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CITY COUNCIL 2008

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CHIEF OF POLICE

March 13, 2008

03-14-08A09:09 RCVD

Mr. Sean Nozzari, Deputy District Director  
Caltrans District 4, Operations  
P. O. Box 23660  
Oakland, CA 94623-0660

Dear Mr. Nozzari:

After our conversation I was optimistic about our red light camera project because you were confident that all the issues could be resolved. As you may recall, at the last meeting with representative of both our agencies, the members of your department requested the accident rate at the intersections, expressed concern over placing a pole on the center divider because the island is less than the desired width, and raised the issue of the electrical connection to your system.

1. **Accident rate:** It is my opinion that the rate really has no bearing on approval of the project, and I do not understand its significance since the city is responsible for enforcement and documentation of accidents and not the state. Nevertheless, we wish to comply with your agency's request. Over the last three years we have a combined average of 60 accidents per year at these locations. The enforcement at these intersections is dangerous for the motor officers and cannot be worked as effectively as the camera. A day time video analysis on seven of the worst intersection/approaches in South San Francisco confirmed over 375 red light violations in a single day – there is no question these are dangerous intersections.
2. **The pole in the center island:** We were told that Caltrans does not allow poles to be placed on the center divider unless the island is a specific width because if the pole is knocked down, whatever it is holding up may break through the windshield of a vehicle in the opposing lane. Although our island does not meet the specification, I know of locations in California where there are light standards on center islands that are less than the required width. I appreciate the theory behind it; however, the camera and light that will be on the pole are significantly lighter than a traffic standard. The possibility of injury is no greater than for directional signs that are currently on center islands. To mitigate this concern we offered to install a breakaway pole, which you thought might resolve the issue. However, it has been my experience that if a vehicle hits a pole on the center island and is able to knock it down, the momentum of the car would be so great that it would continue across the island and strike a vehicle coming in the opposite direction, which would be more likely to cause injury than the pole.
3. **The connection to the red light phase:** The information given to those in attendance at the meeting was that there could be no hardwire connection to your wires and a reference made to a

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24-volt unit. Our provider, ATS, has suggested the following solutions that appear to address this concern.

**Option One:** As can be reviewed in the attached specifications and drawings, the CR Magnetics provide 100% electrical isolation from the TS phase conductors. The red and amber traffic signal phase conductors are each passed through the current switch apertures 3 to 5 turns and operate in Normally Open mode of operations. As each TS phase is energized (illuminating the TS phase lamps/LEDS), the current flowing through the phase conductor will activate the switch and close the output contacts at 350 milli Amps of current detection.

At the rear ATS pole cabinet, a 2/c#14 AWG cable assembly is run to the TS phase termination point location. A separate 120 Vac is passed from the rear cabinet on one of the conductors to one of the current switch lead conductors. When switched to closed mode of operation, the 120 Vac is passed back to the phase input module in the ATS rear pole cabinet on the other conductor.

**Option Two:** The OPTP Isolation modules, have a similar concept where the TS phase conductor in reference to TS phase neutral controls the OPTO22 isolator (1 isolator for each red and amber TS phase) on the PB\$ board. As each TS phase is energized (illuminating the TS phase lamps/LED), the OPTP 22 isolators are enabled (switched) thus passing ground back to the phase input module back in the ATS rear pole cabinet.

Either of these two configurations must be contained in water tight enclosures. They can be physically located in the TS controller cabinet, the TS phase pole base or the TS head assembly. Note: for the OPTO, this power supply and PBE module can be placed in the ATS cabinet as long as the TS phase conductors and TS are neutral. Please refer to the enclosures.

Also, with regard to this item, for a number of years Caltrans has given us permission to connect the "Rat Boxes" to the red lights at various intersections along El Camino.

Please note that in Options One and Two, the City's 120 volts will not be entering the Caltrans cabinet. Instead, it will be low voltage.

**Option three:** The City of South San Francisco takes over the management and maintenance of the intersections and Caltrans pays the City for their portion (1/2 or 2/3 depending on intersection), which would allow us the direct connection to the red phase since the City's personnel would be working on the system and not Caltrans personnel.

I hope these solutions will concur with your needs. I look forward to meeting with you to resolve the fine details so we can move ahead with the project. Thank you for your assistance.

Sincerely,



Mark Raffaelli  
Chief of Police

Enclosures

cc: Assemblyman Gene Mullin w/o Enclosures