

AGENDA: May 3, 2007

TO: Regional Transportation Commission - Service Authority for Freeway Emergencies

FROM: Grace Blakeslee, Transportation Planner

RE: Call Box Upgrades Update and New Call Box Maintenance Contract

RECOMMENDATION

Staff recommends that the Regional Transportation Commission, acting as the Service Authority for Freeway Emergencies (SAFE):

1. Accept an update on the Santa Cruz County call box digital and TTY (teletypewriter) upgrades; and,
 2. Adopt a resolution ([Attachment 1](#)) authorizing the Executive Director to enter into a five year contract with Comarco Wireless Technologies for maintenance of the Santa Cruz County upgraded call box system.
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BACKGROUND

The Regional Transportation Commission (RTC) entered into a five year agreement (November 1, 2000 to October 31, 2005) with Comarco Wireless Technologies to provide call box maintenance services for the Santa Cruz County call box system.

In October 2005, the RTC approved entering into an agreement with Comarco Wireless Technologies for TTY and digital upgrades to the entire Santa Cruz County call box system. Conversion of the call boxes from analogue to digital was needed as cellular companies indicated that they would no longer support analog technology after 2007. The TTY upgrades were needed in anticipation that the Federal Access Board issued Americans with Disabilities Act Accessibility Guidelines (ADAAG) would be finalized to include TTY devices for call boxes.

In December 2005, the RTC approved extending the existing call box maintenance contract through completion of the call box upgrades; with the intent of negotiating a new maintenance contract when the new equipment was installed. At that time the upgrades were scheduled to be completed by March 2006. Hence, the RTC approved extending the existing maintenance agreement for a six month period through April 2006 and authorized staff to execute amendments to the existing maintenance contract to ensure continued maintenance to the call box system until completion of the upgrades.

Extended negotiations with the digital cellular carrier for the call boxes, Cingular Wireless, delayed the upgrades until December 2006; almost one year later than originally scheduled. The digital cellular service contract was required prior to installation of digital cellular equipment.

The delays in finalizing the contract for digital cellular service can primarily be attributed to the indirect impacts of a dispute between Cingular Wireless and San Bernadino, San Diego and Riverside SAFEs over the same type of digital cellular service contract desired by Santa Cruz County SAFE. During the dispute, Cingular Wireless put digital cellular contract negotiations with Santa Cruz County SAFE on hold. In order to ensure that maintenance to the call boxes was continued during this period the existing maintenance contract was extended through the expected upgrade completion date. The current maintenance contract expires April 30, 2007.

DISCUSSION

Call Box Upgrades Update

The call box upgrades have been underway since January 3, 2007 and are 95% complete. The remaining call boxes have been upgraded with the new technology, but are experiencing problems receiving the new digital cellular service. Staff is working closely with Cingular Wireless and Comarco Wireless Technologies to ensure that these call boxes come online in a timely manner.

Inspections

Inspections of the call boxes by a private inspector are planned prior to making a formal approval of the upgrades completion. The inspector will be requested to test a sample of call boxes to insure TTY and digital workability. Other SAFE's, including Monterey County SAFE, experienced some inconsistencies in the service provided by the new technologies immediately after their implementation. RTC staff believes that it is prudent for an outside contractor to inspect the call boxes to ensure that they are functioning as expected prior to formally completing the upgrades. The inspections are anticipated to cost \$2,500. Sufficient SAFE funds are budgeted for the call box upgrades to cover the cost of the inspections.

Upgrades Contract Cost

The contract with the upgrade contractor, Comarco Wireless Technologies, was awarded at a cost of \$256,349 in October 2005. The RTC approved a contract limit of \$260,000 which allowed for a contingency of approximately 1.5%. The contractor has incurred costs not accounted for in the originally contracted amount including: the purchase of equipment used to adhere the TTY signs to the call box posts and costs associated with acquiring the TTY signs. These activities are included in the Scope of Work for the project, but the costs were inadvertently left out of the contractor's proposal. The contractor has worked cooperatively with staff to minimize additional costs and ensure that the work is completed in accordance with the contracted Scope of Work. Due to additional costs associated with this work, staff is negotiating possible cost increases with the contractor and is working to keep them within the amount approved by the RTC. Staff will return to the RTC for direction if the outcome of negotiations differs.

Site Survey

Site surveys were completed in conjunction with the call box upgrades. The site surveys were completed in anticipation that the Federal Access Board issued Americans with Disabilities Act Accessibility Guidelines (ADAAG) would be finalized to establish mobility access parameters for call boxes in addition to providing a comprehensive update of call box sites. Information collected in the site surveys include:

- the call box location and surroundings, such as, the presence of hand rails, retaining walls, length of the handset cord, height of call box, the presence of a call box pad and drops or edges adjacent to the call box;
- access to the call box from the edge of the roadway or shoulder including distance from the pavement to the pole, the surface type and degree of slope; and,
- potential improvements such as installing a pad at the call box site, lowering or building up the area surrounding the call box, removing a curb or berm or reconfiguring a site.

The site surveys will provide a tool for RTC staff to evaluate the level of need and the feasibility of call box site upgrades. Staff will return to the RTC with an analysis of the information provided by the call box site surveys and recommendations for site improvements as needed and feasible.

Call Box Maintenance Contract

Both the existing Santa Cruz County call box maintenance contract and the proposed new maintenance contract can be categorized as *Fixed Rate Limited “turn key”* Maintenance Contracts. These contracts include four elements of call box maintenance: preventive maintenance, corrective maintenance, limited knockdown and vandalism repairs and limited removal and replacement of call boxes. A description of preventative and corrective maintenance activities and other repairs included in the *Fixed Rate Limited “turn key”* Maintenance Contract are included in Attachment 2. Comarco Wireless Technologies offers two other Maintenance Contract options: *All Inclusive Fixed Rate “turn key”* maintenance contract and the *Performance Based* Maintenance Contract. Description of the other contract options are also included in Attachment 2.

The *Fixed Rate Limited “turn key”* Maintenance Contract is best suited to address maintenance for the Santa Cruz County call box system given the historical number of knockdowns and relocation rates and staff time available to administer the contract. Comarco Wireless Technology owns all of the cellular telephone call box patents and is virtually the only company with whom SAFE’s can contract for call box installation and maintenance.

Historical Call Box Maintenance Needs

In 2006, fifty-one corrective maintenance repairs were completed for Santa Cruz County call boxes. The repairs included battery, faceplate and cable replacements and working with the cellular provider to address cellular coverage issues for individual call boxes. Seven call box knockdowns or partial knockdowns (5.6% of the call box system) occurred in 2006. In addition, three call boxes (2.4% percent of the system) were removed during 2006 as a result of the

Highway 1/17 Merge Lanes Construction Project. These repairs compare favorably with Santa Cruz County corrective maintenance call box needs.

Call Box Maintenance Cost

Over the past six years (November 2000-November 2006) the cost for call box maintenance has increased from \$302 to \$361 per call box per year. This cost covers preventative and corrective maintenance and other repairs consistent with the *Fixed Rate Limited “turn key”* Maintenance Contract. The rate increased annually according to the Consumer Price Index for the State of California as specified in the contract. In total, the rate increased 19.5% over a six year period or approximately 3.2% per year.

The maintenance price per call box for the proposed new contract begins at \$417 per year and is to be increased annually by the Consumer Price Index. This starting rate is a 15% increase from today’s maintenance rate. The additional cost per call box covers maintenance of the TTY equipment added to the call boxes as part of the upgrades. The following table illustrates the cost of the proposed five year contract:

Fees for New Maintenance Contract

Year	Assumed # of In-Service Call Boxes	Annual Fee Per Call Box**	Annual Total	Cumulative Total
Year 1	120*	\$417	\$49,997	\$49,997
Year 2	120*	\$429	\$51,497	\$101,494
Year 3	124	\$442	\$54,810	\$156,303
Year 4	124	\$455	\$56,454	\$212,757
Year 5	124	\$469	\$58,148	\$270,905

*Four call boxes have been removed to accommodate the Highway 1/17 Merge Lanes Project construction and are expected to be reinstalled upon the completion of the project.

**Consumer Price Index is assumed at 3% for forecasting purposes.

The annual total cost assumes that RTC SAFE will not exceed the threshold for knockdown and temporary removals and reinstallations. However, the SAFE budget contains a contingency reserve should the thresholds be exceeded. Comarco Wireless Technologies is offering the same rate to all SAFEs throughout the state for identical service. The funds for the proposed maintenance services are included in the adopted FY06/07 and FY07/08 budgets.

Staff recommends that the RTC adopt the attached resolution authorizing the Executive Director to enter into an agreement with Comarco Wireless Technologies for call box system maintenance for the period from May 1, 2007 to April 30, 2012 at a rate of \$416.64 per year per box for the first year increased annually in May according to the Consumer Price Index for the State of California (Attachment 1).

SUMMARY

The Santa Cruz County call box TTY and digital upgrades are 95% complete. Inspections by an independent inspector are planned upon completion of the upgrade work. Comarco Wireless, the contractor completing the upgrades, has requested compensation for costs associated with the installation of TTY signs that were not correctly accounted for in the original contract cost. Site surveys were completed during the call box upgrades to provide information about the needs and opportunities for mobility improvements to call box sites.

The existing Call Box Maintenance Contract for Santa Cruz County call boxes expires April 30, 2007. A new Call Box Maintenance Contract will include maintenance for the new TTY equipment installed. The *Fixed Rate Limited "turn key"* Maintenance Contract offered by Comarco Wireless Technologies is best suited to address maintenance for Santa Cruz County call boxes.

Attachment 1: Resolution Authorizing the Executive Director to Enter Into a Call Box Maintenance Agreement with Comarco Wireless Communications

Attachment 2: Comarco Wireless Technologies Maintenance Plan Descriptions

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Attachment 2

Comarco Wireless Technologies Maintenance Contract Descriptions (4/07)

1. Fixed Rate Limited “turn key” Maintenance Contract

- Preventive maintenance involves visiting every call box site every six months to inspect all of the call box components. This shall include cleaning, as necessary, of call box housing, inspection and anti-corrosion treatment of external electrical connections associated with solar panels and antenna transmission lines, inspection of replacement as necessary of call box weather tight seals and electrical penetration points for solar power panels, check solar panel current level and battery pack voltage level, check TTY Lite operation, check operation of call box controls and system operational sequence, check outer door, handset and illumination of proper operation. Preventative Maintenance also includes the cleaning of the site, including, but not limited to, the removal of weeds, trash, debris, accumulated sedimentation on or around the call box pad.
- Corrective maintenance involves responding to call box alarms and calls from the California Highway Patrol, Caltrans, RTC staff or anyone else indicating operational problems with individual call boxes or the system as a whole. The corrective maintenance charges cover the cost of all electronic components which fail and need to be replaced or repaired including, but not limited to, batteries, cables, cellular equipment, handset, door and solar panel.
- Other repairs included in the “turn key” maintenance contract not covered under either preventive or corrective maintenance including the repair or replacement of non-electronic components sustained when a call box is struck by a vehicle, knocked down, vandalized or sustains damages imposed by nature temporary removals and reinstallations, etc. Temporary removals and reinstallations are also covered under this maintenance category. It is assumed that knockdowns will not exceed 7% of the installed number of call boxes and temporary removals and reinstallations will not exceed 3% of the installed number of call boxes in the system. The RTC would pay for those items above the percentage thresholds.

2. All Inclusive “turn key” Maintenance Contract

- In addition to providing the preventative and corrective maintenance services as described above, the All Inclusive “turn key” rate covers the cost of unlimited knockdowns, removal and relocations.

3. Performance Based Maintenance Contract

- A fixed rate for preventative maintenance described above and a tiered rate for corrective maintenance activities described above based on the quality and timeliness of the repairs.