,322.00 | \$3,717.36 | \$4,866.12 | \$208.24 | \$1,425.60 |

| Subtotal | | 2. | 18 | 36 | 42 | 2 | 24 |
|----------|--|---|---|--|--|--|--|
| Subtotal | | \$325.24 | \$2,322.00 | \$3,717.36 | \$4,866.12 | \$208.24 | \$1,425.60 |
| | President and the Control of Cont | lands are illined steeld water it is misself to | ara volumeteración transfinatunia mala sino usa d | Track and track in the last term and the first term and the last t | and the state of t | and the state of t | HOLES AND AND DESCRIPTION OF THE PROPERTY OF T |

Total Labor Charges \$12,864.56

| ITEM | UNITS | RATE | AMOUNT |
|------------------------------------|--|----------|------------|
| Drill Rig | 22 | \$185.00 | \$4,070.00 |
| Field Supplies/Grout | 200 | \$2.00 | \$400.00 |
| Traffic Control (Shoulder Closure) | 1 | \$45.00 | \$45.00 |
| Laboratory | 200 | \$9.00 | \$1,800.00 |
| Mileage | 400 | \$0.31 | \$124.00 |
| Repro./Misc. | 1 | \$150.00 | \$150.00 |
| | | | \$0.00 |
| | MATERIAL SECTION OF THE PROPERTY OF THE PROPER | | \$0.00 |

| Subcontracts | & | Other | Charges | \$6,589.00 |
|--------------|---|--------------|--|--|
| | | посрачинуя с | terminer and are the termine and the party of the party o | Market Street and American Street |

| | THE RESIDENCE OF THE PROPERTY |
|---|---|
| Estimated Total Cost of Geotechnical Services | 1 640 450 501 |
| Estimated rotal Cost of Geolechnical Services | § \$19.453.56 |
| | |

page 28 of 69



252

| LABOR RATE SUMMARY, GEOTECHNICAL CONSULTANTS, INC. | | | | | |
|--|---|---------|----------------------------|--|--|
| Project No.: | M97028A | Client: | T.Y. Lin International | | |
| Project: | Santa Cruz County Bridge Seismic Retrofit | Project | | | |
| Phase: | PS&E Preparation (Phase 2) | | | | |
| Date: | 24-Jun-98 | File: | C:\123R5W\WORK\97028LR.WK4 | | |

| NAME | TITLE | LABOR RATE* |
|----------------------|---------------------|-------------|
| Joe Gonzalez | Principal Geologist | \$162.62 |
| Tim Huber | Project Manager | \$129.00 |
| G. Neelakantan | Associate Engineer | \$115.86 |
| Jim Thurber | Asociate Geologist | \$107.38 |
| Susan Zova | Proiect Coordinator | \$104.12 |
| Neal Mace | Senior Geologist | \$103.26 |
| Ted Powers | Proiect Geoloaist | \$85.17 |
| Apostolos Kozompolis | Staff Engineer | \$66.63 |
| Aurie Patterson | Staff Geologist | \$66.56 |
| Julie Hulse | CAD Technician | \$59.40 |
| Terek Naward | Junior Engineer | \$57.19 |

[•] NOTE: Labor rates calculated with indirect cost rate @ 200% and profit @ 10%.



ivir. Dennis J. Jang, S.E. Principal T.Y. Lin International * 825 Battary Street San Francisco, CA 94111

9165636972

Re: Santa Cruz County, Seismic Retrofit berign Program, Revised Cost Proposal

Dear Wir. Jang:

Ayres Associates is pleased to support T.Y. Lin International on the hydrology, hydraulics and scour partions of this design project. Attached is our revised cost proposal for the 7 bridges that cross over flowing creaks or rivers. This revision uses our fully burdanad rates as psr Department of Defense audits and our 1998 basic wage rates. We have also shown a specific QA/QC rola for a senior specialist.

We have separated the costs for each structure as per our summary show below:

| Bridge Name | Preliminary Degradation Raport | Seismic Retrofit Hydraulic Impact | Totals |
|----------------------------|-----------------------------------|--------------------------------------|-----------------|
| | name and 1994 | Report | |
| Kings Creak Road Bridga | \$3,217 | N/A | \$ 3,217 |
| Larkspur Street Bridge | \$3,217 | N/A | \$3,217 |
| Either Way Bridga | \$3,217 | NIA | \$3,217 |
| Sequel Driva @ Aptos Cra | ak \$3,217 | \$11,553 | \$14,770 |
| Sequal Drive @ Sequal Cree | sk \$3,217 | N/A | \$3,217 |
| Irwin VVay Bridge | \$3,217 | ' N/A | \$3,217 |
| Valenda Creek Bridge | \$3,217 | \$11,553 | <u>\$14,770</u> |
| YOTAL | | | \$45,625 |

Our hydraulic impacia report will require field surveyed cross sections for each site and we have not included that cast in our estimate. This need has been discused with George Smiley of Robert DaWitt and Associates and they will include the survey cost in their proposal.

Please call me directly if there are any questions or further details are needed.

Sincaraly,

Owen Ayres and Associates, Inc.

Thomas W. Smith, P.E., G.E.

Water Resources/Geotechnical Engineer

Owen Ayres & Associates, Inc. Engineers/Scientists/Surveyors teo.Edzunzelalabwamionawid-aiijosmi:o

2151 River Plaza Driva, Sute 170, Sacramento, CA 95833, (916) 563-7700, FAX (916) 563-6972.

Printed on recycled paper



page 30 of 69

254

January 7, 1998

Santa Cruz County Bridge Retrofit Project Hydrology and Hydraulics

BASIS OF COST PROPOSAL

I. GENERAL

The basis of this cast proposal consists of complating the following two groups of reports:

- a. Preliminary Dagradation Report
- b. Saismic Retrofit Hydraulic Impact Report

Preliminary Degradation Reports Will be performed on the following sites in provide; A assessment of the existing and anticipated channel bad aggradation/degradation and to estimate the probable bad elevation change over the life of the bridge.

| a. Kings Creek Road Bridga | Bridge No. 36C-0064 |
|--------------------------------|----------------------------|
| b. Larkspur Straat Bridge | Bridga No. 36C-0068 |
| c. Either Way Bridge | Bridge No, 36C-0073 |
| d. Soqual Drive @ Aptos Creak | Bridge No. 36C-0075 |
| a. Soquel Driva @ Soquel Creek | Bridge No. 36C-0078 |
| f. Irwin Way Bridge | Bridga No. 36C-0083 |
| g. Valencia Creek Bridga | Bridge No. 36C-0116 |

Saismic Retrofit Hydraulic Impact Raports will be prepared far only the following two sites to evaluate any hydraulic or scour related impacts of the proposed seismic retrofit measures and to derline appropriate countermeasures as required.

| 6. Soquel Driva @ Aptos Creek | Bridga No. 35C-0075 |
|--|---------------------|
| b. Valancia Creek Bridge | Bridge No. 36C-0116 |

c:\msoirlce\winword\mswdsiz\scruzb3.cst

8.34



255

II. PRELIMINARY DEGRADATION REPORT

The Preliminary Degradation Report will assess the existing and anticipated channel bed aggradation/degradation and estimate the probable bed elevation change over the life of the bridge. Our approach will consist of the following.

- Review as-built plans and existing conditions based on existing reports.
- Perform a field visit to verify and photograph existing conditions including measurements of thalwag elevation from know bridge deck elevation
- Plot spot elevations of channel elevations from past data and compare to existing values
- In the absence of data for profile analysis, review watershad history and changes in lend use condition and estimate potential channel response based on simplified geomorphic relationships. Review available aerial photographs to define potential lateral instability and relationship to vertical instability.
- Describe scour potential of existing bridge configuration, considering factors such as bridge location relative to channel planform, bed and bank sadiment conditions, vegetation conditions, pier alignment, degree of constriction, existing countermeasures, debris potential and any documented previous problems
- Prepare a Preliminary Dogradation Report summarizing all information reviewed and findings. Estimated length, 3 pages.

111. SEISWICRETROFITHYDRAULICIMPACY REPORT

The Saismic Retrorit Hydraulic Impact Report will evaluate the hydraulic and scour related impacts of the proposed saismic retrofit measures and define appropriate countermeasures as required. Our Approach will consist of the following tasks:

- tit is assumed that any existing hydrology would be of only general information since most of the structures were constructed in the 1950's or before. New hydrology will be computed using the Corps of Engineers computer program HEC-1, using Soil Conservation Service curve number procedures for the smaller watersheds and by stream gage analysis for these with that data. The 50- and 100-year peak discharges will be computed for each site. The hydrology for each site will be checked by using the USGS regional regression equations for computation of peak flows.
- Bridge hydraulics will be performed using the Corps of Engineers computer program, HEC-RAS. For each flood frequency, a clear water analysis will be performed without any special consideration for sediment or debris. If a qualitative analysis of the upper watershed indicates a significant potential for mass wasting of sediment or debris, additional analyses will be performed to simulate bulked flow conditions, channel deposition conditions or debris build up conditions (or all three). The results of multiple simulations will be plotted graphically and tabulated for comparison. The worst case scenario will be used in plotting the 100-year water surface levels.
- Evaluate change in channel hydraulics resulting from retrofit measures using the same procedures and data as in the section above. Compare changes in velocities and water surface elevation levels.

c:\maoffica\wirnverd\mawdata\scruzb3.cat

9165636972

256

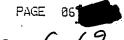


- Evaluate changes in local scour as a result of pier or abutment modifications considering factors such as changes in pier shape and size.
- Evaluate change in contraction scour as a result of any increased constriction cause by the retrofit modifications.
- Evaluate appropriate counter measures to mitigate hydraulic and scour related issues.
- Prepare final Seismic Retrofit Hydraulic Impact Report summarizing watershed hydrology (both existing and updated), potential hydraulic and scour related issues with the proposed retrofit strategy.

c:\msoffice\vinword\mswdata\scruzb3.cat

8.34





page 33 of 69

ි.) ට්anuary 15, 1998 257

Santa Cruz County Bridge Retrofit Project

ESYMATE OF EFFORT PER SITE FOR PRELIMINARY DEGRADATION REPORT

| Yasks | Project Manager | Senior Engineer | Englneer | CADD | Clerical | QA/QC Specialist |
|------------------------------------|---------------------------|---------------------------|----------|--------|----------|---------------------|
| a. Review Existing Records | 2 | 4 | | | | |
| b. Site Review and Data Collection | 6 | б | | | | |
| c. Data Reduction | | 2 | 4 | | | |
| d. Report Preparation | 4 | 6 | | 4 | 2 | 2 |
| Subtotal | 12 | 18 | 4 | 4 | 2 | 2 |
| Hourly Rata | \$86. . 41 | \$60.35 | \$47.18 | 537.43 | \$35.93 | \$101.49 |
| Yotal Cost by for Personnal | \$1,037 | \$1,088 | \$189 | \$150 | \$72 | \$203 |
| geriscellaneaus Expenses | \$480 | | | | | |
| TOTAL per Report | \$3,317 | | | | | |

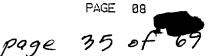
page 34 of 69.

January 15, 1998

Santa Cruz County Bridge Retrorit Project

ESYIMATE OF EFFORT PER SITE FOR SEISMIC RETROFIT HYDRAULIC IMPACT REPORT

| Task | Project Manager | Senior Engineer | Engineer | CADD | Clerical | QA/QC Specialist |
|----------------------------|---------------------------|--------------------|----------|---------|----------|----------------------------|
| Watershed Hydrology | 4 | 24 | 12 | | | |
| Existing Bridge Hydraulics | 4 | 12 | 12 | | | |
| Ratrofit Bridge Hydraulics | 2 | 8 | 4 | | | |
| scour Analysis | 4 | 6 | 6 | | | |
| Dezign Counter Massures | 2 | 12 | 8 | | | 2 |
| Find Report | 12 | 24 | 16 | 4 | 4 | 4 |
| Subtotal | 28 | 84 | 58 | 4 | 4 | а |
| Hourly Rate | \$88,41 | 560.35 | \$47.18 | \$37.44 | \$35.83 | \$101.49 |
| Yotal Cost by Persannel | \$2,419 | \$5,069 | \$2,738 | \$150 | \$144 | \$809 |
| Miscellaneous Expenses | \$425 | | | | | |
| TOTAL per Report | \$11,553 | | | | | |



County of Santa Cruz Salsmic Retrofit Design program
Ayres Associates

| Nama | | Raw Hourly Rate | Direct Labor Overhead 149.35% | | oor Fae head | | Fully Burdened Rate | |
|---|-----|--|--|---|----------------------------|--|---------------------------|---|
| Tom Smith Jim Schall Dan Tichaïs Morgan Byars Chris Kulick Stacey Murphy Sandy Powell | *** | 31.50 37.00 2200 17.20 13.65 9.05 | ** | 47.05 55.26 32.86 25.69 20.39 i 3 . 5 2 10.66 | \$ \$ \$ \$ \$ \$ \$ \$ \$ | 7.86 9.23 5.49 4.29 3.40 2.26 3.27 | *** | 86.41 101.49 60.35 47.18 37.41 24.83 35.93 |





1/13/98

R=96%

Page 1

32

9165636972

FEE PROPOSAL TO

T. Y. LIN INTERNATIONAL, INC.

FOR SURVEYING, MAPPING, AND RIGHT-OF-WAY DETERMINATIONS FOR THE COUNTY OF SANTA CRUZ 1996-1997 SEISMIC RETROFIT PROGRAM

SUMMARY OF FEE ESTIMATES:

| JOB NO. | BRIDGE <u>SITE</u> | SITE SU | <u>PART "A"</u> RVEY AND R/W SSTIGATION | | PART "B" IBIT MAP AND DESCRIPTIONS | TOTAL FEE ESTIMATE |
|-----------|--------------------------------------|---------|---|-------|--|--------------------------|
| R97030-A | IRWIN WAY | | \$8,174.71 | | \$2,641.66 | \$10,816.36 |
| R97030-B | SOQUEL DR | | \$9,995.31 | | \$2,708.75 | \$12,704.06 |
| R97030-C | @APTOS CF | RIVE | \$7,386.52 | | \$2,641.66 | \$10,028.18 |
| R97030-D | @ SOQUEL APTOS O'HE | AD | \$6,328.27 | | \$2,030.14 | \$8,358.41 |
| R97030-E | (R.D.M. BLVD. @ RR) VALENCIA ROAD | | \$8'752.17 , | | \$2,708.75 | \$11,460.92 |
| R97030-F | TWO BAR R | OAD | (DELETED FROM P | ROPOS | AL) | |
| R97030-G | KING'S CRE | EK RD. | \$9,430.39 | | \$2,800.91 | \$12,231.30 |
| R97030-H | LARKSPUR | ST. | \$7,622.55 | | \$2,693.75 | \$10,316.30 |
| R97030-I | EITHER WAY | Y LANE | \$7,622.55 | | \$2,693.75 | \$10,316.30 |
| | | - | | | ک شد به سم می ناشد سم می | |
| ESTIMATED | TOTAL FEES | 3 | \$65,312.47 | | \$20,919.36 | \$86,231.83 |

NOTE: Fees are charged on a time and materials basis at the firm's audited hourly rates for the services provided. The estimated fees are based upon the estimated time to complete the professional tasks as outlined in the attached estimates. Actual fees will be based upon the time and materials charged to the work.

Prepared by:

Robert L. DeWitt & Associates, Inc. Civil Engineers and Land Surveyors

1607 Ocean Street, Suite 1 Santa Cruz, CA 95060

> Phone: (408) 425-1617 Fax: (408) 425-0224

Job No.: R97030 Rev: July 14, 1998

Rev.: 7/14/98

COUNTY OF SANTA CRUZ **SEISMIC** RETROFIT DESIGN PROGRAM Survey Sub-Consultant: Robert L. **DeWitt &** Assoc., Inc.

Fee Schedule based upon CALTRANS pre-award audit performed 11197

Fee schedule revised 7/6/98 per memo to Al Raymond dated June 18, 1998, Pagt

| Employee | Classification | Hourly Wage <u>Rate</u> | Audited Overhead <u>Rate</u> 170.67% | <u>Fee</u> 10.00% | Approved Billing <u>Rate</u> |
|------------|-----------------|-------------------------------|---|----------------------|------------------------------------|
| R. DeWitt | Prin. Engineer | \$35.00 | \$59.72 | \$9.47 | \$104.19 |
| G. Smiley | Survey Manager | \$21.12 | \$36.03 | \$5.72 | \$62.87 |
| D. Darling | Draft/Computing | \$18.00 | \$30.71 | \$4.87 | \$53.58 |
| P. Murphy | Party Chief | \$17.00 | \$29.03 | \$4.60 | \$50.63 |
| M. Weld | Field Assistant | \$15.00 | \$25.62 | \$4.06 | \$44.68 |
| M. Diola | Clerical | \$12.00 | \$20.48 | \$3.25 | \$35.73 |

12age 38 of 69

R97030-A REV 7/14/98

IRWIN WAY

State Bridge Number 36C-0083 County Bridge No. 43030-BR.0.2





PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field. Mobilize field crew. Project coordination and supervision.

\$377.22 6 hrs. @ \$62.87 Survey Manager: 4 hrs. @ \$104.19 \$416.76 Principal Engineer:

> Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

\$50.63 \$253.15 Party Chief: 5 hrs. @ Field Assistant: 5 hrs. @ \$44.68 \$223.40 \$300.00 G.P.S. Subconsultant

> Subtotal: \$776.55

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief: \$50.63 \$607.56 12 hrs. @ Field Assistant: 12 hrs. @ \$44.68 \$536.16

> Subtotal: \$1,143.72

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing: 24 hrs. @ \$53.58 \$1,285.92 Principal Engineer: 1 hrs. @ \$104.19 \$104.19 Survey Manager: 1 hrs. @ \$62.87 \$62.87

> Subtotal: \$1,452.98

\$50.00 e. Miscellaneous expenses allowance

Photos, reproduction costs, etc.

Subtotal Site Survey: \$4,217.23

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property comers or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make

necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of **way** needed, if any.

263

 Drafting/Computing:
 24 hrs. @ \$53.58
 \$1,285.92

 Survey Manager:
 2 hrs. @ \$62.87
 \$125.74

 Principal Engineer:
 2 hrs. @ \$104.19
 \$208.38

2-Man field Crew:

Party Chief: 24 hrs. @ \$50.63 \$1,215.12 Field Assistant: 24 hrs. @ \$44.68 \$1,072.32

Subtotal: \$3,907.48

b. Miscellaneous expenses allowance

Reproduction costs, etc. \$50.00
Title Report(s) (furnished by County) \$0.00

Subtotal, Right of Way Investigation: \$3,957.48

Subtotal, Part "A": \$8,174.71

PART "B"

EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)

(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or

temporary easements as required.

 Survey Manager:
 2 hrs. @ \$62.87
 \$125.74

 Principal Engineer:
 0.5 hrs. @ \$104.19
 \$52.10

 Drafting/Computing:
 20 hrs. @ \$53.58
 \$1,071.60

Subtotal: \$1,249.44

b. Misc. expenses (reproduction costs, etc.)

\$35.00

Subtotal, Exhibit Map

\$1,284.44

2. <u>LEGAL DESCRIPTIONS</u>

(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

 Survey Manager:
 4 hrs. @ \$62.87
 \$251.48

 Principal Engineer:
 0.5 hrs. @ \$104.19
 \$52.10

 Cleric-al:
 1 hrs. @ \$35.73
 \$35.73

Subtotal: \$339.31

Allowance for site: 4 ea.@ \$339.31 \$1,357.22

Subtotal, Part "B":

\$2,641.66

TOTAL FEE ESTIMATE, PART "A" AND PART "B"

\$10,816.36

Rev.: 7/14/98

32

page 40 of 69

R97030-B SOQUEL DRIVE State Bridge Number 36C-0075 REV: 7/14/98 @APTOS CREEK County Bridge No. 02416-BR.5.9

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field. Mobilize field crew. Project coordination and supervision.

Survey Manager: 8 hrs. @ \$62.87 \$502.96 Principal Engineer: 4 hrs. @ \$104.19 \$416.76

Subtotal: \$919.72

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief: 4 hrs. @ \$50.63 \$202.52 Field Assistant: 4 hrs. @ \$44.68 \$178.72

Subtotal: \$381.24

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls. Additional cross sections at approximately one floodplain width upstream, one floodplain width downstream, and two floodplain widths downstream.

2-Man field Crew:

Party Chief 42 hrs. @ \$50.63 \$2,126.46 Field Assistant: 42 hrs. @ \$44.68 \$1,876.56

Subtotal: \$4,003.02

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

 Drafting/Computing:
 48 hrs. @ \$53.58 \$2,571.84

 Principal Engineer:
 1 hrs. @ \$104.19 \$104.19

 Survey Manager:
 2 hrs. @ \$62.87 \$125.74

Subtotal: \$2,801.77

e. Miscellaneous expenses allowance \$100.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$8,205.75

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property comers or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data

page 41 of 69
ake 265

to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.

==========

Drafting/Computing: 12 hrs. @ \$53.58 \$642.96 \$62.87 \$125.74 Survey Manager: 2 hrs. @ Principal Engineer: 2 hrs. @ \$104.19 \$208.38

2-Man field Crew:

Party Chief: 8 hrs. @ \$50.63 \$405.04 Field Assistant: 8 hrs. @ \$357.44 \$44.68

> Subtotal: \$1,739.56

b. Miscellaneous expenses allowance

Reproduction costs, etc. \$50.00 Title Report(s) (furnished by County) \$0.00

Subtotal, Right of Way Investigation: \$1,789.56

Subtotal, Part "A": \$9,995.31

PART "B" **EXHIBIT MAP AND LEGAL DESCRIPTIONS**

1. EXHIBIT MAP (Access / Temporary Easements)

(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or

temporary easements as required.

Survey Manager. 2 hrs. @ \$62.87 \$125.74 Principal Engineer: 1 hrs. @ \$104.19 \$104.19 Drafting/Computing: 20 hrs. @ \$53.58 \$1.071.60

> Subtotal: \$1,301.53

b. Misc. expenses (reproduction costs, etc.) \$50.00

> Subtotal, Exhibit Map \$1,351.53

2. LEGAL DESCRIPTIONS

(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and

temporary easements. \$339.31 each

For Each Description:

Survey Manager: \$62.87 \$251.48 4 hrs. @ Principal Engineer: 0.5 hrs. @ \$104.19 \$52.10 Clerical: 1 hrs. @ \$35.73 \$35.73

Subtotal: \$339.31

Allowance for site: \$339.31 \$1,357.22 4 ea. @

Subtotal, Part "B": \$2,708.75

TOTAL FEE ESTIMATE, PART "A" AND PART "B" \$12,704.06

SOQUEL DRIVE State Bridge Number 36C-0078 R97030-C REV: 7/14/98 @ SOQUEL CREEK County Bridge No. 02416-BR.2.5



PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION 1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field. Mobilize field crew. Project coordination and supervision.

Survey Manager. 6 hrs. @ \$62.87 \$377.22 Principal Engineer: 4 hrs. @ \$104.19 \$416.76

> Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief: 5 hrs. @ \$50.63 \$253.15 Field Assistant: 5 hrs. @ \$44.68 \$223.40 G.P.S. Subconsultant \$300.00

> Subtotal: \$776.55

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief: 16 hrs. @ \$50.63 . \$810.08 Field Assistant: 16 hrs. @ \$44.68 \$714.88

> Subtotal: \$1,524.96

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing: 24 hrs. @ \$53.58 \$1.285.92 Principal Engineer: 1 hrs. @ \$104.19 \$104.19 Survey Manager: 2 hrs. @ \$62.87 \$125.74

> Subtotal: \$1,515.85

e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

\$4,661.34 Subtotal Site Survey:

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property comers or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make

page 43 of 69 267

necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.

\$7,386.52



Drafting/Computing: 20 hrs. @ \$53.58 \$1,071.60 Survey Manager: 4 hrs. @ \$62.87 \$251.48 Principal Engineer: 2 hrs. @ \$104.19 \$208.38

2-Man field Crew: Party Chief:

12 hrs. @ \$50.63 \$607.56 12 hrs. @ \$44.68 \$536.16

> Subtotal: \$2,675,18

b. Miscellaneous expenses allowance

Field Assistant:

Reproduction costs, etc. \$50.00 Title Report(s) (furnished by County) \$0.00

Subtotal, Right of Way Investigation: \$2,725.18

Subtotal, Part "A":

PART "B" **EXHIBIT MAP AND LEGAL DESCRIPTIONS**

1. EXHIBIT MAP (Áccess / Temporary Easements)

(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or

temporary easements as required.

Survey Manager: 2 hrs. @ \$125.74 \$62.87 0.5 hrs. @ \$104.19 \$52.10 Principal Engineer: Drafting/Computing: 20 hrs. @ \$53.58 \$1,071.60

> Subtotal: \$1,249.44

b. Misc. expenses (reproduction costs, etc.) \$35.00

> Subtotal, Exhibit Map \$1,284,44

2. LEGAL DESCRIPTIONS

(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and

temporary easements. \$339.31 each

For Each Description:

4 hrs. @ \$251.48 Survey Manager: \$62.87 0.5 hrs. @ \$104.19 Principal Engineer: \$52.10 Clerical: \$35.73 1 hrs. @ \$35.73

Subtotal: \$339.31

\$339.31 Allowance for site: \$1,357.22 4 ea.@

Subtotal, Part "B": \$2.641.66

TOTAL FEE ESTIMATE, PART "A" AND PART "B" \$10,028.18

page 44 of 69

R97030-D APTOS O'HEAD REV: 7/14/9 (R.D.M. BLVD. @ RR) State Bridge Number 36C-0083 County Bridge No. 43030-BR.0.2

[PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field. Mobilize field crew. Project coordination and supervision.

Survey Manager: **6** hrs. @ **\$62.87 \$377.22** Principal Engineer: **4** hrs. @ \$104.19 \$416.76

Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief: 5 hrs. @ \$50.63 \$253.15 Field Assistant: 5 hrs. @ \$44.68 \$223.40 G.P.S. Subconsultant \$300.00

Subtotal: **\$776.55**

c. Field measurements sufficient to develop cross section views at northerly and southerly faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls.
2-Man field Crew:

Party Chief: **8** hrs. @ **\$50.63 \$405.04** Field Assistant: **8** hrs. @ **\$44.68 \$357.44**

Subtotal: **\$762.48**

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, rails, abutments, foundations and any exposed footings.

 Drafting/Computing:
 20 hrs. @
 \$53.58
 \$1,071.60

 Principal Engineer:
 1 hrs. @
 \$104.19
 \$104.19

 Survey Manager:
 1 hrs. @
 \$62.87
 \$62.87

Subtotal: \$1,238.66

e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$3,621.67

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property corners or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make

32

page 45 of 69 to 269

necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.



Drafting/Computing: 22 hrs. @ \$53.58 **\$1,178.76** Survey Manager: 2 hrs. @ \$62.87 \$125.74 2 hrs. @ Principal Engineer: \$104.19 \$208.38 2-Man field Crew:

Party Chief \$50.63 12 hrs. @ \$607.56 Field Assistant: 12 hrs. @ \$44.68 \$536.16

> Subtotal: \$2,656.60

b. Miscellaneous expenses allowance

Reproduction costs, etc. \$50.00 Title Report(s) (furnished by County) \$0.00

Subtotal, Right of Way Investigation: \$2,706.60

Subtotal, Part "A": \$6,328.27

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements) (AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager: 2 hrs. @ \$62.87 \$125.74 Principal Engineer: 1 hrs. @ \$104.19 \$104.19 Drafting/Computing: 20 hrs. @ \$53.58 \$1,071.60

> Subtotal: \$1,301.53

b. Misc. expenses (reproduction costs, etc.) \$50.00

> Subtotal, Exhibit Map \$1,351.53

2. LEGAL DESCRIPTIONS

(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and

temporary easements. \$339.31 each

For Each Description:

Survey Manager: 4 hrs. @ \$62.87 \$251.48 Principal Engineer: 0.5 hrs. @ \$104.19 \$52.10 Clerical: 1 hrs. @ \$35.73 \$35.73

> Subtotal: \$339.31

Allowance for site: 2 ea. @ \$339.31 \$678.61

Subtotal, Part "B": \$2.030.14

TOTAL FEE ESTIMATE, PART "A" AND PART "B"

\$8,358,41

R97030-E REV: 7/14/98

VALENCIA ROAD

State Bridge Number 36C-0116 County Bridge No. 02503-BR.2.7



PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field.

Mobilize field crew. Project coordination and supervision.

Survey Manager: 6 hrs. @ \$62.87 \$377.22 Principal Engineer: 4 hrs. @ \$104.19 \$416.76

> Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief: 5 hrs. @ \$50.63 \$253.15 Field Assistant: 5 hrs. @ \$44.68 \$223.40 G.P.S. Subconsuttant \$300.00

> Subtotal: \$776.55

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls. Additional cross sections at approximately one floodplain width upstream, one floodplain width downstream, and two floodplain widths downstream.

2-Man field Crew:

Party Chief 30 hrs. @ \$50.63 \$1.518.90 Field Assistant: 30 hrs. @ \$44.68 \$1,340.40

> Subtotal: \$2,859.30

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing: 30 hrs. @ \$53.58 \$1,607.40 Principal Engineer: \$208.38 2 hrs. @ \$104.19 Survey Manager: 4 hrs. @ \$62.87 \$25 1.48

> Subtotal: \$2,067.26

e. Miscellaneous expenses allowance \$100.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$6,597.09

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property comers or right of way monuments, if any



Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.

Drafting/Computing: 12 hrs. @ \$55.34 \$664.08 Survey Manager: 2 hrs. @ \$62.87 \$125.74 Principal Engineer: 2 hrs. @ \$104.19 \$208.38 2-Man field Crew:

Party Chief: 12 hrs. @ \$52.27 \$627.24

Field Assistant: 12 hrs. @ \$39.97 \$479.64

> Subtotal: \$2,105.08

b. Miscellaneous expenses allowance

\$50.00 Reproduction costs, etc. Title Report(s) (furnished by County) \$0.00

Subtotal, Right of Way Investigation: \$2,155.08

Subtotal, Part "A":

\$8,752.17

PART "B" **EXHIBIT MAP AND LEGAL DESCRIPTIONS**

1. EXHIBIT MAP (Access / Temporary Easements)

(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager: 2 hrs. @ \$125.74 \$62.87 1 hrs. @ \$104.19 \$104.19 Principal Engineer: Drafting/Computing: 20 hrs. @ \$53.58 \$1,071.60

> \$1,301.53 Subtotal:

\$50.00 b. Misc. expenses (reproduction costs, etc.)

> Subtotal, Exhibit Map \$1,351.53

2. LEGAL DESCRIPTIONS

(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and

temporary easements. \$339.31 each

For Each Description:

Survey Manager: 4 hrs. @ \$62.87 \$251.48 Principal Engineer: 0.5 hrs. @ \$104.19 \$52.10 Clerical: 1 hrs. @ \$35.73 \$35.73

\$339.31 Subtotal:

\$1,357.22 Allowance for site: 4 ea. @ \$339.31

Subtotal, Part "B": \$2,708,75

TOTAL FEE ESTIMATE, PART "A" AND PART "B" \$11,460.92

page 48 of 69 272

R97030-G KING'S CREEK RD. State Bridge Number 36C-0064 County Bridge No. 43026-BR.0.6

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION 1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field.

Mobilize field crew. Project coordination and supervision. Survey Manager: 6 hrs. @ \$62.87 \$377.22

Principal Engineer: 4 hrs. @ \$104.19 \$416.76

Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

 Party Chief:
 6 hrs. @ \$50.63
 \$303.78

 Field Assistant:
 6 hrs. @ \$44.68
 \$268.08

 G.P.S. Subconsultant
 \$300.00

Subtotal: \$871.a6

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief: 12 hrs. @ \$50.63 . \$607.56 Field Assistant: 12 hrs. @ \$44.68 \$536.16

Subtotal: \$1,143.72

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

 Drafting/Computing:
 20 hrs. @ \$53.58 \$1,071.60

 Principal Engineer:
 1 hrs. @ \$104.19
 \$104.19

 Survey Manager:
 2 hrs. @ \$62.87
 \$125.74

Subtotal: \$1,301.53

e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$4,161.09

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property comers or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to

page 49 of 69

detennine necessity of additional right of way needed, if any.

 Drafting/Computing:
 36 hrs. @ \$55.34 \$1,992.24

 Survey Manager:
 4 hrs. @ \$62.87 \$251.48

 Principal Engineer:
 2 hrs. @ \$104.19 \$208.38

2-Man field Crew:

Party Chief: 30 hrs. @ \$52.27 \$1,568.10 Field Assistant: 30 hrs. @ \$39.97 \$1,199.10

Subtotal: \$5,219.30

b. Miscellaneous expenses allowance

Reproduction costs, etc. \$50.00 Title Report(s) (furnished by County) \$0.00

Subtotal, Right of Way Investigation: \$5,269,30

Subtotal, Part "A": \$9,430.39

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)

(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or

temporary easements as required.

Survey Manager: 2 hrs. @ \$62.87 \$125.74 Principal Engineer: 1 hrs. @ \$104.19 \$104.19 Drafting/Computing: 22 hrs. @ \$53.58 \$1,178.76

Subtotal: \$1,408.69

b. Misc. expenses (reproduction costs, etc.)

\$35.00

Subtotal, Exhibit Map \$1,443.69

2. <u>LEGAL DESCRIPTIONS</u>

(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and

temporary easements. \$339.31 each

For Each Description:

 Survey Manager:
 4 hrs. @ \$62.87
 \$251.48

 Principal Engineer:
 0.5 hrs. @ \$104.19
 \$52.10

 Clerical:
 1 hrs. @ \$3573
 \$35.73

Subtotal: \$339.31

Allowance for site: 4 ea. @ \$339.31 \$1,357.22

Subtotal, Part "B": \$2,800.91

TOTAL FEE ESTIMATE, PART "A" AND PART "B" \$12,231.30

R97030-H REV: 7/14/98

LARKSPUR ST.

State Bridge Number 36C-0068 County Bridge No. 43018-BR.0.2

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field Mobilize field crew. Project coordination and supervision.

Survey Manager: 6 hrs. @ \$62.87 \$377.22 Principal Engineer: 4 hrs. @ \$104.19 \$416.76

Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site **and** establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

 Party Chief:
 6 hrs. @ \$50.63
 \$303.78

 Field Assistant:
 6 hrs. @ \$44.68
 \$268.08

 G.P.S. Subconsultant
 \$300.00

Subtotal: \$871.86

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief: 12 hrs. @ \$50.63 . \$607.56 Field Assistant: 12 hrs. @ \$44.68 \$536.16

Subtotal: \$1.143.72

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

 Drafting/Computing:
 20 hrs. @ \$53.58 \$1,071.60

 Principal Engineer:
 1 hrs. @ \$104.19 \$104.19

 Survey Manager:
 2 hrs. @ \$62.87 \$125.74

Subtotal: \$1,301.53

e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$4,161.09

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property comers or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to

32 1

page 51 of 69

determine necessity of additional right of way needed, if any.

Drafting/Computing: 20 hrs. @ \$55.34 \$1,106.80

Survey Manager: 4 hrs. @ \$62.87 \$251.48 Principal Engineer: 2 hrs. @ \$104.19 \$208.38

2-Man field Crew:

Party Chief: 20 hrs. @ \$52.27 \$1,045.40 Field Assistant: 20 hrs. @ \$39.97 \$799.40

Subtotal: \$3,411.46

b. Miscellaneous expenses allowance

Reproduction costs, etc. \$50.00 Title Report(s) (furnished by County) \$0.00

Subtotal, Right of Way Investigation: \$3,461.46

Subtotal, Part "A":

\$7,622.55

\$2.693.75

PARTIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)

(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or

temporary easements as required.

 Survey Manager:
 2 hrs. @ \$62.87 \$125.74

 Principal Engineer:
 1 hrs. @ \$104.19 \$104.19

 Drafting/Computing:
 20 hrs. @ \$53.58 \$1,071.60

Subtotal: \$1,301.53

b. Misc. expenses (reproduction costs, etc.) \$35.00

Subtotal, Exhibit Map \$1,336.53

2. LEGAL DESCRIPTIONS

(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and

temporary easements. \$339.31 each

For Each Description:

Subtotal, Part "B":

 Survey Manager:
 4 hrs. @ \$62.87
 \$251.48

 Principal Engineer:
 0.5 hrs. @ \$104.19
 \$52.10

 Clerical:
 1 hrs. @ \$35.73
 \$35.73

Subtotal: \$339.31

Allowance for site: 4 ea. @ \$339.31

\$1,357.22

TOTAL FEE ESTIMATE, PART "A" AND PART "B" \$10,316.30

R97030-I EITHER WAY LANE State Bridge Number 36C-0073 County Bridge No. 42030-BR.0.1

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field.

Mobilize field crew. Project coordination and supervision.

Survey Manager: 6 hrs. @ \$62.87 \$377.22

Principal Engineer: 4 hrs. @ \$104.19 \$416.76

Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

 Party Chief: 6 hrs. @
 \$50.63
 \$303.78

 Field Assistant:
 6 hrs. @
 \$44.68
 \$268.08

 G.P.S. Subconsultant
 \$300.00

Subtotal: \$871.a6

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief: 12 hrs. @ \$50.63 . \$607.56 Field Assistant: 12 hrs. @ \$44.68 \$536.16

Subtotal: \$1,143.72

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

 Drafting/Computing:
 20 hrs. @ \$53.58 \$1,071.60

 Principal Engineer:
 1 hrs. @ \$104.19

 Survey Manager:
 2 hrs. @ \$62.87 \$125.74

Subtotal: \$1,301.53

e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

Subtotal Site Survey:

\$4,161.09

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property comers or right of **way** monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to

32

page 53 of 69

277

determine necessity of additional right of way needed, if any.

Drafting/Computing: 20 hrs. @ \$55.34 \$1,106.80 Survey Manager: 4 hrs. @ \$62.87 \$251.48 Principal Engineer: 2 hrs. @ \$104.19 \$208.38

2-Man field Crew:

Party Chief: 20 hrs. @ \$52.27 **\$1,045.40** Field Assistant: 20 hrs. @ \$39.97 \$799.40

Subtotal: \$3.411.46

b. Miscellaneous expenses allowance

Reproduction costs, etc. \$50.00

Title Report(s) (furnished by County) \$0.00

Subtotal, Right of Way Investigation: \$3,461.46

Subtotal, Part "A":

\$7,622.55

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements1

(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or

temporary easements as required.

 Survey Manager:
 2 hrs. @ \$62.87
 \$125.74

 Principal Engineer:
 1 hrs. @ \$104.19
 \$104.19

 Drafting/Computing:
 20 hrs. @ \$53.58
 \$1,071.60

Subtotal: \$1,301.53

\$339.31

b. Misc. expenses (reproduction costs, etc.) \$35.00

Subtotal, Exhibit Map \$1,336.53

2. LEGAL DESCRIPTIONS

(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and

temporary easements. \$339.31 each

For Each Description:

 Survey Manager:
 4 hrs. @ \$62.87
 \$251.46

 Principal Engineer:
 0.5 hrs. @ \$104.19
 \$52.10

 Clerical:
 1 hrs. @ \$35.73
 \$35.73

Allowance for site: 4 ea.@ \$339.31 \$1,357.22

, ,

Subtotal:

Subtotal, Part "B": \$2,693.75

TOTAL FEE ESTIMATE, PART "A" AND PART "B" \$10,316.30

Project: Santa Cruz County Seismic Retrofit

- 1. Aptos Creek Bridge
- 2. Valencia Creek Bridge

Tasks: Biological and Wetland Assessment

Reference for Development of SOW: Caltrans Procedure Manual for completing Preliminary Environmental Study (PES) form (July ,1996)

Biological Assessment (Per Site)

Task 1.0 Document Review

California Department of Fish and Game (California Natural Diversity Data Base), and U.S. Fish and Wildlife Service will be contacted for information on state or federal listed, proposed, and/or candidate endangered and/or threatened plant or animal species **and/or** their critical habitat which may occur in the area. The local agencies will be contacted to review any available documents or data for the site and surrounding habitat. No deliverables are anticipated for this task. Task will be completed within 2 weeks for Notice to Proceed.

Task 2.0 Field Survey

An on-site biological assessment will be conducted to assess the site's biological value including habitat value, vegetative cover, and specie diversity. An assessment will also be made of the potential of the retrofit project to impact the site's habitat, and endangered and/or threatened species or species of concern. During the site visit, the site will be surveyed for state or federal listed, proposed or candidate endangered and/or threatened species and suitable habitat for these species. In the event that the site or the immediately adjacent area is assessed to be potential habitat for protected species, further studies may be required that are not covered within this scope of work.

No deliverables are anticipated for this task. Task will be completed within 2 weeks for completion of Task 1.

Task 3.0 Report

A letter report will be prepared describing the results of the field surveys including recommendations for next steps if necessary. Documentation collected during the work will be included as appendices. Three copies of the report will be prepared. Draft and Final versions of the report are anticipated. Kleinfelder has assumed upto 3 hour of the

Senior Biologist time will be required to revise the report to the Final version. Additional 279 charges will be billed on a time and materials basis.

Wetland Delineation (Per Site)

Task 1.0 Document Review

As the first step of the wetland delineation, the following documents will be reviewed for information on wetlands in the project area:

- National Wetlands Inventory Map from the United States Fish and Wildlife Service
- Recent Aerial Photographs
- Soil Surveys and Hydric Soil Lists from the Natural Resources Conservation Service

No deliverables are anticipated for this task. Task will be completed within 2 weeks for Notice to Proceed concurrent with the Biological Assessment.

Task 2.0 Field Survey

A routine wetland delineation field survey and report of jurisdictional wetlands within the areas of potential concern will be completed in accordance with the United States Army Corps of Engineers (USACOE) 1987 Guidelines under Section 404 of the Clean Water Act.

The site will be walked in transects (perpendicular to the watercourse) at suitable site specific intervals and visually scanned for hydrophytic vegetation, standing water, topographical depressions, surface scour, sediment deposition, fence line debris, seeps, and evidence of ditching to assess the site's wetland potential (USACOE, 1987). Areas that appear to meet the three required wetland criteria as defined in the USACOE 1987 Corps of Engineers Wetland Delineation Manual of (1) hydric soil, (2) wetland hydrology and (3) hydrophytic vegetation will be further characterized for hydrophytic vegetative dominance (Reed, 1988), wetland hydrology, and hydric soil. Hydric soil will be determined based on field indicators established by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (USDA, 1996), using descriptions according to Munsell Soil Color Charts (1994). Hydrophytic vegetation will be identified according to wetland indicator status, as defined for the region by the United States Fish and Wildlife Service (USFWS) National List of Plant Species that Occur in Wetlands: California (Region 0) (Reed, 1988). Hydrologic indicators will be determined by observing soil saturation in test pits and soil borings and evidence of standing water e.g. water scouring marks, cracked soils, and sediment deposition.

The areas that meet the USACOE wetland criteria will be further surveyed to quantitatively assess the site's wetland boundaries. These wetland boundaries will then be staked with PVC pipes. All data points will be photographed and staked. Wetland data sheets will be developed to support the observed wetland boundaries. These data sheets will contain the information necessary on vegetation, hydrology and soils to meet the USACOE 1987 requirements for wetland delineation. The observed wetland areas on site will sketched and mapped as part of the wetland delineation report. This scope of services does not include land surveying, data reduction and preparation of a scaled map.

page 56 of 69 280

No deliverables are anticipated for this task. Task will be completed within 2 weeks for completion of Task 1 concurrent with the Biological Assessment.

Task 3.0 Report

A letter report will be prepared in accordance with USACOE standards including the preparation of data sheets. The sketch map and data collected during the tasks will be included in the report as appendices. Three copies of the report will be prepared. **Draft** and Final versions of the report are anticipated. **Kleinfelder** has assumed **upto** 3 hour of the Senior Biologist time will be required to revise the **report** to the Final version.

| _ | | | |
|-----|----------------|------|------|
| NO. | ROUTE DATA | COPY | ATT. |
| 1 | DIRECTOR | / | |
| | ASST. DIR. OPR | | |
| | CSA/CLAIMS | | |
| | OPR. PROJ/PRKG | | |
| | PERMITS/ENCR | | |
| | RDS/DRAIN/EQP | | |
| | SANIT/LANDF | | |
| | ASSI DIR PS. | | |
| | CONSTRUCTION | | |
| | DRAINAGE | | |
| | SANIT. ENG | | |
| | SOLID WASTE | | |
| á | ASSI DIR. R.E. | | |
| 3 | DESIGN | | |
| | R.D.A. | | |
| | RD. PLAN/TRAFF | | |
| | SURVEY | | |
| | CHIEF ADM, SVC | | |
| | REAL PROPERTY | | |

| | Summary of Project Costs Aptos Creek Bridge | | | | | | | | | |
|----------|--|-------------|------------|----------|---------|--|--|--|--|--|
| Task No. | Description | Total Labor | Laboratory | Expenses | Total | | | | | |
| Task 1 | Biological Assessment - Document Review | \$959 | so | \$106 | \$1,065 | | | | | |
| Task 2 | Biological Assessment - Field Survey | \$1,193 | SO | \$51 | \$1,244 | | | | | |
| Task 3 | Biological Assessment - Report | \$1,602 | SO | \$0 | \$1,602 | | | | | |
| Task 4 | Wetlands Delineation - Document Review | \$959 | so | \$58 | \$1,017 | | | | | |
| Task 5 | Wetlands Delineation - Field Survey | \$1,343 | SO | \$53 | \$1,397 | | | | | |
| Task 6 | Wetlands Delineation - Report | \$1,835 | so | \$52 | \$1,887 | | | | | |
| | Totals | \$7,892 | SO | \$320 | \$8,212 | | | | | |

| | Cost Estimat | | | |
|--------------------|------------------------|--|---|--|
| | | | | |
| | | | | |
| | | | | |
| 1 | : Biological Asses | ssment - Doc | ument Review | |
| | | | | |
| ъ | ** | Wage Rate | Proposed | |
| Pos | sition | - | - | Total Dollars |
| | Senior Consultant | <u> </u> | 0 | \$0.00 |
| | Senior Biologist | \$150.11 | 4 | \$600.44 |
| , | ~ | | 0.5 | \$66.20 |
| | Senior Professional | \$0.00 | 0 | \$0.00 |
| | Project Manager | \$82.9 1 | 2 | \$165.82 |
| | Project Professional | \$0.00 | 0 | \$0.00 |
| | Staff Professional | \$0.00 | 0' | \$0.00 |
| | Assistant Professional | \$0.00 | 0 | \$0.00 |
| | Senior Tech | \$0.00 | 0 | \$0.00 |
| | Technician | \$0.00 | 0 | \$0.00 |
| | Draftsman | \$0.00 | 0 | \$0.00 |
| | Clerical | \$42.19 | 3 | \$126.57 |
| | total | | 9.5 | |
| | | • | | |
| | | | - L | \$959.03 |
| | | | <u> </u> | 1.00 |
| | | TOTAL LA | BOR COST | \$959.03 |
| | | | · | |
| | | | - | |
| Trips of | 60 miles @ | \$0.3 1 | per mile | \$18.60 |
| | | | | |
| | Quantity | | | 610 |
| | | | | \$10 |
| - | | 50.00 | eacn | \$50 |
| | | | | |
| ounication ata (* | or direct hour) | | \$2.00 | \$27.55 |
| iumcation, etc. (p | er direct nour) | 9.5 | \$2.90 | ΦΔ1.33 |
| | т | тат отц | FR COSTS | ¢07 55 |
| | 1 | OTAL OTA | EK COSIS | \$87.55 |
| | | | | |
| | | | | |
| | Trips of | Position Senior Consultant Senior Biologist Senior Project Manager Senior Professional Project Manager Project Professional Staff Professional Assistant Professional Senior Tech Technician Draftsman Clerical total Trips of 60 miles @ Quantity 1 1 1 nunication, etc. (per direct hour) | Position Senior Consultant So.00 Senior Biologist \$150.11 Senior Project Manager \$132.40 Senior Professional Project Manager \$82.9 1 Project Professional \$0.00 Staff Professional So.00 Staff Professional So.00 Senior Tech So.00 Technician So.00 Technician So.00 Clerical \$42.19 total Total D Over TOTAL LA Trips of 60 miles @ \$0.3 1 Quantity Unit Cost 1 10.00 1 50.00 nunication, etc. (per direct hour) 9.5 | Senior Consultant \$0.00 0 Senior Biologist \$150.11 4 Senior Project Manager \$132.40 0.5 Senior Project Manager \$132.40 0.5 Senior Professional \$0.00 0 Project Manager \$82.9 2 Project Professional \$0.00 0 Staff Professional \$0.00 0 Assistant Professional \$0.00 0 Senior Tech \$0.00 0 Technician \$0.00 0 Technician \$0.00 0 Clerical \$42.19 3 total 9.5 Total Direct Salary Overhead Factor TOTAL LABOR COST Trips of 60 miles \$0.3 per mile Quantity Unit Cost Unit Measure 1 10.00 each 1 50.00 each |

| | | Cost Estimat | te | | |
|---------------|-------------|-----------------------------|--------------------|-------------------|---------------|
| | | | | | |
| | | | | | |
| Task | 2 | : Biological Asse | essment - Field | l Survey | |
| | | Position | Wage Rate (hourly) | Proposed Hours | Total Dollars |
| | | Senior Consultant | \$0.00 | 0 | \$0.00 |
| | | Senior Biologist | \$150.11 | 6 | \$900.66 |
| | | Senior Project Manager | \$132.40 | 0 | \$0.00 |
| | | Senior Professional | \$0.00 | 0 | \$0.00 |
| | | Project Manager | \$82.9 1 | 2 | \$165.82 |
| | | Project Professional | \$0.00 | 0 | \$0.00 |
| | • | Staff Professional | \$0.00 | 0 | \$0.00 |
| | | Assistant Professional | \$0.00 | 0 | \$0.00 |
| | | Senior Tech | \$0.00 | 0 | \$0.00 |
| | | Technician | \$0.00 | 0 | \$0.00 |
| | | Draftsman | \$0.00 | 0 | \$0.00 |
| | | Clerical | \$42.19 | 3 | \$126.57 |
| | | | | 11 | |
| 1 | | | | | 04 102 05 |
| | | | | rect Salary | \$1,193.05 |
| | | | | ead Factor | 1.00 |
| | | , | TOTAL LAB | OR COST | \$1,193.05 |
| A . TT | | | | | |
| Auto Use: | Tois of | 60 miles @ | ¢0.2.1 | ا دانس سما | 010.60 |
| 1 | Trips of | 60 miles @ | \$0.3 1 | per mile | \$18.60 |
| Other Costs: | | Quantity | Unit Cost | Unit Measure | e |
| Equipment | | | | | \$0 |
| Laboratory | | | | | \$0 |
| | | | | | |
| Supplies, com | nunication, | etc. (per direct hour) | 11.0 | \$2.90 | \$31.90 |
| | | Т | OTAL OTHE | ER COSTS | \$31.90 |
| | Date of Co | est Estimate: Jul. 13, 1998 | ТОТ | AL COST | \$1,243.55 |

| | | Cost Estimate | 3 | • | |
|--------------|------------|-----------------------------|----------------|--------------|--------------------|
| | | | | | |
| | | | | | |
| | | | | | |
| Task | 3 | : Biological Asse | essment - Rep | ort | |
| _ | | | * | | |
| | | | Wage Rate | Proposed | Total |
| | | Position | (hourly) | Hours | Dollars |
| | | Senior Consultant | • • • | 0 | \$0.00 |
| | | Senior Biologist | | 7 | \$1,050.77 |
| | | Senior Project Manager | | 1 | \$132.40 |
| | | Senior Professional | | 0 | \$0.00 |
| | | Project Manager | | 2 | \$165.82 |
| | | Project Professional | | 0 | \$0.00 |
| | | Staff Professional | | 0 | \$0.00 |
| | | Assistant Professional | | 0 | \$0.00 |
| | | Senior Tech | _ | 0 | \$0.00 |
| | | Technician | | 0 | \$0.00 |
| | | Draftsman | \$0.00 | 0 | \$0.00 |
| | | Clerical | \$42.19 | 6 | \$253.14 |
| | | total I | | 16 | · |
| | | | | <u> </u> | |
| | | | Total Di | irect Salary | \$1,602.13 |
| | | | Overh | nead Factor | 1.00 |
| | | , | TOTAL LAI | 3OR COST | \$1,602.13 |
| | | | | _ | |
| Auto Use: | | | | | |
| 0 | Trips of | 60 miles @ | \$0.3 1 | per mile | \$0.00 |
| | | | | - | |
| Other Costs: | | Quantit | y Unit Cost | Unit Measure | e |
| Equipment | | | | | \$0 |
| Laboratory | | | | | \$0 |
| | | - | | | \$0 |
| | | | · = 0 mvv | -: o ~ma | |
| | | T | OTAL OTH | ER COSTS | \$0.00 |
| | | | | | |
| | Data of Co | ost Estimate: Jul. 13, 1998 | TO | TAL COST | T ¢1 602 12 |
| | Date of Co | St Estimate. Jul. 13, 1770 | 107 | IAL CUSI | \$1.UU4.1 <i>3</i> |

| | | Co | ost Estimate | <u>, </u> | | |
|---------------|-------------|------------------------|---------------|--|--------------|---------------|
| | | | | | | |
| | | | | | | |
| Task | 4 | : W | etlands Delin | eation - Docu | ıment Reviev | V |
| | | | | | | - |
| | | Position | | Wage Rate | Proposed | Total Dollars |
| | | | | (hourly) | Hours | |
| | | | or Consultant | \$0.00 | 0 | |
| | | | ior Biologist | \$150.11 | 4 | \$600.44 |
| | | - | ject Manager | \$132.40 | 0.5 | \$66.20 |
| | | Senior | Professional | \$0.00 | 0 | \$0.00 |
| | | Proj | ect Manager | \$82.91 | 2 | \$165.82 |
| | | Projec | t Professior | al \$0.00 | 0 | \$0.00 |
| | | Staff | Professional | \$0.00 | 0 | \$0.00 |
| | | Assistant | Profession | • | .00 0 | \$0.00 |
| | | | Senior Tech | \$0.00 | 0 | \$0.00 |
| | | | Technician | \$0.00 | 0 | \$0.00 |
| | | | Draftsman | \$0.00 | 0 | \$0.00 |
| | | | Clerical | \$42.19 | 3 | \$126.57 |
| | | | total | | 9.5 | |
| | | | | | | |
| | | | | | rect Salary | \$959.03 |
| | | | | Overh | ead Factor | 1.00 |
| | | | 7 | TOTAL LAB | OR COST | \$959.03 |
| | | | | | | |
| Auto Use: | | | | | | |
| 1 | Trips of | 60 | miles @ | \$0.31 | per mile | \$18.60 |
| | | | | | | |
| Other Costs: | | | Quantity | Unit Cost | Unit Measur | e |
| Wetlands Map | S | | 1 | 12.00 | each | \$12 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Supplies, com | munication, | etc. (per direct l | nour) | 9.5 | \$2.90 | \$27.55 |
| | | | | | | |
| | | | T | OTAL OTHI | ER COSTS | \$39.55 |
| | | | | | | |
| | | | | | | |
| <u> </u> | Date of Co | st Estimate: Ju | l. 13, 1998 | TOT | fal cost | \$1.017.18 |

| | | | Cost Estima | te | | |
|--------------|-------------|---------------|-------------------|--------------------|-------------------|---------------|
| | | | | | | |
| Task | 5 | | Wetlands Delin | eation - Field | Survey | |
| Task _ | <u> </u> | : | wettands Denn | eation - Meiu | Survey | |
| | | Position | | Wage Rate (hourly) | Proposed Hours | Total Dollars |
| | | S | enior Consultant | \$0.00 | 0 | \$0.00 |
| | | | Senior Biologist | \$150.11 | 7 | \$1,050.77 |
| | | Senior | Project Manager | \$132.40 | 0 | \$0.00 |
| | | Sei | nior Professional | \$0.00 | 0 | \$0.00 |
| | | | Project Manager | \$82.91 | 2 | \$165.82 |
| | | Pro | ject Professional | \$0.00 | 0 | \$0.00 |
| | | S | taff Professional | \$0.00 | 0 | \$0.00 |
| | | Assist | ant Professional | \$0.00 | 0 | \$0.00 |
| | | | Senior Tech | \$0.00 | 0 | \$0.00 |
| - | | | Technician | \$0.00 | 0 | \$0.00 |
| | | | Draftsman | \$0.00 | 0 | \$0.00 |
| | | | Clerical | \$42.19 | 3 | \$126.57 |
| | | | total | | 12 | |
| | | | | Total Dir | ect Salary | \$1,343.16 |
| | | | | | ead Factor | 1.00 |
| | | | 7 | TOTAL LAB | OR COST | \$1,343.16 |
| | | | | | | |
| uto Use: | | | | | r | |
| <u> </u> | Trips of | 60 | miles @ | \$0.3 1 | per mile | \$18.60 |
|)ther Costs: | | | Quantity | Unit Cost | Unit Measure | |
| lquipment | | | | | | \$0 |
| aboratory | | | | | | \$0 |
| | | | | | | |
| upplies, com | munication, | etc. (per dir | ect hour) | 12.01 | \$2.90 | \$34.80 |
| | | | TO | OTAL OTHE | CR COSTS [| \$34.80 |
| | | | | | | |
| | Date of Co | st Estimate | : Jul. 13, 1998 | TOT | AL COST I | \$1396.56 |

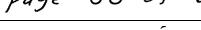
| Cost Estimate | e | | |
|---|--------------------|------------------|---------------|
| Task 6 : Wetlands Delin | eation - Repo | rt | |
| Position | Wage Rate (hourly) | Proposed Hours | Total Dollars |
| Senior Consultant | \$0.00 | 0 | \$0.00 |
| Senior Biologist | \$150.11 | 8 | , \$1,200.8 |
| Senior Project Manager | \$132.40 | 1 | \$132.40 |
| Senior Professional | \$0.00 | 0 | \$0.00 |
| Project Manager | \$82.91 | 3 | \$248.73 |
| Project Professional | \$0.00 | 0 | \$0.00 |
| Staff Professional | \$0.00 | 0 | \$0.00 |
| Assistant Professional | \$0.00 | 0 | \$0.00 |
| Senior Tech | \$0.00 | 0 | \$0.00 |
| Technician | \$0.00 | 0 | \$0.00 |
| Draftsma | n \$0.00 | 0 | \$0.00 |
| Clerical | \$42.19 | 61 | \$253.14 |
| total | | 18 | |
| | | | |
| | | rect Salary | \$1,835.15 |
| , | | ead Factor | 1.00 |
| | TOTAL LAB | or cost <u>i</u> | \$1,835.15 |
| Auto Use: | | | |
| 0 Trips of 60 miles @ | \$0.31 | per mile [| \$0.00 |
| Other Costs: Quantity | Unit Cost | Unit Measure | |
| Equipment Quantity | Om Cost | Onit Measure | \$0 |
| Laboratory | | | \$0 \$0 |
| | | | |
| Supplies, communication, etc. (per direct hour) | 18.0 | \$2.90 | \$52.20 |
| T | OTAL OTHE | ER COSTS [| \$52.20 |
| Date of Cost Estimate: Jul. 13, 1998 | ТОТ | AL COST | \$1,887.35 |

| Summary of Project Costs Valencia Creek Bridge | | | | | | | | | |
|---|---|-------------|------------|----------|---------|--|--|--|--|
| Task No. | Description | Total Labor | Laboratory | Expenses | Total | | | | |
| Task 1 | Biological Assessment - Document Review | \$971 | so | \$106 | \$1,077 | | | | |
| Task 2 | Biological Assessment - Field Survey | \$1,206 | SO | \$51 | \$1,257 | | | | |
| Task 3 | Biological Assessment - Report | \$1,615 | \$0 | \$0 | \$1,615 | | | | |
| | Totals | \$3,792 | SO | \$157 | \$3,949 | | | | |

| | | Cost Esti | imate | • | | |
|---------------|---------------------|--------------------------------|--------|-------------|---------------|---------------|
| | | | | | | |
| Task_ | 1 | : Biological A | Assess | sment - Doo | cument Review | |
| | | Position | | Wage Rate | Proposed | Total Dollars |
| | | | | <u> </u> | | Total Bollars |
| | | Senior Consult | ltant | \$0.00 | 0 | \$0.00 |
| | | Senior Biolo | gist | \$150.11 | 4 | \$600.44 |
| | | Senior Project Mana | ager | \$130.70 | 0.5 | \$65.35 |
| | | Senior Profession | _ | \$0.00 | 0 | \$0.00 |
| | | Project Mana | ager | \$88.74 | 2 | \$177.48 |
| | | Project Profession | _ | \$66.62 | 0 | \$0.00 |
| | | Staff Profession | | \$56.5 1 | 0 | \$0.00 |
| | | Assistant Professio | onal | \$52.20 | 0 | \$0.00 |
| | | Senior T | ech _ | \$0.00 | 0 | \$0.00 |
| | | Technic | cian 🗀 | \$0.00 | 0 | \$0.00 |
| | | Draftsn | nan | \$56.47 | 0 | \$0.00 |
| | | Cleri | ical | \$42.65 | 3 | \$127.95 |
| | | to | otal | | 9.5 | |
| | | | | | _ | |
| | | | | | irect Salary | \$971.22 |
| | | | | | head Factor | 1.00 |
| | | | 7 | TOTAL LA | BOR COST [| \$971.22 |
| A4 - TI | | | | | | |
| Auto Use: | Tuina af | (0:1 (| _ | ¢0.2.1 | ., Г | 010.60 |
| <u></u> | Trips of | 60 miles @ | a | \$0.3 1 | per mile | \$18.60 |
| Other Costs: | | Quantity | 7 | Unit Cost | Unit Measure | |
| JSGS Maps | | 1 | | 10.00 | | \$10 |
| Data Base | | 1 | | 50.00 | i | \$50 |
| | | | | | | Ψ50 |
| | | | | | | |
| Supplies, com | munication, etc | . (per direct hour), | t | 9.5 | \$2.90 | \$27.55 |
| | | | T/ | TAI OTI | ED COSTS I | CO7 22 |
| | | | 1(| JIAL UIB | ER COSTS [| \$87.55 |
| | | | | | , | |
| | Date of Cost | Estimate: Jul. 13, 1998 | 8 | TO | TAL COST | \$1,077.37 |

| | | | Cost Estimat | te | | <u> </u> |
|---------------|---------------|----------------|------------------|----------------|-------------------|--------------|
| Task _ | 2 | : | Biological Asse | essment - Fiel | d Survey | |
| | | Position | | (hourly) | Proposed Hours | Total Dollar |
| | | Se | nior Consultant | \$0.00 | 0 | \$0.00 |
| | | S | Senior Biologist | \$150.11 | 6 | \$900.66 |
| | | | Project Manager | \$130.70 | 0 | \$0.00 |
| | | | or Professional | \$0.00 | 0 | \$0.00 |
| | | P | roject Manager | \$88.74 | 2 | \$177.48 |
| | | | ect Professional | \$66.62 | 0 | \$0.00 |
| | | Sta | aff Professional | \$56.5 1 | 0 | \$0.00 |
| | | Assista | nt Professional | \$52.20 | 0 | \$0.00 |
| | | | Senior Tech | \$0.00 | 0 | \$0.00 |
| | | | Technician | \$0.00 | 0 | \$0.00 |
| | | | Draftsman | \$56.47 | 0 | \$0.00 |
| | | | Clerical | \$42.65 | 3 | \$127.95 |
| | | | | | 11 | |
| | | | | Total Di | rect Salary | \$1,206.09 |
| | | | | | ead Factor | 1.00 |
| | | | ŗ | TOTAL LAE | <u>1</u> | \$1,206.09 |
| | | | | | • | • |
| Auto Use: | Trips of | 60 | miles @ | \$0.3 I | per mile | \$18.6 |
| Other Costs: | | | Quantity | Unit Cost | Unit Measure | |
| Equipment | | | | | | \$(|
| Laboratory | | | | | | \$(|
| Supplies, com | munication, e | tc. (per direc | ct hout) | 11 .0 | \$2.90 | \$31.9 |
| | | | T | OTAL OTH | ER COSTS | \$31.9 |
| | Date of Co | st Estimate: | Jul. 13, 1998 | TO | TAL COST | \$1.256.5 |

| | | Cost Estimate | | | | | | |
|--------------|------------------------|---|--------------|----------------|------------|--|--|--|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Task | 3 | : Biological Asse | coment - Ren | ort | | | | |
| 1 ask _ | <u> </u> | Diviogical Asse | ssmem - Rep | OIt | | | | |
| | | | 337 D a4a | D | m 4.1 | | | |
| | | Position | Wage Rate | Total | | | | |
| | | | (hourly) | Hours | Dollars | | | |
| | | Senior Consultant | \$0.00 | 0 | \$0.00 | | | |
| | | Senior Biologist | \$150.11 | 7 | \$1,050.77 | | | |
| | | Senior Project Manager | \$130.70 | 1 | \$130.70 | | | |
| | | Senior Professional | \$0.00 | 0 | \$0.00 | | | |
| | | Project Manager | \$88.74 | 2 | \$177.48 | | | |
| | | Project Professional | \$66.62 | 0 | \$0.00 | | | |
| | | Staff Professional | \$56.5 1 | 0 | \$0.00 | | | |
| | | Assistant Professional | \$52.20 | 0 | \$0.00 | | | |
| | | Senior Tech | \$0.00 | 0 | \$0.00 | | | |
| | | Technician | \$0.00 | 0 | \$0.00 | | | |
| | | Draftsman | \$56.47 | 0 | \$0.00 | | | |
| | | Clerical | | 6 | \$255.90 | | | |
| | | total | · | 16 | * | | | |
| | | | ļ | l | | | | |
| | | | Total Di | rect Salary | \$1,614.85 | | | |
| | | 1.00 | | | | | | |
| | | Overhead Factor TOTAL LABOR COST | | | \$1,614.85 | | | |
| | | • | IOIAL LID | ok cosi [| Ψ1,017.02 | | | |
| Auto Use: | | | | | | | | |
| Auto Ose: | Tring of | 60 miles @ | \$0.3 1 | nor mila | \$0.00 | | | |
| <u> </u> | Trips of | 60 miles @ | φυ.3 1 | per mile | \$0.00 | | | |
| Other Costs: | | Quantity | Unit Cost | Unit Measure | <u> </u> | | | |
| | | Quantity | UIII COSI | Ullit Micasure | \$0 | | | |
| Equipment_ | | | | | \$0 | | | |
| Laboratory | | | | | | | | |
| <u>.</u> | | I - | / | | \$ 0 | | | |
| | TOTAL CONTROL COCKE | | | | | | | |
| | TOTAL OTHER COSTS\$0.0 | | | | | | | |
| | | | | | | | | |
| | D 4 -6 C- | 4 T 1 12 1000 | ТОЛ | | M1 /14 05 | | | |
| | Date of Co | st Estimate: Jul. 13 , 1998 | 101 | TAL COST | \$1,614.85 | | | |





July 14 1998

File No: 1 O-Y 10002

Mr. Dermis Jang T.YLin International 825 Battery Street San Francisco, California 94111

Subject: Santa Cruz County Bridge Seismic Retrofit

Dear Mr. Jang:

The purpose of this letter is to respectfully request the addition of two Kleinfelder, Inc. (Kleinfelder) personnel to the approved staff list for the subject project. Kleinfelder is providing the California Department of Transportation (Caltrans) with technical support concerning potential legal issues associated with the project.

The two personnel that we request be added to our project team are:

Senior Geologist/Project Manager \$127.92 per • Mr. William Theyskens hour

• Ms. Christina Kennedy Senior Client Manager \$119.42 per hour

Mr. Theyskens is a senior professional, who has extensive experience in managing projects with respect to environmental issues. He will serve as a senior technical resource on this project. Ms. Kennedy is a senior professional who has extensive experience in managing projects with respect to environmental issues and in the Santa Cruz Mountains. She will provide research support on this project. Their resumes are attached for your review.

Should this request be approved by Caltrans, we request that you provide us with written confirmation. Should you require any additional information and/or clarifications, please call.

Very truly yours,

KLEINFELDER, INC.

Regional Environmental Manager

293

STATE OF CALIFORNIA

PERSONNEL REQUEST

BUSINESS, TRANSPORTATION AND HOUSING AGENCY

| | OFIT PROJECT | | | | | Date: | July 6, | 1998 | | | | |
|------------------------------------|------------------------|--------------------------|---------------------------------------|----------------------------|------------|-----------------------------|---------------|----------------------------------|-------------|-------|---------------|------|
| COST PROPOSAL TO: TY LIN | | | | | | | | Contract No. Expiration Date: | | | | |
| FROM: Kleinfelder, Inc. | | | | | | | | File No | | | | |
| | | Eringo Repelit | | Overhead % | | Gener | ral Administr | ation & | | | 0 | ., |
| Nor | mal | Fringe Benefit: | • | 111% | | Gener | 50% | ation A | | | Combined 195% | * |
| Premium Portion of Overtime | | 0% | | 111% | | | 50% | - | | | 161% | |
| | | | | | | ge. Overhead | | | Hourly Rate | | | |
| Name | Function | Initial Wage (\$/Hr.) | % Wage Incr. (After 1/27/99) | scheduled wage (\$/Hr.) | Normal | Premium Portion of OT | Fee % | Normal | от 1.5х | OT 2x | From | то |
| Paul Baginski | Senior Project Manager | 44.34 | 500 | 44.34 | 195 | 161 | 10.00 | 143.90 | N/A | N/A | 1/27/98 | 1/27 |
| Lita Freeman | Project Manager | 27.06 | 5.00 | 27.03 | 195 | 161 | 10.00 | 87.88 | N/A | NIA | 1/27/98 | 1/27 |
| Roxy Barnett | Senior Biologist | 46.26 | 5.w | 46.26 | 195 | 161 | 10.00 | 15011 | N/A | N/A | 1/27/98 | 1/27 |
| Sandra Hope | Clerical | 13.65 | 5.00 | 13.65 | 195 | 161 | lo.w | 44.29 | N/A | N/A | 1/27/98 | 1/27 |
| William Theyskens | Senior Geologist | 39.42 | 5.00 | 39.42 | 195 | 161 | 10.00 | 127.92 | N/A | N/A | 1/27/98 | 1/27 |
| Christina Kennedy | Senior Client Manager | 36.60 | 5.00 | 36.80 | 195 | 161 | 10.00 | 119.42 | | N/A | 1/27/98 | 1/27 |
| The above cons | sultant hereby reque | ests CALTRA | ANS appr | oval for the a | additional | staff listed | d above. | | | | | |
| | | | | DATE REQUE | | Pai | | | | | | |
| : | STATE CONTRAC | T MANAGEI | R | | | | | | TOR PRO | | MANAGE | R |

DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONSULTANT CONTRACT REQUIREMENTS

The provisions of Title 49, Part 23, Code of Federal Regulations (49CFR 23) and Santa Cruz County's adopted DBE Program require that Disadvantaged Business Enterprises (DBEs) have the opportunity to participate in federally funded, transportation projects.

In order to meet these requirements, the following criteria have been established:

- 1. Participation by CALTRANS' certified **DBEs** as prime consultants or subconsultants in this contract or
- 2. A good faith effort by the prime consultant n trying to secure participation by DBEs prior to award of this contract. Documentation of a good faith effort will be submitted in writing and will consist of the following:
 - a) A list of CALTRANS' certified DBEs solicited.
 - b) Description of efforts to use the services of available minority community organizations; minority contractor groups; women contractor groups; and local, state, and federal minority business assistance centers in the recruitment and placement of DBEs including name of contact, date of contact, and information they provided.
 - c) Identification of the portions of the work to be performed by **DBEs** including type of work and dollar value.
 - d) Documentation of good faith negotiations between subcontractors and interested DBEs, including names and dollar values of all bids.

CERTIFICATION OF CONSULTANT

I HEREBY CERTIFY that I am the engineer and duly authorized representative of the firm of T.Y. Lin International, whose address is 825 Battery Street, San Francisco, CA 94111, and that, except as hereby expressly stated, neither I nor the above firm that I represent have:

- (a) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above consultant) to solicit or secure this agreement; nor
- (b) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the agreement; nor
- (c) paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above consultant) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out this agreement.

I acknowledge that this Certificate is to be made available to the California Department of Transportation (CALTRANS) in connection with this agreement involving participation of federal aid highway funds, and is subject to applicable state and federal laws, both criminal and civil.

7/20/98 (Date)

(SIGNATURE OF CONSULTANT)

I HEREBY CERTIFY that I am the Director of the Santa Cruz County Department of Public Works and that the consulting firm of T.Y. Lin International or its representative has not been required (except as herein expressly stated), directly or indirectly, as an express or implied condition in connection with obtaining or carrying out this Agreement to:

- (a) employ, retain, agree to employ or retain, any firm or person; or
- (b) pay or agree to pay, to any firm, person or organization, any fee, contribution, donation, or consideration of any kind.

I acknowledge that this Certificate is to be made available to the California Department of Transportation (CALTRANS) in connection with this Agreement involving participation of federal aid highway funds, and is subject to applicable state and federal laws, both criminal and civil.

ATTACHMENT NO. 4

Auly 23, 1998

COUNTY OF SANTA CRUZ REQUEST FOR APPROVAL OF AGREEMENT

| | | 297 | |
|------------|---|--|------|
| TO: | Board of Supervisors County Administrative Officer | FROM: PUBLIC WORKS (De | pt.) |
| | County Counsel Auditor-Controller | (Signature) 7/31/98 (Do | - |
| The | Board of Supervisors is hereby requ | sested to approve the attached agreement and authorize the execution of the same. | |
| 1. | Said agreement is between the | COUNTY OF SANTA CRUZ (Ager | ıcy) |
| | | onal, 825 Battery St., San Francisco, CA (Name & Addre | ess) |
| 2. | | ineering design services for eight bridges of the | |
| | Sel | smic Retrofit Program | _ |
| 3. | The agreement is needed becaus | e the work can be done most expeditiously by contract. | |
| 4. | Period of the agreement is from | Board Approval to June 30, 1999 | |
| 5. | decrease Anticipated xxxx is \$ 1 0 . 8 9 2 . 7 | 7 2 (Fixed amount; Monthly rate; Not to exce | eed) |
| 6. | Remarks:, Contract \$602, | 73.30; 6% Overhead \$36,142.40; Total \$638,515.70 | |
| | | | |
| 7. | | 1046-3590-POO247 (621100) (Index#) 3590 (Subobj | ect) |
| _ | | PRIATIONS ARE INSUFFICIENT, ATTACH COMPLETED FORM AUD-74 , | |
| Ap | propriations available and are not | will be encumbered. Contract No. <u>81594</u> Date <u>7/31/98</u> GARY A KNUTSON Auditor - Controller | |
| _ | | By | uty. |
| _ <u>D</u> | Director of Pu blic Work | recommended that the Board of Supervisors approve the agreement and authorize the Solution of the Department of | |
| | Public Works marks: | (Agency). County Administrative Officer | |
| | | (Analyst) By 50 W Date 7-31-59 | |
| | reement approved as to form. Date | | |
| | lJ:bbs | | |
| Uis | Bd. of Supv White Auditor-Controller - Blue County Counsel - Augus - Co. Admin. Officer - Canary Auditor-Controller - Pink Originating Dept Goldenrod | State of California) County of Santa Cruz) Ss | у |
| | *To Orig. Dept. if rejected. | said Board of Supervisors as recommended by the County Administrative Officer by an order duly entere in the minutes of said Board on County Administrative Officer By | er |

ADM - 29 (6/95)