



# REPLACEMENT Memorandum

**TO:** HONORABLE MAYOR  
AND CITY COUNCIL

**FROM:** Katy Allen

**SUBJECT:** SOUTH SAN JOSE POLICE  
SUBSTATION CONTRACT  
-VARIOUS ACTIONS

**DATE:** 10-17-08

Approved

Date

10/21/08

**COUNCIL DISTRICT:** Citywide

## RECOMMENDATION

Adoption of a resolution authorizing the Director of Public Works to negotiate and execute individual contract change orders in excess of \$100,000 up to a combined amount not to exceed \$1,500,000 for the work specified in this memorandum for the South San José Police Substation construction contract with S.J. Amoroso Construction Co, Inc. (SJA).

## OUTCOME

Adoption of the resolution authorizing the Director of Public Works to negotiate and execute certain change orders will allow these change orders to be processed and approved as soon as the final costs are negotiated. This authority will allow the contractor to perform the change order work in a timely manner and minimize potential delays.

## EXECUTIVE SUMMARY

The Director of Public Works does not have the authority to approve any single change order that is for more than \$100,000. Subsequent to the award of the South San José Police Substation construction contract in December 2007, several potential change orders with estimated values in excess of \$100,000 each have been identified as necessary to address building code, longevity and operational requirements for this facility. The aggregate authority requested in this memo is for \$1,500,000 for all of the following items:

1. Changes to the Mechanical, Plumbing and Electrical systems required for code, constructability and energy efficiency.
2. An increase in the fueling station capacity to meet operational requirements.
3. Changes to the building exterior design to address water proofing and construction conflicts.

4. Changes to the roof insulation system and equipment supports for proper drainage and structural support.

Staff has evaluated the details of the proposed changes above and has determined that they are comprised of scope elements that should have been included in the original bid documents and are non-discretionary in nature.

As the estimated value of these pending change orders exceeds the Director of Public Works authority to execute and their timely execution will be necessary to minimize impacting the construction schedule and incurring delay costs, staff is recommending that Council authorize the Director of Public Works to negotiate and execute change orders consistent with this memorandum.

Staff has also evaluated the known potential change orders which, when combined with the items covered by the requested change order authority, are likely to consume the balance of the remaining construction contingency. Staff, therefore, is reviewing the project and evaluating potential cost saving measures and preparing recommendations for a future memo for additional funds and construction contingency that may be needed to complete the project.

## **BACKGROUND**

On December 18, 2007, the City Council awarded a construction contract to SJA for the South San José Police Substation Project in the amount of \$59,997,000 with a 4.5% construction contingency in the amount of \$2,710,000. Primarily due to budget constraints, the Council-approved contingency was lower than the standard policy which allows for 10% of the construction contract value. The Notice to Proceed was issued to the contractor in late February 2008 and construction began on March 3, 2008. As of this report, construction is approximately 34% complete and is proceeding on schedule for completion in the Fall of 2009.

Subsequent to the award of the construction contract for this project, staff was advised by the architectural design consultants (RossDrulisCusenbery [RDC]) and separately by the contractor (S.J. Amoroso [SJA]) that the contract documents would require multiple revisions in order to achieve code compliance, building longevity and meet police operational requirements. The analysis section of this memo includes staff's evaluation of the proposed changes and their relative impacts to the project.

## **ANALYSIS**

Per Municipal Code Section 14.04.415, the Director of Public Works' approval authority is \$100,000 per change order, which is approximately 0.17% of the Police Substation's construction contract amount of \$59,997,000. The estimated costs for the pending change orders included in the recommendation are between \$1,000,000 and \$1,250,000. The requested Director's change order approval authority of \$1,500,000 would be approximately 2.5% of the construction contract amount, which staff considers adequate to efficiently negotiate and execute the pending change orders and to minimize impacts to the construction schedule. Below is a

more detailed description and analysis of the change orders that the Director of Public Works would have the authority to negotiate and execute.

*Mechanical, Electrical and Plumbing Changes*

The delegation would include the authority of the Director of Public Works to negotiate and execute one or more change orders in excess of \$100,000 for the mechanical, electrical and plumbing work described below. At this point, the estimated aggregate cost of the change order(s) for this work is between \$450,000 and \$550,000.

The proposed change order includes increasing the number and capacity of variable air volume (VAV) boxes and adding a number of fire smoke dampers. It also includes modifications to duct sizes, the chiller system piping, the plumbing fixtures (*to ultra low-flow*) and lighting fixtures. The work included in this change order is necessary to meet the requirements of the California Fire Code, California Title-24 energy “performance” model consumption limits and the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. There are also a number of coordination modifications to the design that are necessary to address construction conflicts.

The necessity of these changes was driven by three main factors. Firstly, the mechanical and plumbing design engineers working under RDC finalized their designs for bidding prior to verifying that they met all of the Title-24 “performance” criteria for energy and water usage. The bid documents were based on preliminary energy usage reports using the “prescriptive” model and analysis of the building systems, but the design engineers did not confirm that the final designs met the required “performance” criteria needed to achieve compliance with Title 24. Second, a similar oversight by the electrical design engineer required modifications to the lighting fixtures and control systems to achieve sufficient energy efficiencies to meet the requirements of Title-24 and provide potential for achieving the LEED rating that the building was designed to meet.

The third factor involved a number of fire smoke dampers (FSD) that RDC mistakenly left out of the bid documents. During a fire event, these devices prevent the flow of smoke and hot gasses through ductwork that serves rooms which are separated by a fire rated wall. While the majority of the required FSDs were included in the bid documents, the design engineers found 15 locations on the plans showing ducts penetrating fire rated walls that were not equipped with the required devices.

The City and contractor are in the process of verifying the proposed scope changes and negotiating the costs and time impacts to the project. Due to the complexity of the changes, staff has secured the services of an outside estimator through a master agreement with Gilbane Building Company (GBC) to aid in reconciling the City’s and contractor’s estimates.

Once the final amounts are negotiated and confirmed, the change order will need to be executed so that the contractor has sufficient time to implement the changes without adversely impacting the schedule and incurring additional costs for avoidable delays. The requested delegation of

authority will allow timely execution of the change order once all parties are in agreement. To avoid delays to the construction schedule, the changes may be processed as more than one change order as negotiations are finalized on major components:

### Fueling Station

The delegation would include the authority of the Director of Public Works to negotiate and execute one or more change orders in excess of \$100,000 for the fueling station work described below. At this point, the estimated aggregate cost of the change order(s) for this work is between \$150,000 and \$200,000.

The proposed change order includes increasing the on-site fuel storage capacity from 1,500 gallons to 15,000, modifying the associated controls and support systems. This change order will also connect the fuel stations to the emergency back-up power and add a card-key system for tracking fuel usage. The work included in this change order is necessary to meet the operational mission of the Substation during normal and emergency conditions.

During the design phase of the project, a requirement was established for a minimum of one 15,000-gallon fuel tank with associated dispensing pumps, controls and ancillary systems to service the fueling needs of the police patrol fleet and detectives. The plans issued for bid correctly called for a 15,000-gallon tank; however, the design-build specifications mistakenly identified only a 1,500 gallon tank and were also missing directions for certain submittal requirements and features needed to meet operation needs. Per the contract, the technical specifications take precedent over the drawings; therefore, the contractor's bid did not include the larger tank, associated excavation, and increased monitoring features. Both the larger fuel capacity and the ancillary systems needed to support it are necessary to meet the operational needs of the Substation and regulatory requirements for the larger tank. Staff has procured the use of a fuel tank installation and estimating specialist through GBC to verify both the larger size system requirements and associated costs. The changes associated with this item are affecting the finalization of the site asphalt and concrete work. Concrete and asphalt work are currently on hold in this area and are not on the critical path as of this memo. Increasing the authority of the Director of Public Works will allow timely execution of the change order once all parties are in agreement and avoid potential delays to the overall project's critical path.

### Building Exterior

The delegation would include authorization for the Director of Public Works to negotiate and execute one or more change orders in excess of \$100,000 for modifications to the building exterior and waterproofing work described below. At this point, the estimated aggregate cost of the change order(s) for this work is between \$200,000 and \$250,000.

This proposed change order includes modifications to the exterior building skin and waterproofing details that are necessary to address construction-sequencing conflicts and ensure the integrity of the buildings' waterproofing systems.

The building exterior, or “skin,” is comprised of a combination of glass fiber reinforced concrete (GFRC) panels, concrete fiberboards and window systems. During the design phase of the project, RDC utilized the services of a GFRC fabricator and installer to verify the constructability and detailing of the buildings’ exterior skin. RDC also employed a specialty sub-consultant to develop the waterproofing systems and details that addressed the interface between the GFRC panels and the other exterior skin and window systems. Soon after the award of the construction contract, the general contractor, SJA, advised staff that they had some substantive concerns about the construction sequencing and detailing of the building skin that could require changes to the design. Throughout the initial four months of construction, staff and the contractor worked very collaboratively to verify the GFRC dimensions, detailing, structural support, window systems requirements and sequence of construction. This collaborative effort had been very helpful in confirming the sequence of construction and the interface between the building skin components; however, flaws were identified in the window systems constructability and waterproofing details included in the original contract documents. The design consultants are again working with waterproofing specialists and the window supplier to modify the details where necessary to improve the water tightness, structural integrity and longevity of the building skin. They are also evaluating substitution of certain components such as the waterproofing membrane that will allow it to be installed after the GFRC panels are installed. To avoid delays to the construction schedule, the changes may be processed as more than one change order as negotiations are finalized on major components.

### Roof Modifications

The delegation would include authorization for the Director of Public Works to negotiate and execute one or more change orders in excess of \$100,000 for the roof insulation and equipment support work described below. At this point, the estimated aggregate cost of the change order(s) for this work is between \$150,000 and \$250,000.

This proposed change order includes the addition of tapered rigid insulation to the roofs of the main building and on-site vehicle maintenance building that is necessary to properly direct rainwater to roof drains. It also includes added work for revising the large air conditioning equipment curbs and supporting steel.

The design of the roof systems for both buildings relies largely on sloping of the structural steel members to direct rainwater in the desired directions. However, due to the perimeter roof top walls (or “*parapets*”), the extensive amount of rooftop mechanical equipment and skylights with their associated curbs and supports, it is also necessary to include tapered insulation to create ridges (or “*crickets*”) to properly direct rainwater to drainage systems. While the specifications for the project included the type of tapered rigid insulation, the plans did not identify where and in what quantity this material would be used. On September 2, 2008, RDC issued plan modifications identifying the locations and slopes of the tapered ridged insulation and increasing the equipment curb heights to clear the added crickets.

Subsequent roof and mechanical coordination questions raised by the contractor have also identified several locations that may require additional steel beams to properly align with the

large air handling equipment on the roof. The original design had sufficient steel to support the equipment, but their final installed locations were not properly coordinated with the specified equipment. Staff is in the process of verifying whether the responsibility for this item rests with the contractor or the City's consultant. If the final determination of responsibility rests with the City, then this change order will need to be approved immediately thereafter to avoid extensive delays to the construction progress.

Budget Analysis

On December 18, 2007, Council approved a total construction contingency at award of 4.5% of the base contract in order to allow sufficient funds to be allocated toward the balance of the Public Safety Bond Program. Council Policy normally provides for a standard contingency of ten percent on public works projects involving the construction of a new building. As of this memo, staff has executed \$553,123 in change orders, which is approximately 21% of the approved construction contingency.

As stated above, the initial estimate on the total of the proposed change orders ranges between \$1,000,000 and \$1,250,000. The recommended not-to-exceed authority of \$1,500,000 is greater than the anticipated final amount necessary; however, it will allow sufficient flexibility to execute the change orders once the final details and negotiations are concluded. If the maximum authority is necessary to execute these change orders, there will be approximately \$656,877 available to address future change orders. As of this memo, staff is tracking approximately \$500,000 to \$700,000 in additional pending and potential change orders. Once the costs of these potential change orders are confirmed and negotiations are finalized, they will consume the balance of the original construction contingency. Therefore, staff has concluded that based on the executed, pending and potential change orders, the original contingency allowance will not be adequate to complete the project.

In addition to the change orders discussed in this memo, staff is also evaluating some additional scope items that may be desirable to address the long-term telecommunications capabilities of this new facility. Since this evaluation is not yet complete and the funding has not been identified, this item may be forwarded as a separate recommendation to Council. Staff is also evaluating potential modifications to the current design that may reduce the financial impact of future upgrades if sufficient funding cannot be identified in a timely manner.

In a preliminary review of the proposed change orders included in this memo, staff has determined that they are largely comprised of items that should have been addressed by RDC in the original design documents. As is typical during the design process, Public Works staff, with the assistance of specialty consultants, reviewed the plans before the Director of Public Works approved the project to be bid. The Director of Public Works approved the project to be bid only after RDC - as the architect of record - signed and stamped the plans. As with other projects, staff's review of the plans was general and only intended to identify code, quality and constructability issues before bid. RDC - as the architect of record - remained responsible for providing the City with a complete set of plans and specifications that met the appropriate standard of professional care. Public Works staff will look at whether RDC's failure to include

in the original design documents some or all of the items that need to be change-ordered into the project was the result of RDC's failure to perform its services consistent with the applicable standard of care. If so, then staff will look at how much additional cost, if any, the City incurred as a result of the item(s) not being included in the original design documents and whether, in the overall context of this project, such costs warrant seeking compensation from RDC.

### **EVALUATION AND FOLLOW-UP**

The project is currently within budget and on schedule with a projected completion in fall 2009. Based on the current and projected expenditure of change orders, staff anticipates that additional funds are required to complete the project. In addition, staff is also evaluating some computer cabling changes that may be required to address the long-term telecommunications requirements of the Substation. Staff will forward a separate budget request and recommendations once the additional funding needs are confirmed.

### **POLICY ALTERNATIVES**

**Alternative #1:** Deny the requested increase of authority of the Director of Public Works and require staff to bring the subject construction change orders individually to Council after they are ready for execution.

**Pros:** The final negotiated value of the proposed change orders and impacts to the project budget would be known and Council would take action.

**Cons:** The change orders probably would not be executed in time to avoid delays to the critical path of the contract and the project could incur additional costs for delays.

**Reason for not recommending:** Staff and the consulting architects and engineers will not be able to fully vet the scope and negotiate a fair price for the proposed change orders within sufficient time to agendaize the items for Council consideration without impacting the construction schedule. The City could incur significant additional costs for delay.

### **PUBLIC OUTREACH/INTEREST**

- Criterion 1:** Requires Council action on the use of public funds equal to \$1 million or greater. **(Required: Website Posting)**
- Criterion 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- Criterion 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

This action meets the first criteria above. This memorandum will be posted on the City's website for the November 4, 2008, Council agenda.



10-17-08

Subject: South San José Police Substation – Various Actions

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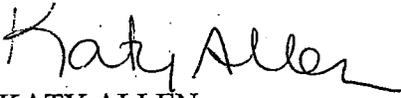
**BUDGET REFERENCE**

Fund #	Appn. #	Appn. Name	RC#	Total Appn.	Amt. for Contract	2008-2009 Adopted Budget Page	Last Budget Action (Date, Ord. No.)
<b>Remaining Project Costs</b>				<b>\$4,965,893</b>			
<b>Current Funding Available</b>							
475	4542	South San Jose Police Substation	122785	4,687,000*	TBD	V-894	(06/24/2008, 28349)
001	6236	South San Jose Police Substation	122785	96,000	0	V-894	(06/24/2008, 28349)
Total				<b>\$4,783,000</b>	<b>TBD</b>		
<b>Funding in Future Years of the CIP</b>							
475	4542	South San Jose Police Substation	122785	183,000	0	V-894	
<b>Total Funding Available</b>				<b>\$4,966,000</b>			

\* \$103,000 of this funding is being recommended as a re-budget in the 2007-2008 Annual Report, which will be reviewed by the City Council on 10/21/08.

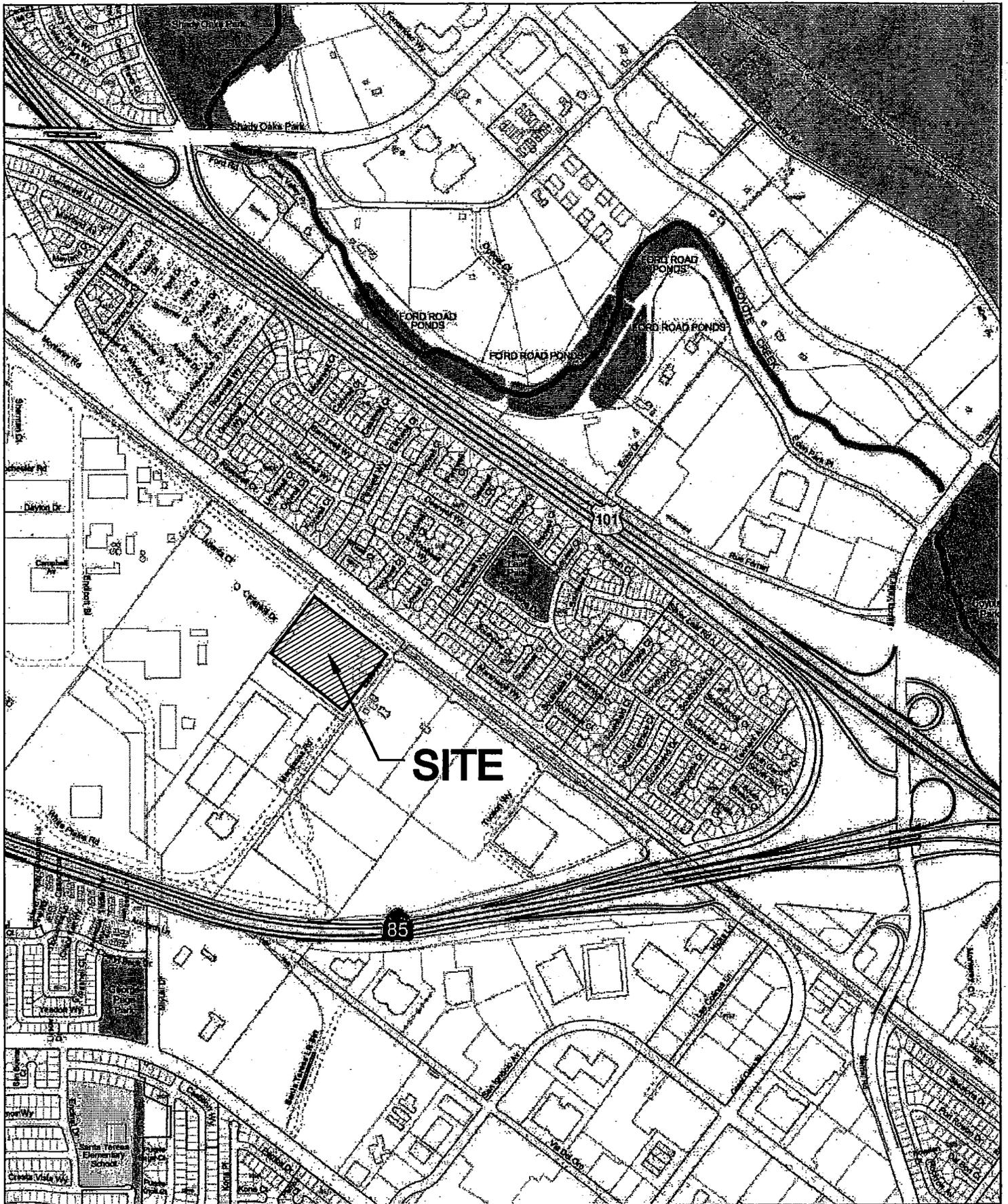
**CEQA**

CEQA: Mitigated Negative Declaration, PP04-304.

  
 KATY ALLEN  
 Director, Public Works Department

For questions please contact DAVID SYKES, ASSISTANT DIRECTOR, at 408-535-8300.

KA:kj:dp:df  
 Attachment  
 Location Map



**SITE**

**POLICE SUBSTATION  
LOCATION MAP**

