

STAFF REPORT

SUBJECT: Call Box System Replacement Project

MEETING DATE: May 15, 2003

AGENDA ITEM: 9

RECOMMENDATION:

Hold public hearing to receive comments on replacement and upgrading of highway call boxes.

DISCUSSION:

Background

SBCAG, in its role as the Service Authority for Freeways and Expressways (SAFE), is responsible for operation and maintenance of the highway call box system in Santa Barbara County. Most of the 340 call boxes in the system were installed over ten years ago, and since that time the original equipment has deteriorated due to age and weather conditions. SBCAG is now undertaking a comprehensive capital replacement and upgrade project for the entire call box system. At its April 2003 board meeting, the SBCAG Board scheduled a public hearing to be held on May 15, 2003, as part of its monthly meeting, to solicit comments from the public. Public notices describing the project were advertised in local newspapers and a direct mail notice was sent to social service groups and other interested parties. A brief presentation on the call box project is scheduled as well as a demonstration of some of the available call box units prior to opening the public hearing.

The capital replacement project will meet a variety of objectives that are described within this report as either result of an Equipment Upgrade or Site Improvement. At the April board meeting, Mayor Weinberg requested that information related to number of calls generated from the call boxes be presented along with this report. Staff is gathering the information and will be including that as part of our presentation prior to the public hearing.

Equipment Upgrades

To improve overall system performance, the project will require that the replacement call box units be digitally compatible for transition from analog cellular network to digital network. Use of digitally compatible units will allow SBCAG to transition to a digital provider much easier at a later point. The digital units will remain "backward compatible" and be able to function on an analog system until the conversion takes place. Digital phones will provide improved performance and signal strength. Analog service is being phase-out by cellular carriers.

The second objective to be achieved through replacement of the call box units is to address ADA compliance for accessibility for hearing-impaired users. The existing call boxes employ only a telephone handset that is not compatible for hearing impaired users. Two different types of call box units are currently manufactured that improve accessibility for hearing-impaired. The two devices types that are under consideration for the replacement project are: "Yes/No" and Teletex Typewriter or "TTY". Both of these units have the ability to function traditionally via a handset, but also have a display screen for the hearing-impaired user. In the case of the "Yes/No" device, the caller is able to respond to the questions by pressing Yes or No buttons to a series of queries by the CHP dispatcher. The "TTY" device operates through the use of a keyboard that is part of the call box unit. The caller can use the keyboard to type out a response to the questions being posed and displayed on the screen. Table 1 identifies some of the features and uses of each call box unit and provides a description.

Representatives for hearing impaired users in other areas of the state have advocated for SAFEs to install the TTY boxes arguing that the functionality of these units meets federal ADA requirements while the Yes/No units do not. Several studies and outreaches have been conducted by other SAFEs, but no clear trend has been established on which technology is preferable or provides better service to the hearing-impaired community. Several other SAFE agencies have undertaken capital replacement programs using the TTY technology including those in San Luis Obispo, Orange and Los Angeles counties. Los Angeles County Metropolitan Transportation Authority's implementation of TTY units is a result of a lawsuit specific to that agency with one of the outcomes being the development of the TTY unit. MTC (Bay Area) has implemented the Yes/No units on a test basis and continues to conduct outreaches with the hearing-impaired community.

**Table 1
Comparison of Call Box Features**

Feature/Use	Yes/No	TTY
Call Activation	This is a light located on the call box unit that indicates when communication with dispatcher is available.	This is a light located on the call box unit that indicates when communication with dispatcher is available.
Display Screen	The dispatcher/operator questions appear on the display screen	The dispatcher/operator questions appear on the display screen
Caller Communication	The caller responds to a series of Yes/No questions by depressing the appropriate button to the dispatcher question.	The caller uses a keyboard device to type responses to the questions being asked by the dispatcher/operator.
Operation Time	Standard list of questions and single response to each provides a quick interaction.	The requirement for caller to type and at times provide lengthier responses may extend call lengths.
On-Going Maintenance	Fewer concerns regarding malfunctioning parts and vandalism to keyboards. \$25/mo/unit (routine service costs exclusive of vandalism repair).	Keyboard with moving parts is subject to malfunction and vandalism. \$27/mo/unit (routine service costs exclusive of vandalism repair).
Costs	\$1400/unit (2003)	\$1700/unit (2003)
Other Features/options		This device type allows the caller to provide additional, critical information.

Site Improvements

Of the approximately 340 call box locations around the county, around 80% will require some variety of site improvements. The site improvements are being undertaken as part of the capital replacement and upgrade project to address issues of ADA accessibility for mobility-impaired and to improve safety for all users. Attachment A shows all of the site configuration types for the call boxes. Table 2 below shows the number for each site type based on a system inventory completed in April 2003 by Comarco Wireless Technologies (CWT) as part of their site assessment report. Also, Table 2 describes possible mitigation(s) to address the accessibility and safety issues.

**Table 2
Inventory of Call Box Sites**

Site Configuration¹	Issue(s)	No. of Units	Mitigation(s)
Type A	• Call box located behind guard rail or dike/curb	205	• Rotate pole and call box device • Relocate call box unit
	• Undersized concrete pad		• Replace to 4' x 4' min. concrete pad
Type B	• Call box located behind guard rail or dike/curb	47	• Rotate pole and call box device • Relocate call box unit
	• Undersized concrete pad		• Replace to 4' x 4' min. concrete pad
Type C	• Call box located behind guard rail or dike/curb	50	• Rotate pole and call box device • Relocate call box unit
	• Undersized concrete pad		• Replace to 4' x 4' min. concrete pad
Type F	• Call box located behind guard rail or dike/curb	21	• Rotate pole and call box device • Relocate call box unit
Type G	• Call box located behind guard rail or dike/curb	1	• Rotate pole and call box device

¹ The Santa Barbara call box system does not currently have any "D" or "H" sites.

Next Steps and Funding

At this meeting, SBCAG has scheduled a public hearing to receive testimony regarding this project and in particular the device type to be chosen to meet the requirements for hearing-impaired users. We also are receiving comments related to the any impacts as a result of the site improvements and related to the implementation of the call boxes to minimize disruptions to on-going service. A summary of the comments will be taken to SBCAG's Technical Transportation Advisory Committee in the coming months and again as part of the SBCAG's board action to approve an environmental document for the project (anticipated to be categorically exempt). The current schedule shows starting the project sometime in the fall of this year. Based on comparisons with other SAFE agencies, the total implementation timeframe could take several months.

Funding for the call box project will come primarily from a TEA 21 funding earmark in the amount of \$1.055 million that was authorized in 1998. These funds will be paid on a reimbursable basis and can be used only for the call box upgrade project. The remaining project costs and required local match will come from the SAFE budget fund balance. SAFE revenues are provided through a \$1.00 annual vehicle registration fee for all vehicles registered in the county.

COMMITTEE REVIEW: A report soliciting comments from TTAC was presented on May 1, 2003. TTAC requested that another report, along with a summary of comments be presented at a future meeting.

STAFF CONTACT: Fred Luna or Jim Kemp

Attachment A Call Box Site Types

Per the *CHP/Caltrans Call Box and Motorist Aid Guidelines - Revised May 1999*.

Note that Caltrans is evaluating the allowance for an "F" site to be placed behind a berm/dike, in addition to a guard rail and other permanent barriers.

"A" site is on level ground or "at grade" and call box faces parallel to the highway.



"B" site is on an upward slope and is "in cut" into the slope/hill. Most often requires transverse walls.



"D" site is directly mounted onto a sound wall or a retaining wall.



"G" site is on a paved median between a highway lane and an on/off ramp.



"C" site is on a down hill slope and has to be "in filled". Usually requires handrail/transverse walls.



"F" site is placed behind a guard rail or another barrier and faces perpendicular to the road.



"H" site is mounted on top of a barrier wall or on permanently - mounted K-Rail.

