CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Larry Esquivel

SUBJECT: **SOUTH SAN JOSE POLICE SUBSTATION OPENING**

DATE: May 28, 2013

Approved

Date 5/28/13

As part of the City Council approval of the 2013-2014 Mayor's March Budget Message, the City Manager was directed to report back to the City Council regarding the opening of the Police Substation as part of the budget process.

BACKGROUND

Several analyses were completed in order to substantiate building a police substation. In 1987, a consultant report noted the potential benefits and costs of opening a substation[1]. The advantages and benefits included: improved cooperation between police and citizens; greater accessibility to the public; greater delegation of responsibility to middle managers; decreased travel time to and from beats; officer satisfaction for reduced commute; greater visibility in the community and perceptions of greater safety. Some of the disadvantages were noted to include: more complex coordination of staff and information; duplication of services; additional staffing costs and operating costs; decentralization of operations; and increased top and middle management.

In March 2002, the residents of San José passed Measure O, the Neighborhood Security Act Bond Measure. The Police Southern Substation project was the largest project funded by the bond measure. In 2002, after the passage of Measure O, the City hired another consultant to identify the cost/benefits of several locations for the substation[2]. The 2002 report analyzed police operations, measuring current and proposed staffing, response times, employee commuting patterns, traffic congestion, and business transactions.

Based on that report, the decision to move forward with a Substation in the southern part of the city was due to several factors:

- The slowest response times to Priority 1 and Priority 2 calls for service occur in the Southern Patrol Division of San José;
- A time and trip analysis showed the Department would gain the most proactive patrol

[1] Analysis of Police Substation Feasibility, Hughes, Heiss & Associations. March 1987

[2] Marcy Li Wong Architects and EKONA Architecture + Planning, in association with Leading Resources, Inc. conducted a three part analysis: San Jose Police Department Decentralization Plan, Investigation of a Police Substation in South San Jose. October 2002.

time by locating a substation within a two-mile radius of the intersection of Cottle Road and Santa Teresa Boulevard;
- The time and trip analysis concluded that the City would gain the equivalent of 7.0 FTE police officer positions in proactive patrol time due to the reduced commute to the officers' beat assignment; and
- Maximum efficiencies gained if the Substation was a full-service facility to meet the needs of the residents, businesses, visitors, and employees.

The 2002 report further identified the following benefits of moving:
- Improved community safety: emergency back-up facility; more space for department staff; improvements to public access
- Improved patrol time availability: reduced commute to beat; shorter travel time for mid-shift returns
- Improvements in community services: public access; better service to 43% of the city; access to refueling/maintenance for other city vehicles

On December 18, 2007, the City Council approved the award of contract for construction of the South San José Police Substation. Project funding was used to construct a full-service police station to meet the needs of residents, businesses, visitors, and employees. The groundbreaking occurred in February 2008, and construction was completed in October 2010. Due to the significant operating budget shortfalls in 2010-2011, 2011-2012, and 2012-2013, the opening of the Substation was approved to be deferred to September 2013, to coincide with the fall 2013 shift change and avoid operating and maintenance impacts to the General Fund.

The Substation was built to house patrol, pre-processing, records, investigations, and various other units. In order to phase-in the General Fund operating impact, the opening of the Substation is planned in stages. Phase I of the plan, as included in the 2013-2014 Proposed Operating Budget, moves the southern patrol division and some non-patrols units. Public access, records, pre-processing, and other units are not included in Phase I of the plan, as these functions require additional staff resources. These functions will be phased-in, in the future, as funding allows.

The Department did consider a number of other operational scenarios in an attempt to further reduce the cost of the Phase I move, including limiting the number of patrol shifts deployed from the Substation in order to not have the building open 24-hours a day; limiting deployment to southern patrol division officers without supervisors or command staff; not staffing Central Supply, who issues safety equipment to patrol and receives evidence; and other various options. However, these other options either created less efficiencies or a higher cost to the City.

In order to open the facility, additional work must be completed by Public Works to ensure the building is functioning properly and the Police Department must furnish and equip the building as necessary. Funding is currently allocated in the 2013-2014 Proposed Operating Budget in the General Fund, grant funds, and the Public Safety Bond Fund to address these needs. Both departments anticipate the work will be completed in fall 2013. The 2013-2014 Proposed Budget includes delaying the Phase I opening from September 2013 to January 2014 to allow time to complete the needed work. Additionally, the Substation is planned to house the alternative

Public Safety Answering Point (PSAP). This alternative PSAP is a back-up for the 9-1-1 Communications Center in an emergency.

ANALYSIS

The Substation was built with the anticipation of gaining efficiencies through decentralizing police services, enhancing community presence, and addressing future growth of the City. The City and the Department has changed since the initial consultant reports in 1987 and 2002: new roads, redivisioning, reduction in work force, closure of units, and reorganization. While the consultant reports did take into consideration population growth and increased traffic congestions, they also included assumptions for staff growth. As the Department analyzed the feasibility of occupying the Substation, consideration was given to the drastic organizational changes that have occurred within the Department these past few years and the constraints of the current and future budgets.

One of the major contributing factors in the decision to build a substation at the site selected was to gain the most proactive patrol time. Even though police resources have diminished over the last several years, there are still efficiencies to be gained by occupying the Substation through reduced travel time at the beginning and end of each shift. In order to maximize efficiencies and minimize costs, all of southern patrol division would have to move together in order to maintain supervisory and management control including, district sergeants, lieutenants and a captain. The Central Supply function must be staffed to receive, process, control, safeguard, and dispose of evidence and noncriminal property, and to issue and control individual officer safety equipment in support of the daily patrol function. Funding is included in the 2013-2014 Proposed Operating Budget for 9.0 Police Property Specialist positions.

In Phase I of the plan, southern patrol units would be available in their assigned beat more immediately to respond to calls, but only at the beginning and end of each shift. While savings cannot be realized in tangible dollars, this efficiency can be converted to savings gained in commute time from the current Police Administrative Building (PAB) to the southern portion of the City and is expected to exceed 18,000 hours annually, which is equivalent to approximately 8.5 officer positions or $1.44 million.

Move In Plans

The Substation was intended to provide public access to police services in the southern part of the City, to increase efficiencies for southern patrols and allow expansion of the Department to address service demand impacts as the City continues to grow. Ideally, the Department would have sufficient staffing that could move to the Substation to address all southern issues in the community, including investigations, public access and support services dedicated to the community, crime and calls for service solely in the southern division. However, these resources are not planned for Phase I. As part of the annual budget process, the Administration will re-evaluate the opportunity and cost of opening the Pre-Processing Center (PPC) and opening the facility to the public.

The Department received Urban Areas Security Initiative (UASI) grant funding to build an alternative Public Safety Answering Point (PSAP) at the Substation. This alternative PSAP is a

back-up for the 9-1-1 Communications Center in an emergency. One of the most crucial elements of a disaster plan is to have an adequate alternative PSAP to ensure emergency calls are handled with minimal disruption. The current alternate PSAP facility at Fire Station 29 has significant physical limitations that hinder staff and the equipment is no longer adequate to meet the needs of the community and operate a fully functioning alternative PSAP. Grant funds, which expire in September 2013, are being used to purchase equipment needed to sustain a permanent alternate PSAP and equipment sufficient for a city the size of San José. Additional General Fund dollars are included in the 2013-2014 Proposed Capital Improvement Program to engineer and manage construction of the power, data, radio, and other infrastructure necessary to support the alternate PSAP for both Police and Fire.

Cost Analysis

Postponing the opening of the Police Substation for an additional twelve months will result in operating cost savings due to the delay of adding 9.0 Police Property Specialists positions, funding for landscape maintenance by the Parks, Recreation & Neighborhood Services (PRNS), and funding for facilities and vehicle maintenance and operating costs in the Public Works Department in the amount of approximately $2.3 million. Based on maintenance and operating costs experienced in 2012-2013 at the Substation, funds in the amount of $360,000 would be needed for minimal maintenance and operating costs while the building is unoccupied and for intermittent use of the alternate PSAP. Savings realized by further postponing Phase I of the move is approximately $2 million annually, after adjusting for the maintenance and operating costs while the building remains closed, which is equivalent to approximately 12 police officer positions.

The Department has worked with the City Manager's Office, the Budget Office, and the Public Works Department to develop a plan that allows the City to open the facility with the highest gain in efficiencies at the lowest cost to the City. However, if attrition continues on the current trend and considering the length of time it takes to recruit, hire and train officers to be street-ready, deploying patrol from two locations may create additional staffing challenges with a reduced work force thus reducing any true gain in efficiencies. The Department would like to move forward with the build out of the Substation, including the alternative PSAP, so the building is ready for occupancy and the alternative PSAP is available as needed and to continue to work with the Administration to evaluate when the appropriate time is to move into the facility. As part of the annual budget process, the Administration will continue to evaluate a Phase II occupancy plan, which includes public access and opening the PPC, to maximize efficiencies expected by the community.

/s/
Larry Esquivel
Acting Chief of Police

LE/LP

Attachments: Analysis of the Police Substation, 1987
San Jose Police Department Decentralization Plan: Phase I, 2002
San Jose Police Department Decentralization Plan: Part 2, 2002

Analysis of Police Substation Feasibility Through the Year 2000

CITY OF SAN JOSE, CALIFORNIA

March 11, 1987

Prepared By:

Hughes, Heiss & Associates
David J. Powers & Associates

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ANALYSIS OF POLICE SUBSTATION FEASIBILITY THROUGH THE YEAR 2000

Executive Summary

This study of police substation feasibility through the year 2000 was conducted by the firms of Hughes, Heiss and Associates and David J. Powers and Associates. The purpose of the study was threefold:

- Update the substation feasibility study conducted by our firms in 1983. In that study, we concluded that a single substation serving all of the southern and eastern portions of the City had the best potential to maximize benefits against the costs of substation operation in 1990. Even in this best case scenario, though the City would spend almost $300,000 per year more in substation staffing and operating costs than was "saved" in travelling to and from beats and the Civic Center. Furthermore, substation construction costs would exceed the costs of expanding the Civic Center facility by between $600,000 - $1.1 million. The present study examined these issues through a year 2000 timeframe.

- Examine the advantages and disadvantages of substations on police operations and community services and service levels. While these factors are subjective in nature, they would be as much a part of the City's decision-making process as the costs involved.

- Evaluate the potential for additional substations. Will demographic and transportation system developments in the 1990's be significant enough to result in expansion of the police substation network?

This Executive Summary briefly outlines the findings and conclusions reached in this study.

1. The cost of travel between the Civic Center police facility and patrol beats throughout the City will continue to grow in the 1990's. In current prices, the trends in these costs are as follows:

1982	1990	2000
$1,478,589	$1,806,212	$2,172,578

2. Operating a substation in the southern portion of the City will not convert a sufficient amount of patrol officer travel time to offset the cost of staffing and operating a new facility. Substation staffing and operating costs have grown as fast as travel costs. In order to have the opportunity in the year 2000 to convert about $305,000 per year in patrol officer travel costs into service availability, the City would need to spend about $752,000 to staff and operate a single substation (expressed in current dollars).

3. The substation site proposed by the City -- the Southside Community Center -- is too far south to base all of the patrol units identified in the earlier study and is not large enough in any event. While the Southside Community Center is an ideal site for a police substation for its visibility, access for the public, proximity to other services, etc., for beat units operating in the Evergreen area and north of Tully Road, the travel time to and from the Center exceeds that to and from the Civic Center facility. Furthermore, the size and configuration of the site effectively caps the number of patrol units which can operate out of the substation at 95 (including Sergeants) and about 250 total staff. Thus, the substation service area would have to be reduced to include the following planning areas:

   - Almaden
   - Cambrien
   - Coyote Valley
   - Edenvale
   - "South San Jose" - south of Tully

4. If the City wanted to build a second police substation, only the Evergreen area would be the most appropriate. Other City areas either have too few beat units or are too close to the Civic Center facility to represent a sound investment. The Evergreen area, on the other hand, is an ideal candidate due to:

   - The projected number of year 2000 patrol units operating in this area (over 17% of the City total).
   - The travel time between this area and the Civic Center (averaging almost 16 minutes each way in peak traffic conditions; almost 12 minutes each way non-peak).
   - The continued service and program focus of this portion of the City.

   The study team identified Lake Cunningham Regional Park as a potential site.

5. Operating a second police substation, however, would be costly. Faced with a similar cost/benefit decision as operating one substation in Year 2000, two satellite facilities would provide the City with the opportunity to convert about $578,000 in annual travel costs (current dollars) into service availability time. Against this, however, the City would devote about $1.37 million in substation staffing and operating costs.

6. The service related reasons for the City to build substations are subjective. There are several potential advantages to building and operating police substations, some affecting police operations, other affecting community perceptions. These potential advantages include:

Police Operation	Community Perceptions
. Development of managers/ supervisors	. Visibility of police
	. Accessibility of police
. Officer satisfaction working closer to home.	. Feelings of safety

There are, however, potential disadvantages particularly affecting police operations, including:

- Fragmentation/coordination
- Duplication of administrative overhead

These are subjective criteria which only the community can weigh. However, it should be pointed out that many of the advantages of substations can be achieved without building new facilities, either through staffing or deployment changes or through enhancing community oriented programs.

7. Building two substations could cost the City over $3.7 million, but would offset facility expansion downtown. The following downtown facility and cost reductions are possible:

	Downtown	Southside	Eastside
Costs	($3,725,212)	$2,413,641	$1,311,571
Patrol Officers/Sergeants	(337)	226	111
Investigators	(15)	9	6
Marked Patrol Vehicles	(106)	71	35

8. <u>There are several factors which the City should examine in the next few years to assist in its police facility decisions.</u> These factors include:

- Trends in travel costs - both in terms of vehicle operating as well as patrol personnel costs. Rises faster than the general rate of inflation in these costs would tip the cost benefit ratio more favorably toward substations, though probably never to "break even."

- New substation staffing. If more police or administrative functions are located at the substation(s) requiring new staff, the less favorably substations could be viewed from a perspective of costs.

- Finally, southerly growth in the City above that projected by the City and in this study would be a factor favoring a southern substation.

ANALYSIS OF POLICE SUBSTATION FEASIBILITY THROUGH THE YEAR 2000

This updated analysis of police substation feasibility for the City of San Jose was conducted by the firms of Hughes, Heiss and Associates and David J. Powers and Associates. Its purpose was twofold:

- To take the police substation analysis conducted by our firms in 1983 and expand the timeframe from 1990 to the year 2000. This portion of the current study addresses the following questions and issues:
  - What will be the impacts of projected travel time and demographic changes by the year 2000 on continued centralized police operations?
  - Are these impacts of proportions which would alter the conclusion reached in our earlier study that by the year 1990, one substation could be built in the southern portion of the City?
- To re-examine the feasibility of building multiple substations in light of projected travel time and demographic changes between the years 1990 and 2000. Specifically:
  - What are the benefits of decentralized police operations compared to the additional costs of building and running a substation as well as the disadvantages of decentralization?
  - What impacts would a second police substation have on the costs and facility requirements resulting from a single substation?

The sections of the report, which follow, provide the results of our analysis into each of these issues. As a starting point, the first section recapitulates the results obtained in the 1983 study.

1. THE EARLIER STUDY SHOWED THAT THE PROJECTED 1990 COSTS OF OPERATING A SINGLE SUBSTATION IN THE SOUTHERN PORTION OF THE CITY EXCEEDED TRAVEL COST SAVINGS BY OVER $200,000 PER YEAR.

The earlier study conducted in 1983 by our two firms contained a detailed cost-benefit analysis comparing the projected 1990 costs of travelling to and from beats in a continued centralized versus a decentralized patrol operation. Against projected 1990 travel cost savings resulting from decentralized patrol operations, the additional costs

of building, staffing and operating one or more substations were developed and factored into the analysis. The specific results of this earlier study included the following:

- Phase I examined projected growth in staffing, travel time requirements and facility impacts of continued centralized patrol operations between 1982 and 1990. Principal conclusions were that:
  - The projected field patrol workload would grow 22% between 1982 and 1990 from 186,000 calls for service to 227,000. The number of beat units needed to handle this community generated workload would grow from 148 per day in 1982 to 195 in the year 1990 - growth of almost 32%.
  - Time spent travelling to and from beats and the police facility at the Civic Center was projected to grow by over 27% during the period from 35,700 annual hours to 43,000 hours. The total annual distance travelled by field patrol units was projected to grow over 20% by 1990 to 1.4 million miles (from 1.1 million miles in 1982).
  - The cost of travel to and from beats and the PAB (Police Administration Building) by field patrol beat units was projected to grow from $1.3 million per year to $1.6 million per year in 1990 -- growth of 23% over the period.
  - PAB facility expansion by 1990 required for staffing growth anticipated over the period was projected to range from $785,000 to $1.5 million.
- Phase II compared the travel and facility costs of continued centralized patrol operations with the costs resulting from decentralization of patrol. This component of the study evaluated the impacts of decentralizing those beats with the greatest total travel time -- principally those in the southern and eastern portions of the City. The conclusion resulting from this analysis was that a single "large" substation serving these areas had the best cost/benefit ratio of all examined.
- Phase III refined the facility planning analysis and evaluated potential substation sites. The following conclusions were reached.
  - The costs of staffing and operating a 24 hour police substation facility would exceed travel cost savings (in terms of time spent travelling to/from beats and the PAB) by about $217,000 per year (almost $295,000 per year when other facility operating costs are included -- utilities, custodial, vehicle ferrying, and building maintenance).
  - The costs of building a substation -- at $2.6 million (excluding land purchase) would exceed PAB expansion by between $600,000 and $1.1 million.

- A site analysis identified the South Corporation Yard as the best city-owned site to build a police substation within the area targeted for substation service.

The current study extended the analysis of travel costs, staff costs and facility requirements through to the year 2000. The sections of the report, which follow, provide the results of this analysis.

2. BY THE YEAR 2000, PATROL OFFICERS WILL BE DEVOTING SUBSTANTIALLY MORE TIME TO TRAVEL TO AND FROM BEATS, THOUGH LARGELY AS A FUNCTION OF GROWTH IN THE NUMBER OF FIELD UNITS.

In updating the earlier study and extending its time frame to the year 2000, the project team evaluated the following:

- Travel times for both peak and non-peak travel conditions between the PAB and all city beats;* and between candidate substation sites and all beats within each service area. The City's transportation model, TRANPLAN, was used for this analysis. This computer model, which was used in the earlier study for the 1990 time frame, has recently been reconfigured to incorporate transportation system improvements and circulation growth projections for the year 2000. Attachment B, at the conclusion of this report, summarizes this portion of the analysis.

- Field patrol call for service workload was projected for the year 2000 utilizing a revision of the methodology used in the earlier study for 1990. This workload analysis was a key element in projecting field staffing needs, by City region, over the planning period. Attachment A, at the conclusion of this report, summarizes the approach taken and detailed results achieved.

- As a result of these analytical tasks, the study team projected substation staffing and facility needs for the year 2000.

The subsections which follow summarize the results of these analytical tasks.

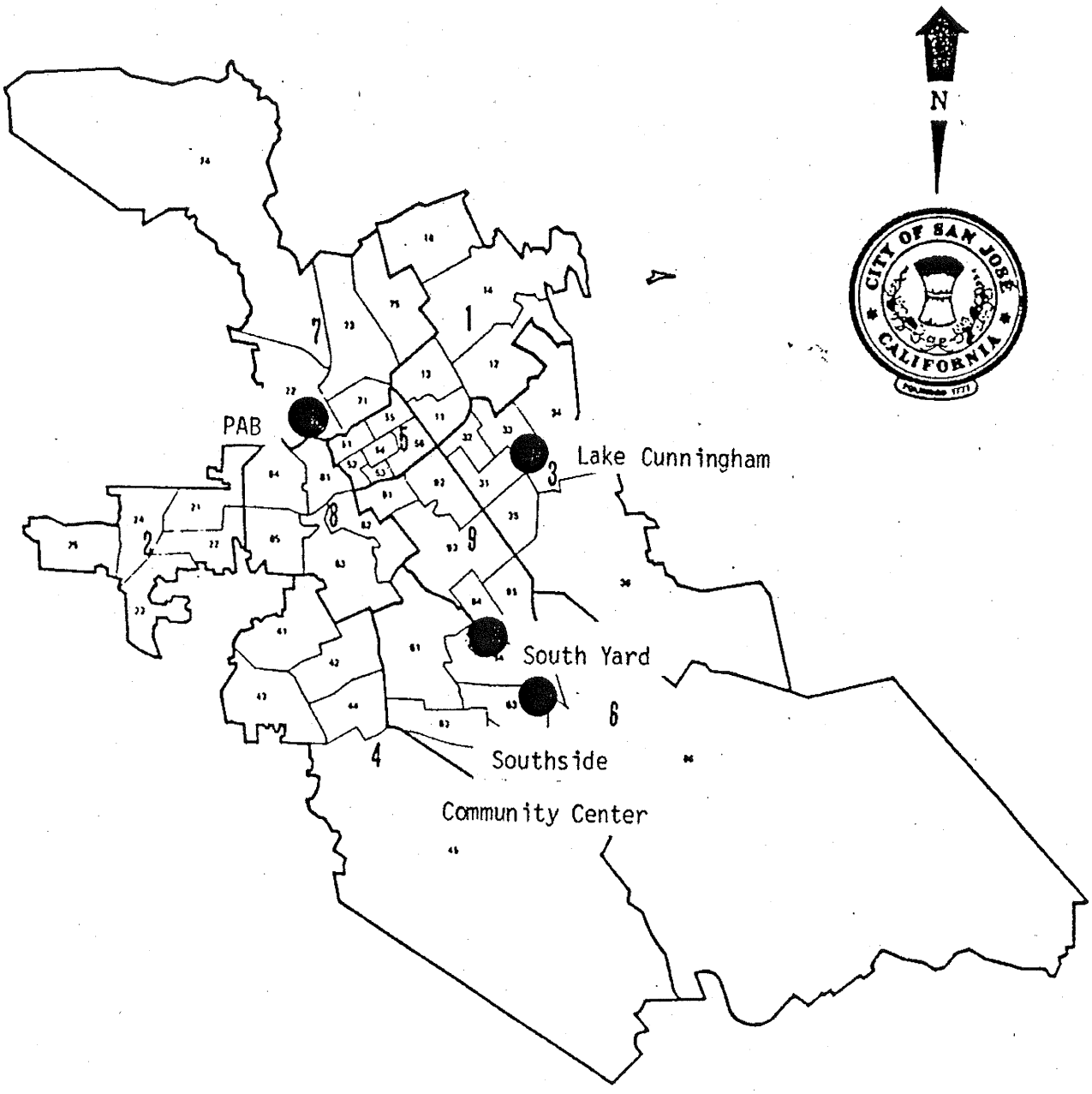
(1) Average Travel Times Between the PAB and City Beats Will Not Change Dramatically Between 1990 and 2000.

Exhibit 1, which follows this page, portrays trends in average travel times between the PAB and each police district for 1982, 1990

* For purposes of consistency with the prior study, the beat and police district boundaries existing in 1982 were used. See Map 1, which follows this page. Map 2, which follows Map 1, compares beat/district boundaries in both configurations.

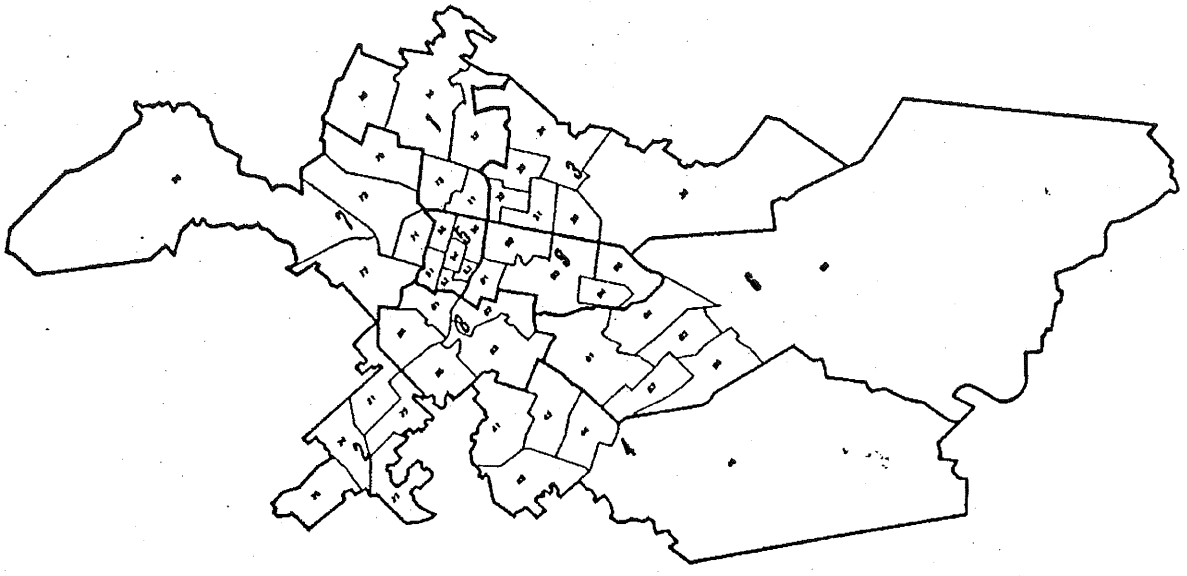
MAP I

SAN JOSE POLICE
BEAT DISTRICT MAP



MAP II

A. Old Boundaries



B. New Boundaries

EXHIBIT I

San Jose Police Department

TRENDS IN AVERAGE TRAVEL TIMES BETWEEN PAB AND BEATS

POLICE *** DISTRICT	AVERAGE TRAVEL TIMES BY YEAR (In minutes) 1982* OFF-PEAK	1982* PEAK	1990** OFF-PEAK	1990** PEAK	2000** OFF-PEAK	2000** PEAK
1 Alum Rock Berryessa	8.3	17.8	8.9	14.8	8.3	15.3
2 West Valley	9.7	22.9	11.8	17.9	11.5	17.3
3 Evergreen	9.6	20.4	11.7	15.6	11.6	15.5
4 Almaden Cambrien	12.8	25.4	13.9	20.2	13.2	19.4
5 Downtown	3.6	9.3	4.3	7.4	4.5	7.7
6 Edenvale/ Coyote	15.0	31.4	14.3	19.3	13.5	18.7
7 North San Jose/ Berryessa/ Alviso	3.1	10.3	6.0	9.6	5.6	9.2
8 Willow Glen	5.2	15.5	6.6	9.7	6.4	9.3
9 South San Jose	8.8	20.5	8.7	12.1	9.3	12.8

* Logged patrol travel times

** TRANPLAN model estimated travel times

***For consistency with the prior study, 1982 police district boundaries are used for the entire planning period.

and 2000. Peak and non-peak average travel times are depicted. This information can be summarized as follows:

- Between the year 1982 and 1990, average peak travel times are projected to decline dramatically -- an average of 25%. Non-peak travel, on the other hand, is projected to rise moderately -- by an average of less than 10%.

- Between 1990 and 2000, on the other hand, the average peak and non-peak travel times between the PAB and all City field patrol beats will be relatively unchanged. Transportation system improvements in the decade, then, will be balanced by growth in traffic.

(2) <u>The Rate of Growth in Call for Service Workload Will Slow in the 1990's.</u>

Exhibit II, which follows this page, portrays projected City population and field patrol call for service workload over the planning period. These projections formed the basis of our analysis of field patrol staffing needs through the end of the century. While projection methodology and assumptions can be found in Attachment A, at the conclusion of this report, the following points summarize our findings:

- Overall, growth in call for service workload is projected to be somewhat less rapid in the 1990's compared to the 1980's - from a current annual growth rate of 2.6% to 2.1% in the 1990's. This is largely a function of a slowdown in the growth of population in the City in the 1990's. However, as in the earlier study, the project team assumed that call for service growth would exceed population growth by 1% per year.

- On a district by district basis, however, CFS growth will result in some differences. For example:

  - District 6 (Edenvale/Coyote) CFS workload is projected almost to double between 1982 and 2000. This area, which includes Coyote Valley development, will be the busiest in terms of CFS workload.

  - For the southern and eastern portions of the City as a whole (the region included in the single substation's service area), CFS workload in the Year 2000 will remain just less than one-half of the City's total field patrol workload.

  - Development downtown will result in dramatic CFS growth in the 1990's -- an increase of almost 50% above current levels by the turn of the century.

EXHIBIT II

San Jose Police Department

PROJECTED CALLS FOR SERVICE
SERVICE BY POLICE DISTRICT *
FOR THE YEAR 2000

POLICE DISTRICT	AVERAGES YEARS 1982-1985 POPULATION	% OF TOTAL	CFS	% OF TOTAL	YEAR 2000 POPULATION	% OF TOTAL	CFS	% OF TOTAL
1 Alum Rock/ Berryessa	84,105	12.0%	19,079	10.2%	95,203	11.5%	24,966	9.1%
2 West Valley	89,614	12.8%	17,083	9.1%	84,727	10.2	19,531	7.1
3 Evergreen	90,487	12.9%	25,584	13.6%	119,714	14.4	36,747	13.4
4 Almaden/ Cambrien	122,591	17.5%	19,008	10.1%	130,148	15.7	23,195	8.5
5 Downtown	32,981	4.7%	23,252	12.4%	34,555	4.2	36,900	13.5
6 Edenvale/ Coyote	112,029	16.0%	23,007	12.3%	162,810	19.6	43,980	16.0
7 North San Jose/ Berryessa/ Alviso	47,187	6.7%	19,786	10.5%	71,790	8.7	35,387	12.9
8 Willow Glen	63,145	9.0%	19,123	10.2%	73,633	8.9	26,001	9.5
9 ~~North~~ San Jose	58,073	8.3%	21,015	11.2%	56,089	6.8	27,544	10.0
TOTAL	700,212	100.0%	187,737	100.0%	828,677	100.0%	274,251	100.0%

* Police district configuration in existence in 1982.

- The growth in CFS workload in District 3 (Evergreen) -- 44% higher in the year 2000 compared to the early 1980's -- will exceed the growth in population in this area -- at 32% over the same period.

- The CFS workload in the western and southwestern portion of the City -- Police Districts 2 and 4 -- will not grow over the planning period.

(3) <u>The Growth Rate in Field Patrol Officers Will Also Slow in the 1990's.</u>

Exhibit III, which follows this page, projects field patrol units in the year 2000 based on an analysis of field workload, personnel availability factors and beat unit allocation. As in the earlier study, Year 2000 staffing levels are derived from the City's target of having 1.6 sworn officers for each 1,000 population. Growth in field patrol beat units (at an average increase of 2.0% per year) will be slower than the 4.0% per year growth in the number of beat units in the 1980's. Growth will be uneven, however, as the following points illustrate.

- District 6 (Edenvale/Coyote) beat units will grow by almost 43% between 1990 and 2000. This police district will have the greatest number of beat units in the City.

- Downtown (District 5) and District 7 (North San Jose/ Berryessa/Alviso) will grow 51% and 43% respectively.

- District 3 (Evergreen) growth in field patrol units will slow to about 1% per year.

- The West Valley (2) and Almaden/Cambrien (4) will have no growth in field patrol units in the 1990's.

The substation districts of 3, 4, 6 and 9 will encompass 48% of the beat units fielded by the City in 2000 -- about the same proportion projected in 1990.

(4) <u>Travel Costs of Field Patrol Personnel in the Year 2000 Resulting from Centralized Operations Will Continue to Grow -- Especially in the South.</u>

Exhibit IV, which follows Exhibit III, portrays the results of our analysis of travel costs to and from beats and the PAB by patrol units over

EXHIBIT III

San Jose Police Department

PROJECTED AVERAGE BEAT UNITS BY DISTRICT AND SHIFT BASED ON 1.6 OFFICERS PER 1,000 POPULATION IN YEAR 2000

POLICE DISTRICT #	DAY SHIFT	SWING SHIFT	NIGHT SHIFT	TOTAL	# OF SERGEANTS	% CHANGE 1990 v. 2000
1 Alum Rock/ Berryessa	6.5	8.7	6.2	21.4	3.0	31.2%
2 West Valley	5.1	6.8	4.9	16.8	2.3	(2.3%)
3 Evergreen	9.6	12.8	9.2	31.6	4.4	10.1%
4 Almaden/ Cambrien	6.1	8.1	5.8	20.0	2.8	(1.5%)
5 Downtown	9.7	12.9	9.3	31.9	4.4	50.5%
6 Edenvale/ Coyote	11.5	15.3	11.0	37.8	5.3	42.6%
7 North San Jose/Berry-essa/Alviso	9.2	12.3	8.9	30.4	4.2	39.4%
8 Willow Glen	6.8	9.1	6.5	22.4	3.1	16.1%
9 South San Jose	7.2	9.6	6.9	23.7	3.3	5.3%
TOTAL	71.7	95.6	68.7	236	32.8	21.0%
% of BEAT UNITS	30.4%	40.5%	29.1%	100%	-	-

*1982 police district configuration

EXHIBIT IV

San Jose Police Department

A COMPARISON OF 1982, 1990
AND 2000 PATROL TRAVEL COSTS
WITHOUT A SUBSTATION

POLICE DISTRICT	1982	1990	2000	% Change 1982 v. 1990	% Change 1990 v. 2000
1 Alum Rock/ Berryessa	$127,671	$139,383	$159,218	9.2%	14.2%
2 West Valley	126,303	152,831	157,680	21.0%	3.2%
3 Evergreen	214,179	276,423	314,855	29.1%	13.9%
4 Almaden/ Cambrien	173,813	219,314	218,033	26.2%	(0.6%)
5 Downtown	93,051	104,027	160,728	11.8%	54.5%
6 Edenvale/ Coyote	233,556	309,606	426,955	32.6%	37.9%
7 North San Jose/Berry-essa/Alviso	72,130	117,387	153,902	62.7%	31.1%
8 Willow Glen	105,136	112,560	128,244	7.1%	13.9%
9 South San Jose	174,448	181,302	220,336	3.9%	21.5%
TOTAL EXPRESSED IN 1982 TERMS	$1,320,287	$1,612,833	$1,939,951	22.2%	20.3%
TOTAL EXPRESSED IN 1987 TERMS	$1,478,589	$1,806,212	$2,172,578		

the planning period. The information provided in the exhibit are the summary cost figures resulting from calculations of the total miles driven and time consumed by projected beat units and costed out both in constant 1982 dollars (for comparability with the prior study) as well as in current 1987 dollars. The following points summarize our conclusions:

- In constant 1982 costs, year 2000 travel costs will be 20.3% greater than 1990 costs -- or about $327,118 per year greater. When expressed in current 1987 dollars, this difference grows to about $366,366 per year.

- Comparing year 2000 travel costs to 1982 costs shows that beat/PAB travel will cost the City $619,664 per year more than the earlier date (or about $693,989 in current 1987 costs).

- Travel costs to the substation area of police districts 3, 4, 6 and 9 will grow from about 51% of total beat/PAB travel costs to about 61% of the year 2000 total.

(5) **Travel Cost Savings in the Year 2000 Associated with a Single Large Substation Are About the Same As Those for 1990 and Are Still More Than Offset by Substation Staffing And Operating Costs.**

The travel time and distance calculations were performed again with reference to the single large substation alternative analyzed in the earlier study. It should be pointed out that after the earlier substation study was completed, the Police Department, Parks and Recreation and other City staff identified a potential substation site not far from the South Corporation Yard which was viewed to be better suited as a police substation from the perspectives of access to the public and arterials, visibility, and future southern City growth. This space was available at the Southside Community Center -- about 2.2 miles south of the South Corporation Yard. Estimated Year 2000 travel times and miles were developed using the TRANPLAN model for the Southside Community Center and other beats/districts in the substation service area. The averages, on a district basis, are shown in Table 1, which follows.

Table 1

Estimated Year 2000 Travel Times and Distances Between the Southside Community Center and the Substation Service Area.

POLICE DISTRICT	# BEAT UNITS	# SGTS.	TRAVEL TIMES NON-PEAK	TRAVEL TIMES PEAK	TRAVEL DISTANCE
3 Evergreen	31.6	4.3	13.4	19.3	5.2
4 Almaden/ Cambrien	20.0	3.3	10.7	14.5	6.1
6 Edenvale/ Coyote	37.8	3.3	5.6	7.8	2.9
9 South San Jose	23.7	4.3	9.5	19.1	5.5

Exhibit V, which follows this page, portrays the results of the year 2000 patrol travel cost analysis assuming a single, large substation located at the Southside Community Center. The following points summarize the results contained in this exhibit.

- In constant 1982 dollars, travel cost savings associated with operating a single, large four district substation at the Southside Community Center in the year 2000 are $272,294 per year. These savings are over $37,700 per year less than those obtained in the earlier study for the year 1990. In current 1987 dollars, these annual savings are almost $305,000 per year.*
- The projected growth in beat units in District 6 (Edenvale/ Coyote) is largely responsible for whatever cost savings result in the year 2000.
- On the other hand, travel costs by the year 2000 are distributed in such a way that other areas cost the same or more to serve out of a substation. These include:
  - District 3 (Evergreen), travel costs, as a whole, are virtually identical for these beat units operating either out of the substation or the PAB. In fact, average peak

* It should be noted that these are not cost savings in the sense that expenditures are reduced. Rather, this travel time/cost is a reduction in travel to and from beats and is converted into service availability or activity.

EXHIBIT V

San Jose Police Department

CITYWIDE PATROL TRAVEL COSTS ASSUMING
A SINGLE SUBSTATION OPERATING AT THE
SOUTHSIDE COMMUNITY CENTER IN THE YEAR 2000

Police District	Travel Costs	+/(-) Centralized Travel Costs
1 Alum Rock/ Berryessa	$ 159,218	-
2 West Valley	157,680	-
3 Evergreen	315,281	$ 426
4 Almaden/ Cambrien	172,964	(45,069)
5 Downtown	160,728	-
6 Edenvale/ Coyote	168,031	(258,924)
7 North San Jose/Berry-essa/Alviso	153,902	-
8 Willow Glen	128,244	-
9 South San Jose	251,609	31,273
TOTAL: 1982 COSTS	$1,667,657	($272,294)*
TOTAL: 1987 COSTS	$1,867,609	($304,969)

* Greater savings are possible if most of District 9 served out of PAB -- in the order of $30,000 - $40,000 per year.

and non-peak travel times will be moderately longer in the substation configuration in the year 2000 while distances will be moderately shorter. This finding raises the issue that virtually all of these beats would be more appropriately served out of the PAB compared to the Southside Community Center.

- District 9 (South San Jose) travel costs are greater than centralized travel costs when all of these beats are based from the Southside Community Center. This, too, indicates that many of these beats should not be based in a substation located further south.

These travel time increases to Evergreen and South San Jose (Districts 3 and 9) also impact 1990 estimates and are largely a function of the substation location shifting over two miles south of the South Corporation Yard.

- Comparing these travel cost savings with the four district substation staffing costs arrived at in Phase III of the earlier study shows that staffing costs still well exceed travel cost savings -- and by a comparable margin in the year 2000. The conclusion is displayed in Table 2 below.

Table 2

Comparison of Travel Cost Savings and Substation Staffing and Operating Costs in the Year 2000

A.	Constant 1982 Dollars	
1.	Substation Staffing Costs (1 Captain, 5 Lieutenants, 1 Secretary, 5 PRCs)	$526,555
2.	Substation Operating Costs (@$4.64 per square foot for a 15,000+ s.f. facility)	70,430
3.	Vehicle Ferrying Costs (for repairs only, to the South Corp. Yard)	7,500
	TOTAL INCREMENTAL OPERATING COSTS	$604,485
4.	Travel Cost Savings	($272,294)
5.	+/(-) Travel Cost Savings	$332,191
B.	Current 1987 Dollars	
1.	Substation Staffing Costs	$673,939
2.	Substation Operating Costs	70,430
3.	Vehicle Ferrying Costs	7,500
		$751,869
4.	Travel Cost Savings	($304,969)
5.	+/(-) Travel Cost Savings	$446,900

The major conclusion to be drawn here -- and the principal choice facing the City -- is that for the opportunity to convert $304,969 in beat/police facility travel costs in Year 2000 to service availability time, the City must spend $751,869 in staffing, facility operating and vehicle ferrying costs (all in 1987 dollars).

The balance of these costs and "savings" could only be improved by a few factors. These potentially include:

- Reduction or increase in the number of beat units based out of the substation.
- An increase in vehicle operating costs. These have not changed in recent years -- as fuel costs have declined, maintenance and vehicle replacement costs have increased.
- An increase in police officer hourly costs above the prevailing rate of general inflation.
- Altering new substation staffing requirements. For example, if Sergeants are deployed around the clock at "the front desk" rather than Lieutenants, an additional $55,000 in 1987 savings could be found. On the other hand, additional new staff would adversely affect the cost-benefit equation.

3. <u>FACILITY OPTIONS ARE ALTERED BY THESE OFFICER TRAVEL FINDINGS.</u>

In the earlier study, a facility plan was developed for a large four district substation serving all of the southern and eastern portions of the City. Developments in the intervening period, as well as findings contained in this study, indicate that this facility plan should be altered to reflect the following:

- The Southside Community Center site, located 2.2 miles south of the original site (the South Corporation Yard) clearly reduces the number of beats which should be served out of this facility due to increases in travel times. These include:
  - Three of the five District 9 (South San Jose) beats -- the northernmost -- should never be served out of the substation due to major travel time differences.
  - There is the potential for most or all of District 3 (Evergreen) beats to be served either out of their own eastside substation or the PAB.

- In any event, the available portion of the Southside Community Center is too small and poorly configured to base all of the City's southern and eastern beat units. By the Year 2000, the police needs of the region as a whole will grow to:

  - 129 beat units (compared to 109 in 1990).
  - 314 patrol personnel (compared to 266 in 1990).
  - A site of over 100,000 square feet where only about 85,000 square feet are available.
  - Parking requirements for 185 vehicles.

Map 3, which follows this page, provides a graphic depiction of the City's plan for the available space for substation use at the Southside Community Center. As this chart shows, the substation space could include an 8,000 square foot facility footprint adjacent to Cottle Road (hashmarked rectangle) and approximately 65,000 square feet of parking -- enough for between 140 - 150 parking spaces. While a two-story facility can easily be accommodated on the site, parking space is limited. As a result, the number of beat units and officers based out of the substation need to be reduced. The subsection which follow, examine alternatives available to the City.

(1) Reduce Facility and Site Requirements By Re-examining Needs and Servicing Fewer Beat Units at the Substation.

There are several actions which could be taken which would have the effect of reducing substation space requirements. There are summarized in the paragraphs which follow:

- Service fewer beats out of the substation. Travel time analysis has indicated that it costs more (in terms of travel costs) to serve most of District 9 (South San Jose) out of the Southside Community Center. This analysis has also concluded that while travel costs are the same for District 3 (Evergreen) if served either out of the PAB or the Southside Community Center, travel time is greater from the substation to virtually all of these beats (distances though are shorter). Keeping these beats out of the substation, then, would reduce total travel costs (by about $30,000 per year) as well as reduce site needs at the Southside Community Center. Exhibit VI, which follows Map 3, revises substation beat unit and personnel allocations in light of this.

MAP III

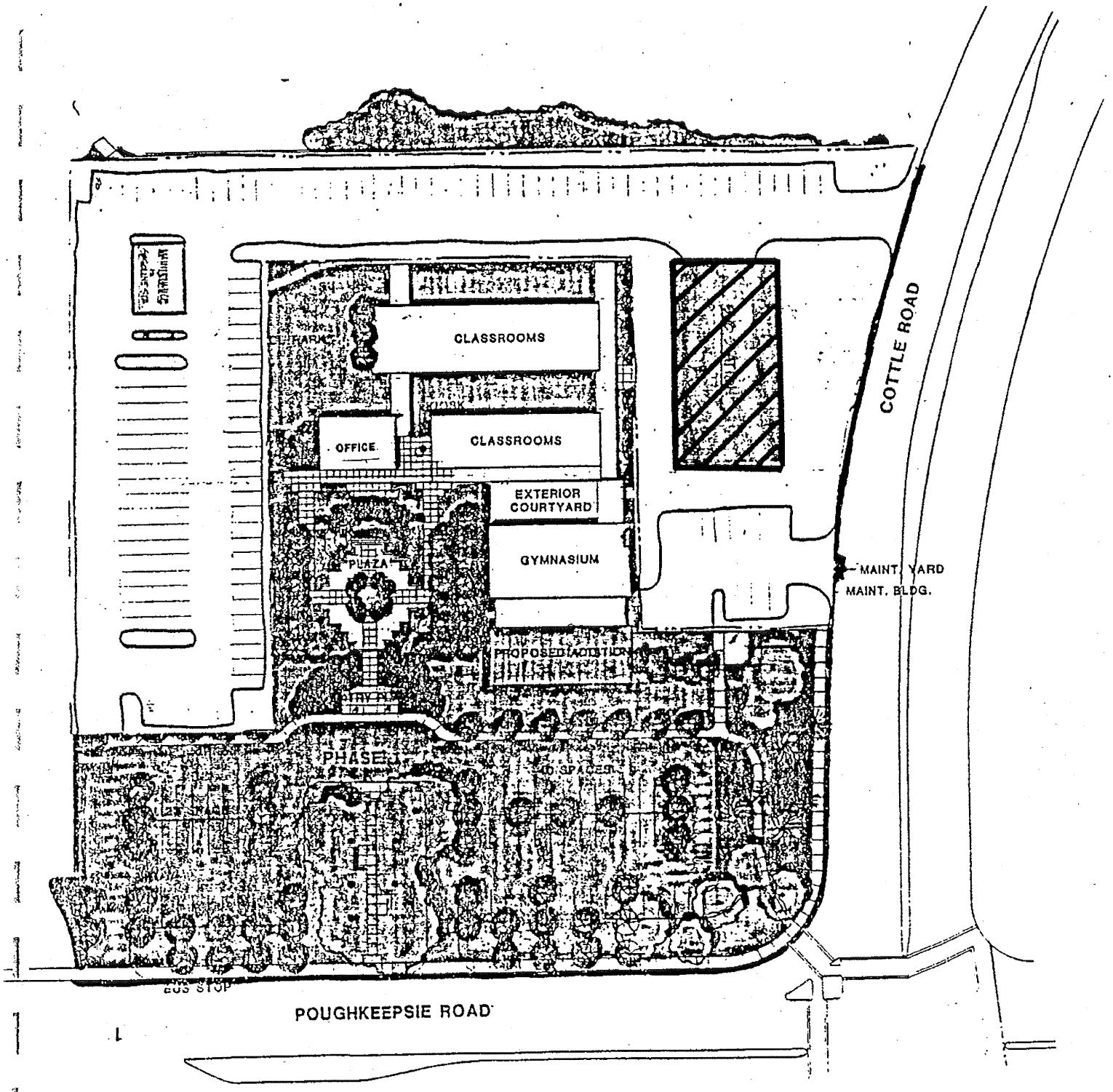

CLASSROOMS
OFFICE
CLASSROOMS
EXTERIOR COURTYARD
GYMNASIUM
PLAZA
PROPOSED ADDITION
PHASE
COTTLE ROAD
MAINT. YARD
MAINT. BLDG.
BUS STOP
POUGHKEEPSIE ROAD

EXHIBIT VI

San Jose Police Department

REVISED CALCULATIONS OF SUBSTATION OFFICERS IN YEAR 2000 WITH FEWER UNITS

1. BEAT UNITS

SHIFT	DISTRICTS/BEAT UNITS 4	6	9	TOTAL
Days	6.1	11.5	7.2	24.8
Swings	8.1	15.3	9.6	33.0
Nights	5.8	11.0	6.9	23.7
	20.0	37.8	23.7	81.5
Sgts.	2.8	5.3	3.3	11.4
TOTAL	22.8	43.1	27.0	92.9
	23	43	27	93

2. TOTAL PERSONNEL

SHIFT	OFFICERS	SERGEANTS	TOTAL
Days	60.3	8.3	68.6
Swings	50.3	11.1	91.4
Nights	57.6	8.3	65.9
TOTAL	198.2	27.7	225.9
	198	28	226

3. MARKED VEHICLES REQUIRED (@3.2)

SHIFT	# VEHICLES
Days (Incl. Sgts.)	21.4
Swings	28.6
Nights	20.6
TOTAL	70.6
	71

81

- Reduce other space allocations without affecting the level of service or quality of workspace. There are several space allocations in the substation facility plan which could be reduced without negatively impacting operations or service. These include the following:

  - Briefing room space allocation is overly generous considering the number of officers assigned to peak shifts.

  - Detention area is not required if preprocessing of arrestees continues to be a centralized function -- something the department has expressed an interest in continuing. Keep interview rooms in substation.

  - Investigators - reduce commensurate with reduction in service area of substation.

  - Locker area would be reduced to reflect fewer officers in the substation.

  - Reduce parking stall space requirement -- stripe parking more narrowly to fit more in the lot.

- Make facility two-story -- this reduces by 50% the facility footprint requirement.

Exhibits VII and VIII, which follow this page, provide revised year 2000 facility and site requirements incorporating the assumptions outlined in the preceding paragraphs. The exhibit shows that these reductions in site requirements provide for the usability of the Southside Community Center for police substation purposes through the planning period (through the turn of the century).

(2) The City Could Build A Second Substation in the Eastern Portion of the City.

Raising the issue of building a second substation reopens the discussion of the value of substations and decentralization in general. The project team conducted in-depth research of the police literature regarding substations and decentralization to evaluate advantages and disadvantages both to the department and the community it serves. Exhibit IX, which follows Exhibit VIII, summarizes the advantages and disadvantages found in this literature search. Key points include:

EXHIBIT VII (a)

SAN JOSE POLICE DEPARTMENT

REVISED SUBSTATION FACILITY
REQUIREMENTS YEAR 2000

DESCRIPTION OF REQUIRED SPACE	N.S.F.
1. Patrol Functions	**N.S.F.**
. Patrol Briefing Room @ 17.4 s.f. per swing shift officer x 80% total pers.)	1,295
. Report Writing Room (@25 s.f. for 15 officers)	375
	1,670
2. Investigative Functions	
. Investigators Work Stations (9 Investigators plus 2 extra @ 100 s.f. each)	1,100
. Clerical (2 @ 60 s.f. each)	120
. Files (10 @ 10 s.f. each)	100
. Terminals (7 @ 45 s.f. each)	315
. Interview Rooms (2 @ 125 s.f. each)	250
. Reception Area (30 s.f. each for 4)	120
	2,005
3. Command Staff Area	
. Captain (@ 200 s.f.)	200
. Lieutenants (sharing 2 work stations plus separate files -- 100 s.f. x 2 plus 10 s.f. x 6)	260
. Secretary (@ 60 s.f.)	60
	520

DESCRIPTION OF REQUIRED SPACE	N.S.F.
4. Clerical/Records Area	**N.S.F.**
. PRC workstations (2 @ 60 s.f.)	120
. Terminals (2 @ 45 s.f.)	90
. Xerox	45
. Files/Cabinets (11 x 10 s.f.)	110
	365
5. Detention Area	0
6. Crime Prevention	150
7. General Areas	
. Lockers (for 198 officers, 28 Sgts., 1 Capt., 5 Lieutenants, 9 Info Center, 9 Investigators @ 15 s.f. each inclusive of showers. RRs, etc.) Total = 250	3,750
. Lobby/reception (30 s.f. x 10)	300
. Information Center -2 workstations @ 60 s.f. plus 1 PRC workstation @ 60 s.f. plus 4 files @ 10 s.f.)	220
. Meeting/Conference Room (30 s.f. for 15 ea.)	450
. Employee Lounge	350
. Arsenal	200
. Internal Storage	200
. Custodial (2 @ 35 s.f.)	70
. Restrooms (2 @ 180)	360
	5,900

EXHIBIT VII (b)

DESCRIPTION OF REQUIRED SPACE	N.S.F.
TOTAL USABLE S.F.	10,610
CIRCULATION @ 20%	2,653
TOTAL N.S.F.	13,263
GROSS SQUARE FEET @12.5%	15,157

EXHIBIT VIII

San Jose Police Department

LARGE SUBSTATION
SITE REQUIREMENTS

DESCRIPTION OF REQUIRED SPACE

1.	Substation Facility	15,157
	Space at 50% - 2 story	7,579
2.	Parking - City-owned vehicles (@350 s.f. ea)	
	. Marked patrol vehicles (2 overlapping shifts -- 50 vehicles)	17,500
	. Command staff (2)	700
	. Investigators (.8 per investigator x 9) = 7	2,450
	. Other (e.g. downtown staff - 3)	1,050
		21,700
3.	Parking-Employee vehicles	
	. Patrol Officers (50 spaces)	17,500
	. Command staff (2)	700
	. Investigators and clerical support (11)	3,850
	. Info Center Staff (4)	1,400
		23,450
4.	Parking-Visitors' Vehicles	
	10 spaces	3,500
5.	Vehicle Maintenance Fueling Facility	2,100
	Sub-Total	58,329
	Landscaping @ 15%	10,293
	TOTAL SITE REQUIREMENTS	68,622

* Total parking spaces = 139

Exhibit IX

San Jose Police Department

BENEFITS AND COSTS OF SUBSTATION FACILITIES

POTENTIAL BENEFITS/ADVANTAGES	POTENTIAL COSTS/DISADVANTAGES
• Potential for improved cooperation between Police Officers and Citizens.	• More complex coordination and flow of information in the department.
• Greater accessibility for crime and other incident reporting.	• Duplication of services and facilities.
• Greater delegation of responsibility to middle managers.	• Additional staffing costs and facility operating costs.
• Decreased travel time to and from beats and police operations center.	• Departmental fragmentation; potential for "provincialism" to develop; difficulty in maintaining policies and standards
• Officer satisfaction in assignment closer to residence.	• Creation of more top and middle management overhead in the Department.
• Greater police visibility resulting in perceptions of greater citizen safety.	

- The advantages of substations in terms of community impacts are really unquantifiable. Pluses relate to perceptions of safety, opportunities for better cooperation between the police and the community. These "advantages" can relate as much to officer training, deployment, and field enforcement emphasis. Furthermore, these advantages can all be achieved without substations.

- Travel time reduction is a real advantage affecting officer availability, but as a cost is eclipsed by added operating and staffing costs. A southern San Jose substation, for example, would convert about 7,500 hours per year of officer travel time into availability time in Year 2000.

- Decentralization of patrol operations results in decentralization of decision-making. While this may be desirable in the department (for career development, etc.), it too can be achieved without substations.

- Some of the other disadvantages of decentralization of police operations are real and must be overcome before a substation is built. For example, the creation of effective lines of communication and standardization of policy and performance expectations need to be resolved. While these issues often characterize centralized police administrations, they are exacerbated in decentralized ones.

The reasons, then, for building police substations are largely subjective in nature. Furthermore, many of the real or perceived advantages of decentralization can be achieved without building substations. For example, the following programs have been instituted in the San Jose Police Department and could be expanded:

- Mail-in reports
- Phone-in reports
- Crime Prevention programs.

In the absence of clearly defined criteria to justify substation construction, the new costs of staffing and operating a satellite police facility must be largely offset by reductions in officer travel. As the analysis in 1983 and the current study demonstrate, even the most optimum balance of these costs and benefits -- a single southern substation -- results in added police department costs of at least $450,000 per year in

current dollars. If the City chose to build a second substation, however, there are very few realistic options. The following paragraphs summarize potential approaches:

- The West Valley (Police District 2 and portions of 4) is not attractive as a substation candidate because:
  - There is projected to be virtually no population, call for service or patrol beat unit growth through the end of the century.
  - In the year 2000, the West Valley will account for:
    - Less than 20% of the City's population, a decline compared to the 1980's proportions.
    - About 11% of the City's field patrol workload -- with call for service frequency comparable to today's.
    - Similarly, about 11% of the City's field patrol beat units -- no growth from current levels.
  - Even a minimally staffed substation (at, say, five Lieutenants and five PRCs) would have new staffing costs well in excess of travel cost savings.
- The Almaden/Cambrien area was a candidate for one of two small substations in the earlier study. As with the west, there are no opportunities to put a substation in District 4 by the year 2000. There is no growth projected in workload or patrol units and too few units would operate out of the substation to offset administrative staffing costs.
- The Alum Rock/Berryessa portion of the City is too close to the PAB to result in justification of a substation -- too little travel time would be saved for relatively few beat units.

The only candidate area with growth, travel impacts and field staffing at levels which warrant substation feasibility being examined is the Evergreen area -- Police District 3.

The San Jose eastside* will, in the year 2000, contain over 40 beat units per day plus Sergeants (about 17% of total city patrol units). Patrol officers assigned to this police district will

* Which for purposes of this analysis includes all of Police District 3 (Evergreen) and southern District 1 (Alum Rock/Berryessa).

respond to more calls than any other of these geographical divisions. Furthermore, the eastside/Evergreen area has been the focus of various special enforcement and community oriented policing projects in recent years. For cost benefit as well as service related reasons, then, this area is an obvious potential substation candidate.

Alone, a smaller Evergreen police substation would result in over $200,000 per year in converted travel costs. As Exhibit X, which follows this page shows, a large southern and smaller eastern substation would generate approximately $517,000 in converted travel cost per year in 1982 dollars -- or $578,000 in 1987 dollars per year.

Against this, however, must be gauged the costs of staffing a substation. Exhibit XI, which follows Exhibit X, portrays these costs. Even if a smaller substation could be staffed with fewer administrative personnel -- one Captain, four Lieutenants and five PRCs two substation staffing costs would exceed converted travel costs by over $661,433 per year in current 1987 dollars. When facility operating costs and vehicle ferrying costs are included, the net cost for two substations grows to over $790,000 in 1987 dollars (over $580,000 in constant 1982 dollars).

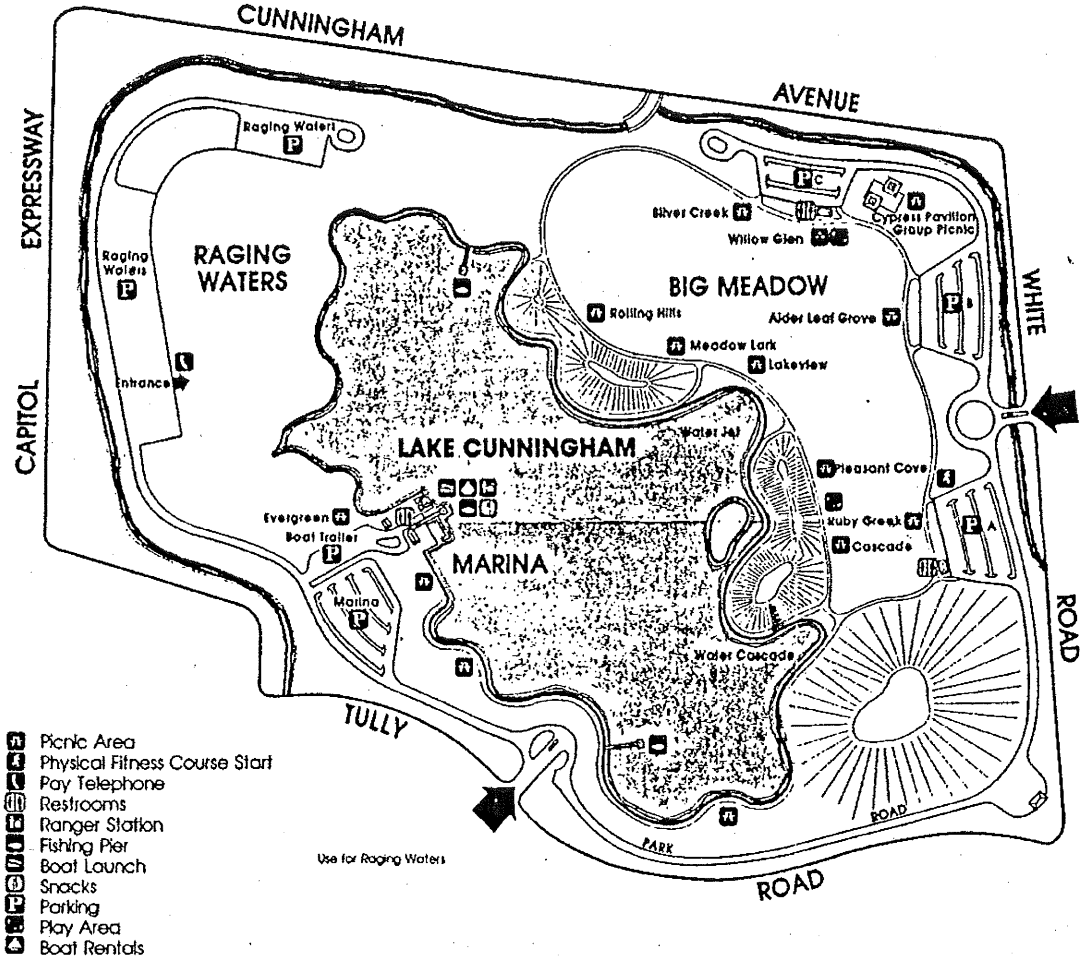
Exhibits XII - XIV, which follows Exhibit XI, provide the analytical sequence showing staff who would be assigned to a substation, facility and site requirements for the smaller substation.

The study team evaluated one site for this analysis -- Lake Cunningham Regional Park -- and utilized this site for purposes of calculating travel costs/savings to all eastside beats (see Map 4). It favorably met several criteria identified in our earlier study as important for substation locational analysis. These include:

LAKE CUNNINGHAM REGIONAL PARK

SAN JOSE, CALIFORNIA

MAP IV



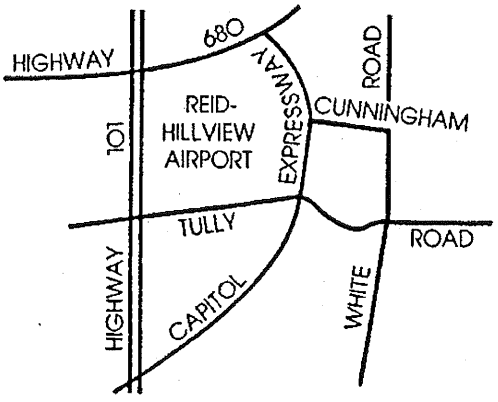


EXHIBIT X

San Jose Police Department

TRAVEL COST SAVINGS WITH
TWO SUBSTATIONS IN 2000

POLICE DISTRICT	POLICE FACILITY	PROJECTED COSTS TOTAL TRAVEL COSTS	+/(-) CENTRALIZED TRAVEL COSTS
1. Alum Rock/ Berryessa	a. PAB b. Eastside Substation	$ 95,511 48,008	($ 15,699)
2. West Valley	PAB	157,680	-
3. Evergreen	Eastside Substation	118,008	(196,847)
4. Almaden/ Cambrien	Southside Substation	172,964	(45,069)
5. Downtown	PAB	160,728	-
6. Edenvale/ Coyote	Southside Substation	168,031	(258,924)
7. North San Jose	PAB	153,902	-
8. Willow Glen	PAB	128,244	-
9. South San Jose	a. PAB b. Southside Substation	132,202 88,134	-
TOTAL - 1982 COSTS		$1,423,412	($516,539)
TOTAL - 1987 COSTS		$1,594,079	($578,499)

EXHIBIT XI

San Jose Police Department

SUBSTATION STAFFING PLANS AND COSTS

1. SMALL SUBSTATION

Staff	Number	Cost/Position (1982)	Cost/Position (1987)	Total Cost (1982)	Total Cost (1987)
Captain	1	$ 76,416	$93,707	$ 76,416	$ 93,707
Lieutenant	4	66,243	80,689	264,972	322,756
P.R.C. II	5	22,072	29,906	100,360	149,530
	10			$ 441,748	$ 565,993

2. LARGE SUBSTATION

Staff	Number	Cost/Position (1982)	Cost/Position (1987)	Total Cost (1982)	Total Cost (1986)
Captain	1	$ 76,416	$93,707	$ 76,416	$ 93,707
Lieutenant	5	66,243	80,689	331,215	403,445
Clerk II	1	18,564	27,257	18,564	27,257
P.R.C. II	5	22,072	29,906	100,360	149,530
	12			$ 526,555	$ 673,939

3.	**TOTAL**	$ 968,303	$1,239,932
4.	Projected Travel Cost Savings With Two Substations	($ 516,539)	($ 578,499)
5.	Net Cost/(Savings) Two Substations	$ 451,764	$ 661,433
	Net with Facility Operating Operating Costs*	$ 581,982	$ 791,651
6.	Projected Travel Cost Savings With One Substation	($ 272,294)	($ 303,849)
7.	Net Cost/(Savings) One Substation	$ 254,261	$ 274,650
	Net with Facility Operating Costs*	$ 332,089	$ 350,478

* Including utilities, building maintenance and estimated vehicle ferrying costs: approximately $130,000 for five substations and $78,000 for one substation (south).

EXHIBIT XII

San Jose Police Department

SMALL SUBSTATION FIELD STAFF
AND VEHICLE REQUIREMENTS

1. BEAT UNITS

SHIFT	DISTRICTS/BEAT UNITS 1 (Part)	3	TOTAL
Days	2.6	9.6	12.2
Swings	3.5	12.8	16.3
Nights	2.5	9.2	11.7
	8.6	31.6	40.2
Sgts.	1.3	4.3	5.6
TOTAL	9.8	35.9	45.8

2. TOTAL PERSONNEL

SHIFT	OFFICERS	SERGEANTS	TOTAL
Days	29.7	4.1	33.8
Swings	39.6	5.4	45.0
Nights	28.5	4.1	32.6
TOTAL	97.8	13.6	111.4

3. MARKED VEHICLES REQUIRED (@3.2)

SHIFT	# VEHICLES
Days (Incl. Sgts.)	10.6
Swings	14.1
Nights	10.2
TOTAL	34.9 / 35

EXHIBIT XIII (a)

SAN JOSE POLICE DEPARTMENT

SMALL SUBSTATION SPACE
REQUIREMENTS YEAR 2000

DESCRIPTION OF REQUIRED SPACE	N.S.F.
1. Patrol Functions	
. Patrol Briefing Room @ 17.4 s.f. per swing shift x 80%) -36	626
. Report Writing Room (@25 s.f. for 6 officers)	150
	776
2. Investigative Functions	
. Investigators Work Stations (6 @ 100 s.f. ea.)	600
. Clerical (1 @ 60 s.f. each)	60
. Files (4 @ 10 s.f. each)	40
. Terminals (3 @ 45 s.f. each)	135
. Interview Rooms (2 @ 125 s.f. each)	250
. Reception Area (30 s.f. each for 2)	60
	1,145
3. Command Staff Area	
. Captain/Lieutenants (2 shared work stations plus separate file cabinets: (100 s.f. x 2 + 10 s.f. x 6)	360

DESCRIPTION OF REQUIRED SPACE	N.S.F.
4. Clerical/Records Area	
. PRC workstations (1 @ 60 s.f.)	60
. Terminals (2 @ 45)	90
. Xerox	45
. Files/Cabinets (4 @ 10 s.f.)	110
	235
5. Crime Prevention	
. (Storage area/small workstation space)	150
6. General Areas	
. Lockers (for 112 patrol officers and Sergeants, 5 Lts. 5 Info. Center Staff, 6 Investigators @ 15 s.f. ea. Inclusive: Total lockers = 128	1,920
. Lobby/Reception (30 s.f. x 5)	150
. Information Center (2 work station @ 60 s.f.	120
. Files (2 @ 10 s.f.)	20
. Meeting/Conference Room	150
. Employee Lounge	200
. Arsenal	100
. Internal Storage	100
. Custodial (1 @ 35 s.f.)	35
. Restrooms (2 @ 90 s.f.)	180
	2,975

EXHIBIT XIII (b)

DESCRIPTION OF REQUIRED SPACE	N.S.F.
SUB-TOTAL	5,641
CIRCULATION @ 20%	1,410
TOTAL N.S.F.	7,051
GROSS SQUARE FEET @12.5% GROSSING FACTOR	8,058

EXHIBIT XIV

San Jose Police Department

SMALL SUBSTATION
SITE REQUIREMENTS

DESCRIPTION OF REQUIRED SPACE

1.	Substation Facility	8,058
2.	Parking - City-owned vehicles (@350 s.f. ea)	
	. Marked patrol vehicles (2 overlapping shifts -- 25 vehicles)	8,750
	. Command staff (1)	350
	. Investigators (.8 per investigator)	1,750
	. Other (e.g. downtown staff)	700
		11,550
3.	Parking-Employee vehicles	
	. Patrol Officers (2 shifts)	8,750
	. Command staff (1)	350
	. Investigators and clerical support (8)	2,800
	. Info Center Staff (1)	350
		12,250
4.	Parking-Visitors' Vehicles	
	5 spaces	1,750
5.	Fueling Facility	600
	Sub-Total	34,208
	Landscaping @ 15%	6,037
	TOTAL SITE REQUIREMENTS	40,245

- Park site with land of sufficient size potentially available.
- Adjacent to arterials (in this case Tully Road and Capital Expressway.
- Not within a residential development.
- Utilities available.
- Few street improvements needed.
- Best net travel time savings potential.
- Visible and accessible by the community.

The choice of this site in this study is by way of example. A second substation must first be evaluated with respect to the desirability of incurring additional staffing and operating costs as against its non-quantifiable service impacts.

(3) The Facility Construction Costs of Two Substations Grow to Over $3.7 Million.

The earlier substation study showed that construction of a single large substation would cost $2.6 million (without land acquisition costs). These costs would change as follows:

Table 3

Facility Construction Costs

		Southside	Eastside	TOTAL
1.	Structure (@ $100/sq.ft.)	$1,515,700	$ 805,800	$2,321,500
2.	Site Development (@ $3/ sq.ft.)	181,329	94,761	276,090
	Sub-Total	$1,697,029	$ 900,561	$2,597,590
3.	Design Services (@15%)	$ 254,554	$ 135,084	$ 389,638
4.	Contingencies (@ 10%)	169,703	90,056	259,759
5.	Fueling Facility	65,000	65,000	130,000
	Sub-Total	$ 489,257	$ 290,140	$ 779,397
6.	Furnishings (@ $15/sq.ft.)	$ 227,355	$ 120,870	$ 348,225
	Total	$2,413,641	$1,311,571	$3,725,212

ATTACHMENT A

CALLS FOR SERVICE YEAR 2000

Introduction

The year 2000 Calls For Service (CFS) are projected by beat, based upon an averaged CFS over a three year period (1982, 1984, and 1985) taking into account the anticipated city growth as shown in the San Jose General Plan, Horizon 2000, plus an annual growth factor of one percent. After examining population, demographic, and land use information it became evident that no single factor would provide a reasonably accurate indicator or mechanism for projecting year 2000 CFS. Rather, a combination of several methods would be necessary to make reasonable projections for the various sectors of the City. Population and demographic indicators were found to be reasonably accurate in the predominantly suburban residential police beats as well as some others, but not in Central San Jose, Coyote Valley or the industrial areas of North San Jose. In North San Jose, CFS projections were based upon planned employment growth by the year 2000. In Central San Jose CFS were projected to increase by 30 percent as a result of the revitalization that includes substantial office and commercial development as well as public uses including a convention center, museum, and transit mall. In Coyote Valley CFS were projeted separately for the planned 8,870 dwellings and the campus industrial development, planned to include 25,000 jobs. Using these methods, the overall total CFS were projected to increase by slightly over 46 percent to 274,251 CFS by the year 2000 as tabulated and shown in Table I. This is an increase of 87,518 CFS over the annual averaged 187,730 CFS for the years 1982, 1984, 1985.

Year 2000 Population Projection by Beat

As a first step, the year 2000 population and its distribution was projected based upon San Jose's General Plan, Horizon 2000. The number of dwelling units in each beat for the year 2000 was derived from the TRANPLAN Model by accessing the number of dwellings in the groups of TAZs (Traffic Analysis Zones) that constituted each beat (refer to Table II). The population in each beat was then projected using the average household size by Planning Area for the year 2000 as expressed on page 27 in Figure 11 of the General Plan. The police beats were segregated into Planning Areas as shown in Table III. Using this method the citywide population is projected to increase to 838,776 by the year 2000, which represents a 21 percent increase over the 1980 population of 693,694. The projected 838,776 year 2000 population represents slightly more than a seven percent increase above the previously projected 1990 population of 788,376 used in the San Jose Police Substation Study (December 1983).

Calls For Service Projection, Year 2000

Calls For Service (CFS) for the year 2000 were projected taking into account population and employment growth and land use changes as well as general trends in CFS. The San Jose Police Substation Study (December 1983) reported an annual increase in CFS of one percent greater than the population growth. This trend in CFS growth fluctuates with economic and other conditions, but a general trend of something less than one percent per year over population growth has often been observed by Hughes Heiss & Associates in several cities in California. It was assumed for the purposes of projecting CFS in this analysis, that there will be an annual increase in CFS of one percent above population or other growth factos. This one percent annual increase was accounted for by calculating the year 2000 CFS and then increasing it by 15 percent to represent the 15 year period from 1985 to 2000.

In order to serve as one basis for projecting Calls For Service for the year 2000, the existing CFS Calls For Service for the years 1982, 1984 and 1985 were tabulated and averaged as shown in Table IV. Records for the year 1983 were not available and records for the year 1986 correspond to a new beat structure established in 1986 and therefore cannot readily be converted to the beat structure used for this analysis. The CFS for years 1982, 1984 and 1985 were averaged to provide a basis for projecting CFS.

The calls for service per 1,000 population for each of the beats was calculated by using an average population for 1980 to 1985 based upon "San Jose Population by Census Tract" Annual Projections, Department of City Planning. The estimated average population 1980 to 1985 is shown in Table V together with the 1980 census population for comparison purposes. Using the average population for 1980 to 1985, the CFS per 1,000 population is calculated in Table VI by beat.

On a citywide basis, the overall year 2000 CFS can generally be projected by multiplying the averaged 1980 to 1985 CFS per 1000 population (268.1) times the projected year 2000 population of 838,776, yielding 224,882 Calls For Service annually. The one percent annual increase is then accounted for by adding 15 percent for the 15 year period from 1985 to 2000, yielding 258,614 CFS. The actual CFS for year 2000 was projected to be 274,251 which is slightly over six percent greater than this general citywide projection based on population. The actual year 2000 CFS were projected on a beat by beat basis taking into account the existing socioeconomic factors as well as population and employment growth factors, using the planned land uses.

Year 2000 CFS were projected based upon year 2000 population in 39 of the beats and other factors were used in the remaining nine beats. The year 2000 CFS for each of the 39 beats was projected by multiplying the averaged 1982, 1984, 1985 CFS per 1,000 population times the year 2000 population and then adding the one percent annual CFS increase or 15 percent. For example, in beat 12, 209.7 CFS/1,000 population $\times$ a population of 27,868 $\times$ 1.15 (15% increase from 1% annual increase for 15 years) = 6,721 CFS for the year 2000. Using this formula the demographic characteristics that influence CFS in a given beat are incorporated into the year 2000 CFS projection since the formula assumes that residents of the new homes that are developed on vacant land will have the demographic characteristics that the existing residents have and will therefore result in the same number of CFS per 1,000 population. This formula also takes into account changes in population and household size projected in San Jose's General Plan. (However, the General Plan household size for the year 2000 is somewhat skewed in few individual beats since the General Plan is divided into Planning Areas which are relatively large, encompassing several beats. In addition, single family attached and detached homes were not differentiated with also resulted in skewing.) This formula and the logic behind it generally applies well to beats where the mix of future growth is similar to the existing use. This formula also generally applies well to beats that have substantial residential populations and/or projected residential growth. This formula does not provide a good projection of 2000 CFS where the residential uses are a limited fraction of the total uses in the beat and where substantial new non-residential land uses are planned. The reason that this formula does not work well to project 2000 CFS in those beats with substantial amounts of vacant non-residential land or small populations is explained below, together with an appropriate alternate formula.

Within the six police beats (beats 51, 52, 53, 54, 55, and 56) that constitute the general downtown area, substantial office and commercial uses are planned or under construction as well as public uses including a convention center, museum and light rail transit mall. This non-residential development will generated an increase in CFS that is not reflected in the planned residential growth in the area and therefore future population is not the

best parameter to use as a basis for projecting CFS. Further, the highest CFS per 1,000 population in this area were not necessarily a direct result of the residential population and their demographic characteristics, but rather, were strongly influenced by other factors. For example, in beat 52 there were 2,191.8 CFS per 1,000 population, which is more than eight times the citywide average of 268.1. This high ratio of CFS is a product of a high transient and daytime population and a small residential population, 1,634. The same is also true of the other beats in the general downtown area (Police District 5). Since the CFS per 1,000 population in these beats was so high and the population relatively small, minor population changes would result in dramatic shifts in CFS if population was used as a basis for projecting. In order to avoid projecting dramatic and unrealistic increases in some beats and decreases in others, the year 2000 calls for service were projected by increasing the the averaged 1982, 1984, 1985 CFS by 30 percent. The 30 percent increase is estimated to roughly correspond to the demands of the service population during the times of the day that the service population would be present in the downtown area based upon the experiences of other cities that have undergone downtown revitalization. In addition, the CFS in these six beats were increased by one percent annually or 15 percent for the period from 1985 to year 2000. This formula results in a year 2000 CFS increase of nearly 50 percent above today's CFS. This formula was used for the six police beats in the Central San Jose Planning Area since this planning area is anticipated to have a net residential population increase of only eight percent and some individual beats are actually expected to decrease in population. However, in fact, it is unlikely that any beat will have significantly fewer CFS in year 2000 than it presently does and therefore the year 2000 CFS were projected based upon the formula described above which can be expected to yield a conservatively high projection.

The year 2000 CFS for beat 74 was based upon anticipated employment increases since this beat includes much of North San Jose and the so called "Golden Triangle" area with its predominantly industrial and commercial land uses. A 40 percent increase in employment is planned for this area by year 2000. Using this parameter for projecting CFS for year 2000, the averaged 1982, 1984, 1985 CFS was projected to directly increase by 40 percent. Another 15 percent increase was then added to represent the one percent annual increase over the 15 year period from 1985 to year 2000.

There is almost no population growth planned for beat 91 and the employment and other types of growth are also small. Therefore the year 2000 CFS in Beat 91 was projected by adding 15 percent to the averaged 1982, 1984, 1985 CFS to account for the one percent per year annual increase over the 15 year period from 1985 to year 2000.

Beat 66 includes Coyote Valley where substantial campus industrial development and residential development is projected in San Jose's General Plan by the year 2000. The residential growth planned for Central Coyote Valley consists of 8,870 multi-family dwellings with an anticipated population of 24,100. The campus industrial development in North Coyote Valley is planned to include 25,000 new jobs. The CFS for the planned campus industrial development sector of beat 66, were projected by using the CFS generated by the existing predominantly industrial development in beat 74. In beat 74, approximately 35,000 existing job generated an average of 3,667 CFS in the years 1982, 1984, and 1985. Applying this same generation rate to the 25,000 jobs in Coyote Valley yields 2,620 CFS. The 24,100 population planned for in Central Coyote valley was multiplyed by the citywide average CFS per 1,000 population of 268.1, yielding 6,461 CFS. The 6,461 CFS for the residential development was then added to the 2,620 CFS for campus industrial development which totals 9,081 CFS. This was increased by 11 percent to 10,080 corresponding to a one per annual increase for 11 years period form 1989-90 to year 2000. This 11 year period was selected since neither the campus industrial nor

residential development is expected to occur before 1989 or 1990 in Coyote Valley. The averaged 1982, 1984, 1985 CFS in beat 66 was increased by 15 percent from 3,739 to 4,300 to account for the one percent annual growth. Apart from Coyote Valley no significant new development is expected in beat 66. This 4,300 was then added to the 10,080 yielding approximately 14,400 CFS.

Using the four formulas described above, the year 2000 Calls For Service were projected for each of the 48 beats and tabulated as shown in Table I. This tabulation yields a citywide CFS of 274,250 in year 2000 or an increase of 87,518 CFS which represents an increase of slightly over 46 percent of the averaged 1982, 1984, 1985 CFS.

TABLE I

PROJECTED

CALLS FOR SERVICE

YEAR 2000

Beat Number	Projected Population By Beat Year 2000	Averaged Calls For Service/ 1000 Population 1982,1984,1985	Total Projected Calls For Service Year 2000(1)
11	8,445	384.4	3,733
12	27,868	209.7	6,721
13	13,465	384.8	5,958
14	25,969	171.2	5,113
16	18,456	153.8	3,441
21	16,727	270.9	5,211
22	21,153	201.4	4,899
23	16,379	175.0	3,296
24	14,588	218.7	3,669
25	15,880	134.5	2,456
31	8,361	340.0	3,269
32	6,180	436.0	3,098
33	10,531	275.4	3,335
34	18,404	197.2	4,173
35	14,348	512.7	8,459
36	61,890	202.5	14,413
41	20,261	162.5	3,786
42	19,183	150.3	3,315
43	21,847	147.6	3,709
44	20,146	280.7	6,503
45	48,711	105.0	5,882
51	7,100	NU	7,405 (2)
52	4,624	NU	5,959 (2)
53	7,405	NU	5,424 (2)
54	2,934	NU	6,393 (2)
55	4,268	NU	4,950 (2)
56	8,224	NU	6,769 (2)
61	31,591	166.4	6,046
62	18,933	283.2	6,166
63	20,922	236.2	5,683
64	29,124	242.6	8,125
65	16,205	190.8	3,556
66	46,043	NU	14,400 (3)
71	11,190	421.3	5,421
72	9,045	628.3	6,535
73	15,792	586.9	10,658
74	5,197	NU	5,904 (4)
75	30,566	195.4	6,869
81	5,800	720.1	4,804
82	11,824	322.9	4,428
83	21,989	199.6	5,047
84	15,059	278.5	4,823
85	18,961	316.4	6,899
91	7,818	NU	5,574 (5)
92	13,365	367.5	5,649
93	23,279	340.0	9,102
94	11,221	323.7	4,177
95	10,505	251.8	3,042
Total	838,776		274,250

(1) 2000 CFS = 2000 Population x $\frac{\text{1982,1984,1985 Averaged CFS}}{\text{1000 Population}}$ x 1.15.

(2) 2000 CFS = Projected 1990 CFS x 1.3 (estimated 30% Increase) x 1.15.

(3) 2000, CFS = (1982,19[illegible],1985 Averaged CFS x 1.15) + [(Projected Centra[illegible] CFS from new re[illegible]l develo[illegible] Projected North Coyote CFS from new campu[illegible]al d[illegible] (refer to ex[illegible]

(4) 2000 CFS = 198[illegible] x 1.15.

TABLE II

POPULATION BY BEAT

PROJECTED YEAR 2000

Beat Number	Projected Number Of Dwelling Units Year 2000	Projected Average Household Size Year 2000	Projected Population By Beat Year 2000
11	3,016	2.80	8,445
12	9,953	2.80	27,868
13	4,809	2.80	13,465
14	8,015	3.24	25,969
16	6,005	3.24	19,456
21	7,210	2.32	16,727
22	9,118	2.32	21,153
23	7,060	2.32	16,379
24	6,288	2.32	14,588
25	6,845	2.32	15,880
31	2,986	2.80	8,361
32	2,207	2.80	6,180
33	3,761	2.80	10,531
34	6,573	2.80	18,404
35	4,019	3.57	14,348
36	17,336	3.57	61,890
41	9,337	2.17	20,261
42	7,294	2.63	19,183
43	8,307	2.63	21,847
44	7,660	2.63	20,146
45	15,270	3.19	48,711
51	3,114	2.28	7,100
52	2,028	2.28	4,624
53	3,248	2.28	7,405
54	1,278	2.28	2,934
55	1,872	2.28	4,268
56	3,607	2.28	8,224
61	11,163	2.83	31,591
62	6,690	2.83	18,933
63	7,393	2.83	20,922
64	10,291	2.83	29,124
65	5,726	2.83	16,205
66	17,709	2.60	46,043
71	4,908	2.28	11,190
72	3,426	2.64	9,045
73	4,874	3.24	15,792
74	1,830	2.84	5,197
75	9,434	3.24	30,566
81	2,544	2.28	5,800
82	5,449	2.17	11,824
83	10,133	2.17	21,989
84	6,605	2.28	15,059
85	8,738	2.17	18,961
91	3,429	2.28	7,818
92	4,706	2.84	13,365
93	8,197	2.84	23,279
94	3,951	2.84	11,221
95	3,699	2.84	10,505
TOTAL	309,111		838,776

TABLE III

DISTRIBUTION OF POLICE BEATS

BY PLANNING AREAS OF

SAN JOSE

Planning Area	Police Beats	Number of Beats
Almaden/Calero	45	1
Alum Rock	11-13, 31-34	7
Alviso/North San Jose	72 partial, 74	1
Berryessa	14, 16, 73, 75	4
Cambrian-Pioneer	42-44	3
Central San Jose	51-56, 71, 72 partial, 81, 84, 91	10
Coyote/Edenvale/San Felipe	61-66	6
Evergreen	35-36	2
South San Jose	92-95	4
West Valley	21-25	5
Willow Glen	41, 82-83, 85	4
		48

TABLE IV

AVERAGE CALLS FOR SERVICE

1982, 1984, 1985

Police Beat Number	1982 Calls For Service	1984 Calls For Service	1985 Calls For Service	Average Calls For Service 1982, 1984, 1985
11	3,493	3,908	4,181	3,861
12	4,069	4,546	4,333	4,316
13	4,530	5,045	5,013	4,863
14	3,343	3,371	3,428	3,381
16	3,566	3,428	3,381	3,458
21	4,155	3,814	3,782	3,917
22	3,775	3,528	3,681	3,661
23	3,396	3,136	3,197	3,243
24	3,898	3,907	3,781	3,862
25	2,598	2,293	2,309	2,400
31	3,663	4,290	4,487	4,147
32	3,713	3,881	3,881	3,825
33	3,837	4,212	4,470	4,173
34	4,150	3,607	3,952	3,903
35	4,160	4,188	4,426	4,258
36	5,105	5,011	5,719	5,278
41	4,061	4,007	4,050	4,039
42	3,592	2,939	3,031	3,187
43	3,420	3,497	3,508	3,475
44	4,575	4,144	4,240	4,320
45	4,027	3,851	4,083	3,987
51	4,586	4,778	4,687	4,684
52	3,691	3,686	3,656	3,678
53	3,359	3,287	3,598	3,415
54	3,959	4,078	3,928	3,988
55	3,066	3,262	3,154	3,161
56	4,193	4,640	4,144	4,326
61	3,522	3,662	3,783	3,656
62	3,872	3,604	4,029	3,835
63	4,167	3,623	3,933	3,908
64	4,087	4,062	4,253	4,134
65	3,595	3,791	3,818	3,735
66	3,668	3,883	3,666	3,739
71	3,834	4,459	4,492	4,262
72	4,637	4,863	5,068	4,856
73	2,974	3,378	3,330	3,227
74	4,095	3,660	3,245	3,667
75	3,785	3,759	3,779	3,774
81	3,523	3,238	3,349	3,370
82	3,228	3,526	3,631	3,462
83	4,244	4,242	4,364	4,283
84	3,996	3,720	3,832	3,849
85	4,007	4,283	4,186	4,159
91	4,363	4,989	5,189	4,847
92	4,660	4,418	4,737	4,605
93	4,592	5,048	5,137	4,926
94	3,358	3,426	3,458	3,414
95	3,369	3,192	3,108	3,223
TOTAL	185,556	187,160	190,487	187,732

TABLE V

AVERAGE 1980-1985 POPULATION

(BY BEAT)

Police Beat Number	1980 Census Population	Estimated Average Population 1980 - 1985
11	9,793	10,045
12	19,403	19,403
13	11,116	12,639
14	19,532	19,532
16	22,141	22,486
21	15,339	15,339
22	17,836	18,177
23	19,405	19,405
24	17,554	17,659
25	19,034	19,034
31	11,855	12,196
32	8,800	8,772
33	14,571	15,152
34	21,044	21,044
35	8,114	8,114
36	25,209	25,209
41	24,814	24,853
42	20,852	21,211
43	23,178	23,178
44	14,784	15,388
45	37,948	37,961
51	4,592	4,704
52	1,634	1,684
53	6,200	6,285
54	4,940	4,940
55	5,498	5,498
56	9,763	9,870
61	21,438	21,969
62	13,202	13,544
63	17,642	17,642
64	16,944	16,944
65	19,268	19,573
66	22,059	22,457
71	10,067	10,117
72	7,718	7,729
73	5,067	5,067
74	5,077	4,961
75	19,183	19,313
81	4,698	4,680
82	9,996	9,996
83	21,454	21,458
84	14,346	14,346
85	12,665	12,665
91	7,881	7,881
92	12,128	12,532
93	14,763	14,487
94	10,374	10,374
95	12,775	12,799
TOTAL	693,694	700,312

TABLE VI

THREE TO FIVE YEAR AVERAGE

CALLS FOR SERVICE / 1000 POPULATION

Beat Number	Average Calls For Service 1982,1984,1985	Estimated Average Population 1980 - 1985	Calls For Service/ 1000 Population 1982,1984,1985
11	3,861	10,045	384.4
12	4,316	19,403	209.7
13	4,863	12,639	384.8
14	3,381	19,532	171.2
16	3,458	22,486	153.8
21	3,917	15,339	270.9
22	3,661	18,177	201.4
23	3,243	19,405	175.0
24	3,862	17,659	218.7
25	2,400	19,034	134.5
31	4,147	12,196	340.0
32	3,825	8,772	436.0
33	4,173	15,152	275.4
34	3,903	21,044	197.2
35	4,258	8,114	512.7
36	5,278	25,209	202.5
41	4,039	24,853	162.5
42	3,187	21,211	150.3
43	3,475	23,178	147.6
44	4,320	15,388	280.7
45	3,987	37,961	105.0
51	4,684	4,704	995.7
52	3,678	1,684	2191.8
53	3,415	6,285	543.4
54	3,988	4,940	801.4
55	3,161	5,498	557.7
56	4,326	9,870	438.3
61	3,656	21,969	166.4
62	3,835	13,544	283.2
63	3,908	17,642	236.2
64	4,134	16,944	242.6
65	3,735	19,573	190.8
66	3,739	22,457	166.5
71	4,262	10,117	421.3
72	4,856	7,729	628.3
73	3,227	5,067	586.9
74	3,667	4,961	739.2
75	3,774	19,313	195.4
81	3,370	4,680	720.1
82	3,462	9,996	322.9
83	4,283	21,458	199.6
84	3,849	14,346	278.5
85	4,159	12,665	316.4
91	4,847	7,881	553.6
92	4,605	12,532	367.5
93	4,926	14,487	340.0
94	3,414	10,374	323.7
95	3,223	12,799	251.8
TOTAL	187,737	700,312	

ATTACHMENT B

YEAR 2000 TRAVEL TIMES AND DISTANCES

BASED UPON TRANPLAN

The peak hour and non peak hour travel times and distances between the Police Administration Building and each of the 48 beats was calculated for the year 2000 using San Jose's traffic Model TRANPLAN. This traffic model has the advantage of both the year 2000 roadway network and the traffic volumes project for this time frame. The travels times and distances are shown in Table I.

TRANPLAN was also used to calculate peak and non peak hour travel times and distances for the year 2000 between Police Districts 3, 4, 6 and 9 and the candidate substation at the Southside Community Center. The travel times and distances are presented in Table II. Similarly the peak and non peak hour travel times and distances for year 2000 were calculated between Police beats 11, 12, 31, 32, 33, 34, 35, and 36 and a candidate substation located at Lake Cunningham, as shown in Table III.

TABLE II

YEAR 2000

TRAVEL TIMES AND DISTANCES

BETWEEN BEATS AND SOUTHSIDE COMMUNITY CENTER

Beat Number	Average Peak Hour Travel Times Between Beats & Southside Com.	Average Non Peak Travel Times Between Beats & Southside Com.	Average Peak Hour Distances Between Beats & Southside Com.	Average Non Peak Distances Between Beats & Southside Com.
31	16.8	12.3	7.9	7.9
32	19.1	13.9	9.0	8.7
33	20.9	14.8	8.9	8.9
34	23.7	15.6	9.3	9.5
35	15.8	10.7	6.3	6.3
36	20.3	13.2	8.0	7.7
41	17.1	12.0	7.3	7.4
42	13.6	9.8	5.4	5.5
43	13.0	10.3	6.8	7.1
44	10.7	8.2	3.9	3.9
45	18.2	12.6	7.0	6.4
61	10.7	7.5	4.0	4.1
62	6.6	4.6	2.0	2.0
63	---	---	---	---
64	5.7	3.9	1.6	1.6
65	6.3	4.9	1.7	1.7
66	16.4	11.4	6.9	7.5
91	16.1	10.7	6.5	6.5
92	17.9	12.7	7.9	7.9
93	14.7	9.0	5.3	5.1
94	11.0	6.8	3.4	3.4
95	13.2	8.4	4.4	4.4

TABLE III

YEAR 2000

TRAVEL TIMES AND DISTANCES

BETWEEN BEATS AND CUNNINGHAM SITE

Beat Number	Average Peak Hour Travel Times Between Beats & Cunningham Site	Average Non Peak Travel Times Between Beats & Cunningham Site	Average Peak Hour Distances Between Beats & Cunningham Site	Average Non Peak Distances Between Beats & Cunningham Site
11	11.8	6.5	3.4	3.3
12	12.9	7.0	3.3	3.3
31	5.9	3.0	1.3	1.3
32	8.7	4.4	1.7	1.7
33	8.7	4.6	1.7	1.7
34	5.9	3.0	1.3	1.3
35	11.2	6.1	2.8	3.0
36	14.4	8.2	3.8	3.8

TABLE I

YEAR 2000

TRAVEL TIMES AND DISTANCES

BETWEEN BEATS AND PAB

Beat Number	Average Peak Hour Travel Times Between Beats And PAB	Average Non Peak Travel Times Between Beats And PAB	Average Peak Hour Distances Between Beats And PAB	Average Non Peak Distances Between Beats And PAB
11	11.4	7.6	4.2	4.1
12	17.0	11.6	7.2	7.1
13	12.5	6.7	3.4	3.2
14	16.5	9.8	5.3	5.0
16	18.9	10.6	5.9	5.8
21	12.9	7.7	4.1	4.1
22	15.1	9.9	5.2	5.2
23	20.0	13.5	7.8	9.2
24	17.5	11.2	7.4	8.8
25	21.2	15.1	9.6	10.2
31	14.1	10.0	7.1	7.1
32	11.7	9.2	6.3	6.3
33	13.9	11.0	7.5	7.7
34	18.0	13.0	9.0	9.1
35	14.6	11.6	8.6	8.0
36	20.5	15.0	10.9	10.3
41	17.0	10.4	6.3	6.3
42	15.8	11.5	7.8	7.7
43	22.7	14.2	10.0	10.5
44	17.3	12.9	8.7	8.6
45	24.3	17.3	9.5	12.1
51	6.7	3.1	1.7	1.5
52	6.9	3.2	2.1	2.1
53	6.7	4.6	2.7	2.6
54	8.3	4.8	2.5	2.5
55	8.6	4.3	2.2	2.2
56	8.9	7.0	3.8	4.0
61	13.2	9.6	7.5	7.1
62	15.1	10.7	9.1	8.3
63	18.2	12.8	9.8	9.8
64	17.6	12.6	8.9	8.9
65	21.8	15.9	12.4	12.1
66	26.3	19.7	16.3	16.1
71	3.7	2.1	1.1	0.9
72	6.2	4.2	2.6	2.2
73	11.4	6.8	3.1	3.3
74	10.7	7.0	4.0	4.2
75	14.0	7.8	4.1	4.1
81	6.2	4.2	2.5	2.5
82	7.7	6.2	4.0	3.7
83	12.6	9.2	5.4	5.0
84	9.1	4.6	2.3	2.3
85	10.8	7.7	4.8	5.0
91	8.6	6.0	3.6	3.6
92	10.2	7.6	5.0	5.2
93	13.4	9.1	6.2	5.8
94	14.9	11.5	7.5	7.9
95	17.1	12.5	8.6	8.6

San Jose Police Department
Decentralization Plan

Investigation of a Police Substation
In South San Jose

Draft: Phase I
Date: October 1, 2002

Prepared by Marcy Li Wong Architects and
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Table of Contents

1 EXECUTIVE SUMMARY

The San Jose Police Department has been interested in a substation located in the southern section of San Jose since the 1980's. In March 2002, with the passage of Measure O, a $159 million Public Safety Bond, the funding for the substation became available. Marcy Li Wong Architects, EKONA Architecture and Planning, and Leading Resources, Inc., (LRI) were retained by the San Jose Police Department to perform the needs analysis, architectural programming and design for a southern substation. This report is Phase I of the needs analysis.

This analysis will investigate three different locations for a substation: Santa Teresa and Cottle Road, Almaden and Cherry, and the San Felipe, Aborn, and White Road intersection. This analysis will also investigate three different sizes for a substation: a smaller 454-person substation; a medium 484-person substation, and a full-service 562-person substation.

This report also provides a benchmark of current San Jose Police Department operations. Currently, the Police Department serves over half of its Priority 1 calls[1] within the 6-minute goal and almost half of its Priority 2 calls[2] within the 8-minute goal. The median response time[3] for a Priority 1 call was 5:05, and the median response time for a Priority 2 call was 8:46.[4] As traffic congestion worsens and the southern section of San Jose becomes more developed, it is anticipated these performance measures will become slower.

Currently, nearly 30,000 citizens do business each year with the Police at the Police Administration Building, located at 201 W. Mission in downtown San Jose. These transactions include crime and accident reporting, payment of warrants, vehicle releases, using the Megan's Law computer, and a variety of others. One-third of these citizens, or nearly 10,000 per year, live in South San Jose, and would be better served by a local neighborhood substation.

Finally, the San Jose Police Department currently spends large amounts of money and time traveling between the Police Administration Building and its beats, particularly those in the Southern region. The data here indicates that the travel costs over $3.6 million per year, or over $10,000 per day: over $3,500 in vehicle mileage costs, and $6,500 in officer time. The officer

[1] A Priority 1 call is defined as a call with "present or imminent danger to life or major damage or loss to property, or there is an in-progress or just occurred felony." Source: Neighborhood Policing Operations Plan (NPOP) p. 47, provided by San Jose Police Department.

[2] A Priority 2 call is defined as a call with a crime in progress or recently occurred, with injuries or property damage, all missing persons reports involving children under 12, and all situations where the suspect is in custody. Source: Neighborhood Policing Operations Plan (NPOP) p. 47, provided by San Jose Police Department.

[3] The median response time is similar to the median housing price. It is a metric which measures the halfway point of a data set. The median response time is defined as the time for which half the calls for service were served more quickly and half the calls were served more slowly.

[4] These numbers mean that half of the Priority 1 calls for service were served faster than 5 minutes, 5 seconds, and half were served more slowly. Similarly, half of the Priority 2 calls for service were served faster than 8 minutes, 46 seconds, and half were served more slowly.

time costs, which reflect the time each day a uniformed patrol officer spends in traffic rather than actively policing his/her beats, are anticipated to increase with congestion and increasing population in the Southern region.

This report concludes with an Appendix which provides further details on calculations.

2 INTRODUCTION

The City of San Jose has experienced rapid growth over the past five decades, and anticipates additional growth in jobs, population, and housing units over the next several decades. San Jose is the "Safest Large City in America," with low crime rates, strong employment statistics, a well-organized police force, and a net inflow of population every decade. Even with a low ratio of 1.5 patrol officers per 1,000 population, the San Jose Police Department continues to meet demanding 6-minute Priority 1 and 8-minute Priority 2 Call For Service response time standards for many calls. The San Jose Police are committed to ensuring that the public feels safe "anytime, anywhere" in San Jose.

As San Jose's population increases and migrates southward, and as traffic continues to grow, there will be an increasing demand for policing services on the southern region of the city. To continue to effectively and efficiently serve these citizens, a police substation on the southern end of the city was proposed. The idea of a substation was investigated in 1982 and again in 1987[5], but on both of those occasions, the savings in operating costs were not sufficient to justify a substation. It was not until March 2002, with the passage of Measure O, a $159 million Public Safety Bond, that the funding for the substation was available.

This report is Phase I of a feasibility study and a cost/benefit analysis for a new police substation, a substation which will become operational in 2007. This is a preliminary study and is intended to provide answers to broad "what-if" questions.

3 PHASE I: ANALYZE CURRENT OPERATIONS

The purpose of Phase I is to conduct a thorough study of current San Jose Police Department staffing, operations, and strategic needs. Here key measures to use in assessing alternative decentralization schemes, such as response times, staff commute times, and citizen use patterns, are identified. This information will provide a baseline of current operations.

[5] See previous consultants' reports, Analysis of the Feasibility of Establishing Police Substations, report by Hughes, Heiss, and Associates and David J. Powers and Associates, 1982, Document HHA 001 in the Appendix, and Analysis of Police Substation Feasibility Through the Year 2000, report by Hughes, Heiss, and Associates and David J. Powers and Associates, 1987, Document HHA 002 in the Appendix.

3.1 Task 1: Current Issues and Project Parameters

This section outlines current issues, identifies project team members, and defines project parameters.

3.1.1 Current data sources

There is currently much data available about the police department, but often it is not all in the same place or easily available. Several key personnel and data sources, both paper and electronic, have been identified. A complete listing of the data sources can be found in the Appendix in Section 4.1 and Section 4.2.

3.1.2 Goal, Rationale, and Performance Metrics

The goal of this study is to provide an independent outside cost/benefit analysis of one proposed police substation in the southern region of San Jose. It will investigate up to three locations and three staffing scenarios.

The rationale for this study is straightforward. As San Jose's population increases and migrates southward, and as traffic continues to grow, there will be an increasing demand for policing services in the southern region of the city. To effectively and efficiently serve these citizens, three locations were considered: two on the southern portion of town and one in the southeastern region of town.

In particular, this project will use current information from the San Jose Police Department, including current San Jose Police Department staffing information, proposed staffing scenarios, and proposed locations of a substation. It will then forecast the 20-year costs and benefits.

Figure 1 provides an overview of the substation staffing plans, showing the differences between the small, medium, and full-service scenarios.[6,7] Figure 2 shows the three locations to be investigated. It is important to note that the locations are approximate; the exact street address will depend upon land availability.

[6] More detail is available on the Staffing Scenarios in Section 4.3 in the Appendix; the interested reader may also want to see the electronic spreadsheets which provide extreme detail regarding redeployments and new hires.
[7] These scenarios were developed in a consultative process between LRI and SJPD.

Figure 1: Overview of Substation Staffing Plans

Scenario	Description
Scenario A	Small substation of 454 people Mainly police personnel and vehicle maintenance
Scenario B	Medium substation of 484 people Scenario A plus City of San Jose employees (Department of Parks and Recreation, and Department of Planning, Building, and Code Enforcement) and volunteers
Scenario C	Full service substation of 562 people Scenario B plus full redeployment of the Community Services Division of the SJPD
It is important to note that these scenarios are approximate and given for illustration purposes. The actual staffing of the substation may vary according to City of San Jose population, crime, and traffic patterns in 2007.	

3.2.1 Measure current and proposed staffing configurations

Through interviews with Lt. David Keneller and other members of the San Jose Police Department, the staffing scenarios in Figure 4 have been obtained. More detail can be found in the electronic version of the Staffing Scenario spreadsheets.[8]

Figure 4: Staffing Scenarios

Current:[9] 0 at substation; 1887 at Headquarters[10]
{SJPD} All staff

Scenario A: 454 at substation; 1729 at Headqtrs **Small Substation, begins with**
{SJPD} All Existing Southern Division staff (167)
{SJPD} One-third of Bureau of Investigations (109)
{SJPD} Additional Sworn/Civilian[11] (163)
{CSJ} Vehicle Maintenance (15)

Scenario B: 484 at substation; 1702 at Headquarters **Medium Substation, adds**
{SJPD} Deputy Chief (1)
{SJPD} Additional Sworn/Civilian (2)
{CSJ} Parks and Recreation (10)
{CSJ} Planning, Building, Code Enforcement (10)
{Other} Family Violence, Rape Crisis, Volunteers (7)

Scenario C: 562 at substation; 1623 at Headquarters **Full Service Substation, adds**
{SJPD} Community Services and Crime Prevention (78)

3.2.2 Current response time to various parts of the city and officer availability

This section outlines the current response times to various parts of the city and service availability time. These response times were calculated using data taken from one week in the

[8] The final version is titled, "Staffing Database v6" and is dated June 19, 2002.
[9] Staffing totals are as of July 1, 2001, and are thanks to Marianne Bourgeois, Chief Financial Officer of the San Jose Police Department.
[10] Headquarters refers to the Police Administration Building (PAB), at 201 W. Mission in downtown San Jose, as well as to various other space occupied by the San Jose Police Department downtown.
[11] Additional sworn/civilian include, for example, violent crime units, a facility manager, computer and tech support, clerical, and lobby staff.

fall of 2001; the data is believed to be a representative sample of data.[12] Section 3.2.2.1 summarizes the findings. Next, in Section 3.2.2.2 the interested reader can find a summary of the data set and finally in Section 3.2.2.3 detailed graphs and data of the findings. This is not intended to be an exhaustive study of current police operations; rather, it is intended to provide a benchmark against which to measure the benefits of the proposed substation.

Summary of Findings[13]

Figure 5: Summary of Findings from Analysis of Call for Service Data

Finding	Summary of Finding
Finding 1:	Over half (62%) of the Priority 1 calls are responded to within the 6 minute goal, and almost half (44%) of the Priority 2 calls are responded to within the 8 minute goal.
Finding 2:	In line with its stated mission, the San Jose Police Department is currently responding to Priority 1 calls first. There is a significantly faster dispatch/queue service time and slightly faster travel response time for the average Priority 1 call.
Finding 3:	90% of the Priority 1 calls have a processing, dispatch/queue, and travel time which is within 11 minutes, and 90% of Priority 2 calls have a processing, dispatch/queue, and travel time which is within 23 minutes. It is the slowest 5% which affect the average response time in a disproportionate manner.
Finding 4:	In the slowest 5% of calls, for both Priority 1 and Priority 2, the extreme delay is located in the dispatch/queue portion of the system, indicating possible issues with officer availability.
Finding 5:	Slow and extremely slow responses are disproportionately in the Foothill and Southern divisions for both Priority 1 and Priority 2 calls.
Finding 6:	The day watch is slowest for both Priority 1 and Priority 2 response times, and the third watch[14] is fastest.

[12] This data was taken before the terrorist bombings of September 11, 2001, and so does not reflect any excessive calls for service generated after that event.

[13] These findings refer only to the dataset provided for the week in September 2001. While it is believed this is a representative sample, and generally accurate, the City of San Jose may experience changes in the future which may cause variation in future performance.

[14] As of October 2002, the Third Watch is on duty from 9 pm until 7 am.

In summary, the data in this dataset shows that currently the San Jose Police Department responds to 62% of its Priority 1 calls and 44% of its Priority 2 calls within its stated targets of 6 and 8 minutes, respectively. The majority of citizens contacting the police with an emergency will receive a speedy response to their call. Moreover, 90% of all Priority 1 calls are responded to within 11 minutes, and 90% of all Priority 2 calls are responded to within 23 minutes. There were a few cases, approximately 5% of the call volume in this dataset, in which a citizen's response time was between 13 and 23 minutes[15] for a Priority 1 call, which has by definition, "present or imminent danger" to life and/or property, or the citizen's service time was between 32 and 120 minutes[16] for a less urgent Priority 2 call. These slow responses are disproportionately in the Southern and Foothill divisions of San Jose, which are the two regions investigated for a substation.

Summary of Data Set

The Call for Service and Response Time process analyzed here begins when an incident occurs. The reporting party calls 911. The call is answered and processed by a Public Safety Dispatcher I or Call Taker. This phase of the process, *call processing time*, averages 90 seconds, and is tracked by the 911 telephone system. If appropriate, the event is passed on to a Public Safety Dispatcher II or Dispatcher. If sufficient police units are available, the police dispatcher will immediately dispatch police beat units . The time between when the dispatcher receives the event until the first unit accepts the call is referred to as *dispatch time.* Sometimes, there may be a delay at the police dispatcher position if police officers are not available to respond right away. This delay is referred to as *queue time.* Priority 1 calls always take precedence over Priority 2 calls, no matter how long the Priority 2 caller has been waiting. After the call has been dispatched to the officer(s), there is a *travel time* while the officer(s) travel from their original locations to the scene of the call. The response time process ends when the first officer arrives at the scene.

It is important to note that the call classification process, in which a dispatcher decides if a call is a Priority 1 or Priority 2 call, is a human process open to differences in professional opinion and errors in human judgment. Moreover, the current CAD system which the San Jose Police Department uses to log and track calls is 12 years old and has some limitations. In particular, the CAD system does not accurately track calls which change in status. A call which is initially a Priority 2 call, but then due to a change in the situation becomes a Priority 1 call, will be recorded in the system's logs as a Priority 1 call for its entire duration. There are also some

[15] In this dataset, the slowest 5% of Priority 1 calls were served in times ranging between 13 and 23 minutes. This means that from the time the citizen initially called 911 until the time the first officer arrived at the location, the total elapsed time was between 13 and 23 minutes.

[16] In this dataset, the slowest 5% of Priority 2 calls were served in times ranging between 32 and 120 minutes. This means that from the time the citizen initially called 911 until the time the first officer arrived at the location, the total elapsed time was between 32 and 120 minutes. The average wait for these calls was approximately 47 minutes.

issues with duplicate calls, in which the same incident gives rise to more than one record in the log; with duplicate calls, sometimes after an incident is closed, one but not both of the records will be closed. The duplicate may remain open for a length of time until the duplicate call is discovered and finally closed out, long after the incident was settled. Despite these limitations, the call for service data is the best available to give insight into current San Jose Police Department operations and was used for this study.

As part of the Five Year Plan for upgrading police operations, new procedures for categorizing calls for service are being considered; moreover, a new computer system which can more accurately track additional information is also being investigated.[17]

Data was provided for the following measures:
Call processing time: from when the reporting party calls 911 until the police dispatcher receives the call. The average of 90 seconds was used for all call processing times in this report.
Dispatch/queue time: from when the police dispatcher receives the call until the police officer is dispatched. This number includes dispatch time plus queue time together; separate data for individual dispatch and queue times was not available.
Travel time: from when the police officer is dispatched until the police officer arrives at the scene.[18]

The San Jose Police Department's Crime Analysis Unit provided a data set[19] which contained dispatch/queue times and travel times. The dataset contained 4693 records, of which 27 were missing various fields and four more were outliers,[20] so in total it yielded 4662 workable records

[17] Source: interviews with Lt. David Keneller, SJPD.
[18] Source: Neighborhood Policing Operations Plan, Chapter 2, p. 14, Document SJPD 001 in the Appendix, plus interviews with Lt. David Keneller, SJPD.
[19] Source: CFS (Calls for service) log for one typical week in 2001, Document SJPD 010 in the Appendix.
[20] The four outliers were removed from the dataset after investigation revealed them to be anomalies. These calls were all recorded as Priority 1 calls with dispatch/queue times in excess of 20 minutes. Three calls were situations which were originally classified as less urgent Priority 2 calls, and hence allowed to pend in the queue for a longer time. When a change in the situation occurred, the call was upgraded to a more urgent Priority 1 call. One call involved a family who called police from a local business after driving by their home and seeing unfriendly juveniles on the front lawn. Since the family was safe at the local business, the call was classified as low priority. When the father decided to go confront the juveniles, the situation became violent and was upgraded to a Priority 1 call. The second call involved a suspicious person under the influence of drugs; when the person produced a knife and began acting in a suicidal manner, the call was upgraded. The third call involved a verbal discussion between a brother-in-law and a husband, which was upgraded once the two men began to fight and a weapon was reported. Once identified as a Priority 1 call, all three of these calls were dispatched almost immediately. The fourth call involved a suspicious person on the perimeter of a local business which sold safes. The police dispatcher heard the word "safe" in the call, misclassified it as an attempted break-in to the business' safe deposit box, and logged it as a Priority 1 call in the computer system. However, the officers in the field only knew that it was a suspicious person, which classified it as a lower-priority call, and so the officers treated this call as a Priority 2 call. The decision was made to remove these anomalies from the data set because the intent was to analyze normal Priority 1 calls and Priority 2 calls, not to analyze calls which changed status. The four outliers formed less than 1/10th of 1% of the sample.

for this analysis. The data began at midnight on Sunday, 9/2/01, and ran for 7 days through midnight on Saturday, 9/8/01[21]. It contained dispatch time and travel time for Priority 1, Priority 2, Priority 3, and Priority 4 calls. There is enough data here for statistical analysis. It is a slightly heavier week for calls for service than the Year 2000 averages given in the Neighborhood Policing Operations Plan; however, it is believed that this dataset is reasonably representative of normal call for service data in San Jose. Figure 6 shows the number of calls.

Figure 6: Number of Priority 1 and Priority 2 Calls in Data Set

	This data, 7 days	This data, projected out to 365 days
Priority 1 Calls	180	9,386
Priority 2 Calls	2786	145,270

Figure 7: Summary Statistics of Call for Service Data Set

Statistics reflect total response time (Call Processing + Dispatch/Queue + Travel)

	Priority 1	*Priority 2*[22]
Number of calls	**180**	**2786**
Average value (mean)	**00:06:08**	**00:11:50**
50-percent point (median)	**00:05:05**	**00:08:46**
Fastest point	**00:01:30**	**00:01:30**
Slowest point	**00:22:18**	**02:04:22**
How many meet performance standard?	**112 (62.2%) (standard is 6 min)**	**1229 (44.1%) (standard is 8 min)**

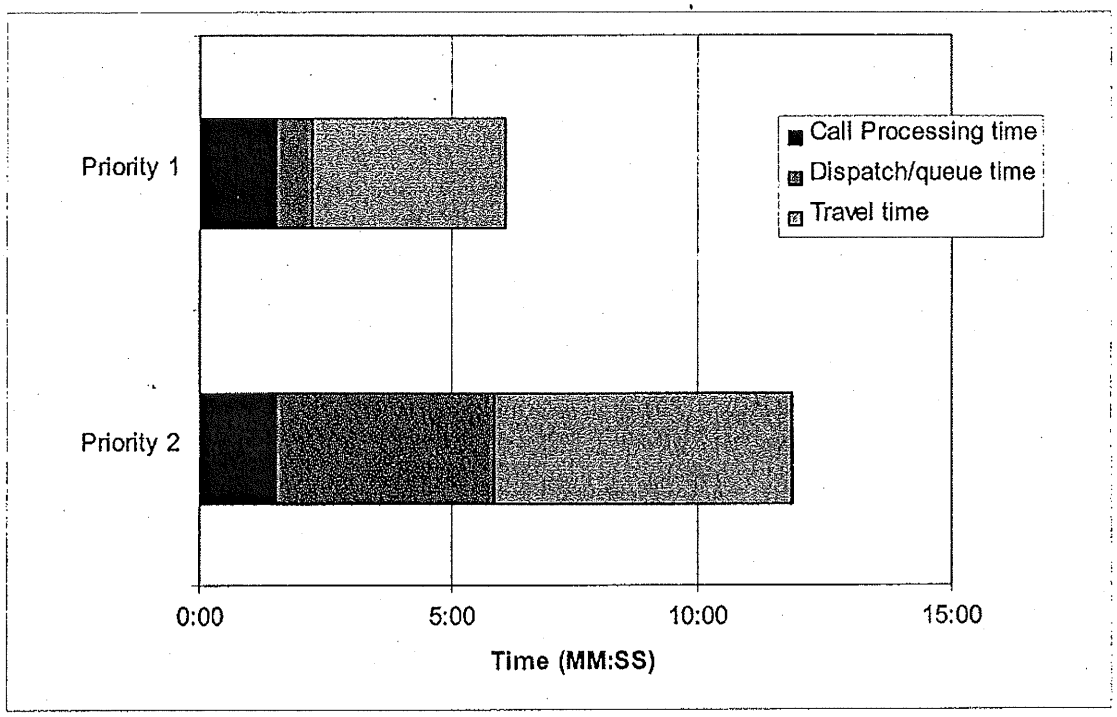
[21] This data set was taken before the terrorist attacks of September 11, so it is believed that these data points do not reflect abnormal calls for service.
[22] Times are given in HH:MM:SS. For example, 00:11:50 is 0 hours, 11 minutes, and 50 seconds.

Detailed Findings

Finding 1: For Priority 1 and Priority 2 calls, most calls are completed (call processing + dispatch/queue + travel) within a relatively quick time period. Over half (62%) of the Priority 1 calls are serviced within the 6 minute goal, and nearly half (44%) of the Priority 2 calls are serviced within the 8 minute goal. These findings are calculated using the one-week data set described above.

Finding 2: In line with its stated mission, the San Jose Police Department is currently serving Priority 1 calls first. While the travel times for Priority 1 calls are slightly faster than for Priority 2 calls, there is a significantly faster service for the average dispatch/queue time for a Priority 1 call. This is shown in Figure 8. These findings are calculated using the one-week data set described above.

Figure 8: Response Time for "Average" Priority 1 and Priority 2 Calls for Service

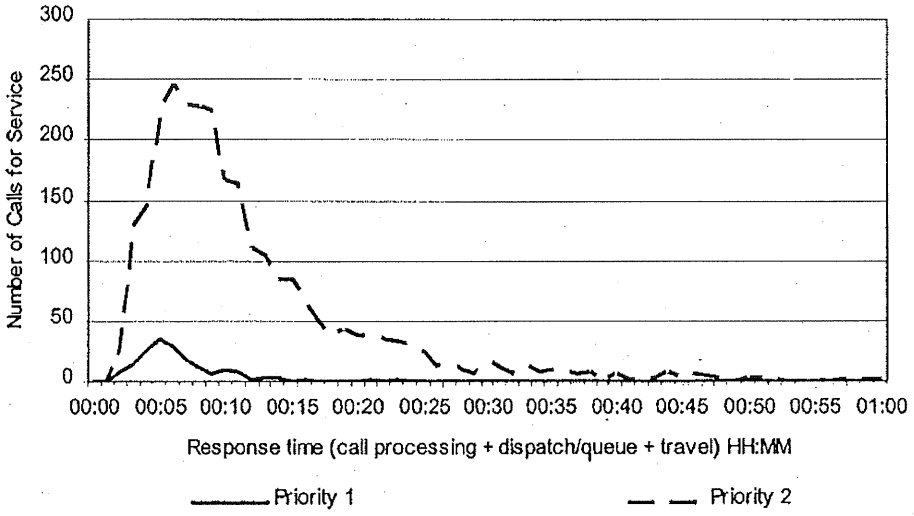


Finding 3: This data does not have a symmetric bell-shaped curve. It is not normally distributed. Instead, it has a long, "heavy" tail 90% of the Priority 1 calls are responded to[23]

[23] Response time is the call processing time, the dispatch/queue time, and the travel time for the first officer. Hence, if 6 minutes elapse between when the citizen first dials 911 and when the first police officer arrives at the location, it is said that the call is "responded to" in 6 minutes,

within 11 minutes, and 95% of Priority 1 calls are responded to within 13 minutes. Similarly, 90% of Priority 2 calls are responded to within 23 minutes, and 95% of Priority 2 calls are responded to within 32 minutes. It is the slowest 5% which slows down the averages and clouds the performance. These findings are calculated using the one-week data set described above.

Figure 9: Distribution of Response Time

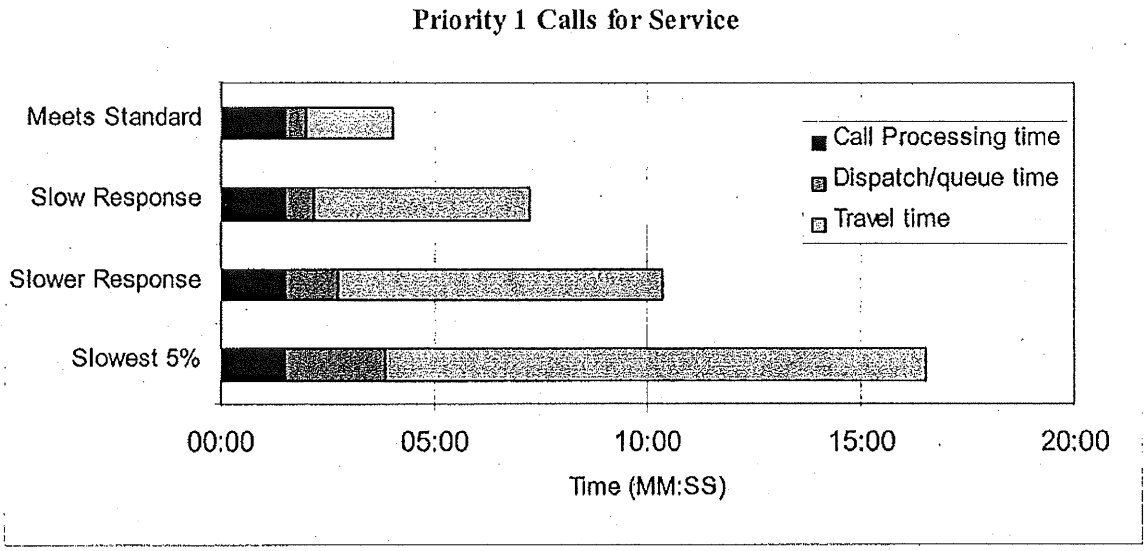


Finding 4: This data can be broken into the following categories for easier analysis:

- Meets Standard (6 minutes for Priority 1, 8 minutes for Priority 2)
- Slow Response
- Slower Response
- Slowest 5% of calls

In the slowest 5% of calls, for both Priority 1 and Priority 2, the extreme delay resides in the dispatch/queue portion of the process and may be caused by a lack of officer availability. Over this week, there were 9 Priority 1 calls and 136 Priority 2 calls which fell into this category. It should be noted that by definition, 95% of all calls for service will not experience such a delay. This is shown in Figure 10 for Priority 1 calls and in Figure 11 for Priority 2 calls. These findings are calculated using the one-week data set described above.

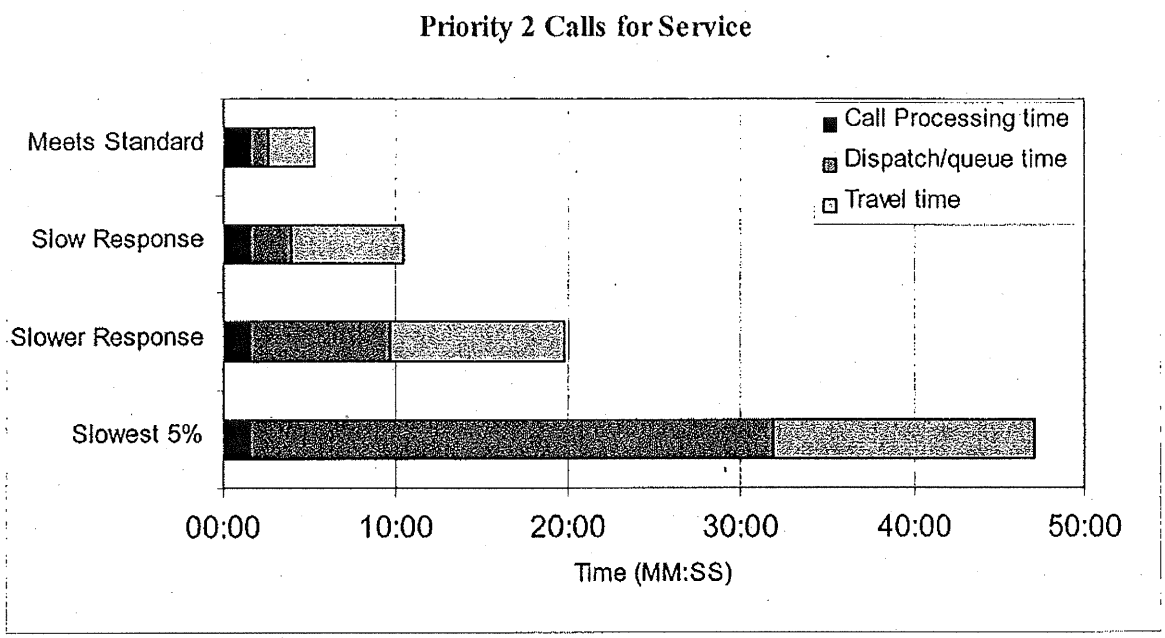
Figure 10: Priority 1 Calls for Service by Category



Priority 1 Category	Speed	Number of calls	Percent of Priority 1 calls	Average response time (dispatch + travel)[24]
Meets Standard	Less than 6 minutes	112	62.2%	04:03
Slow response	6–9 minutes	36	20.0%	07:16
Slower response	9–13 minutes	23	12.8%	10:22
Slowest 5%	13–23 minutes	9	5.0%	16:31
TOTAL	1.5 -23 minutes	180	100.0%	06:08

[24] Times are given in MM:SS. For example, 04:03 is 4 minutes and 3 seconds.

Figure 11: Priority 2 Calls for Service by Category



Priority 2 Category	Speed	Number of calls	Percent of Priority 2 calls	Average response time (dispatch + travel)[25]
Meets Standard	Less than 8 minutes	1229	44.1%	05:15
Slow response	8-14 minutes	857	30.8%	10:27
Slower response	14-32 minutes	564	20.2%	19:49
Slowest 5%	32 minutes – 2 hours	136	4.9%	47:02
TOTAL	1.5 minutes – 2 hours	2786	100%	11:50

[25] Times are given in MM:SS. For example, 05:15 is 5 minutes and 15 seconds.

Finding 5: If one looks at the distribution of slow and extremely slow responses, they are disproportionately in the Foothill and Southern divisions for both Priority 1 and Priority 2 calls, as shown in Figure 12 and Figure 13. These findings are calculated using the one-week data set described above.

Figure 12: Speed of Priority 1 Response by Division

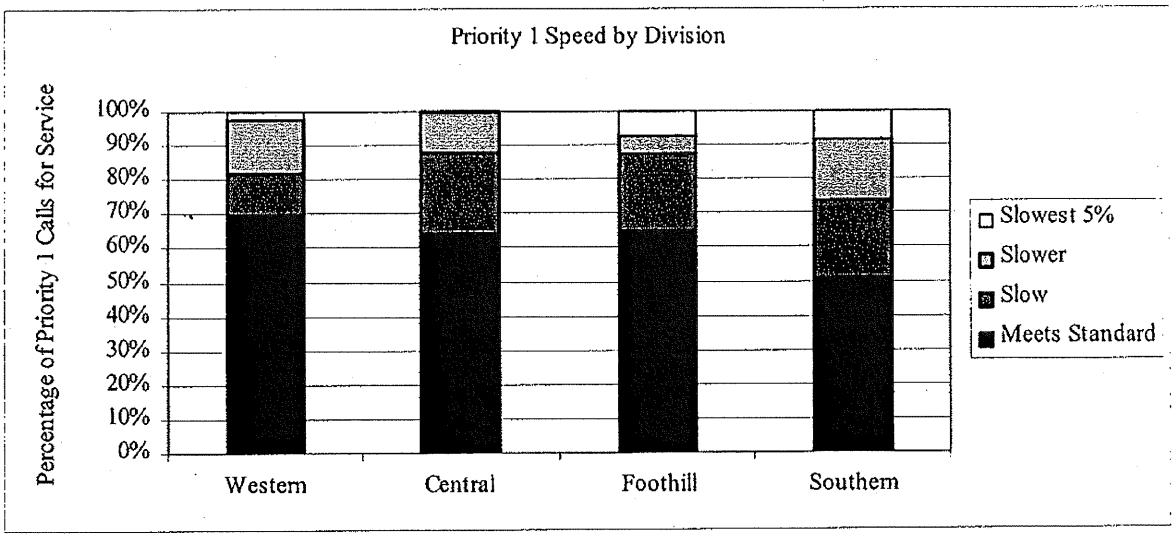
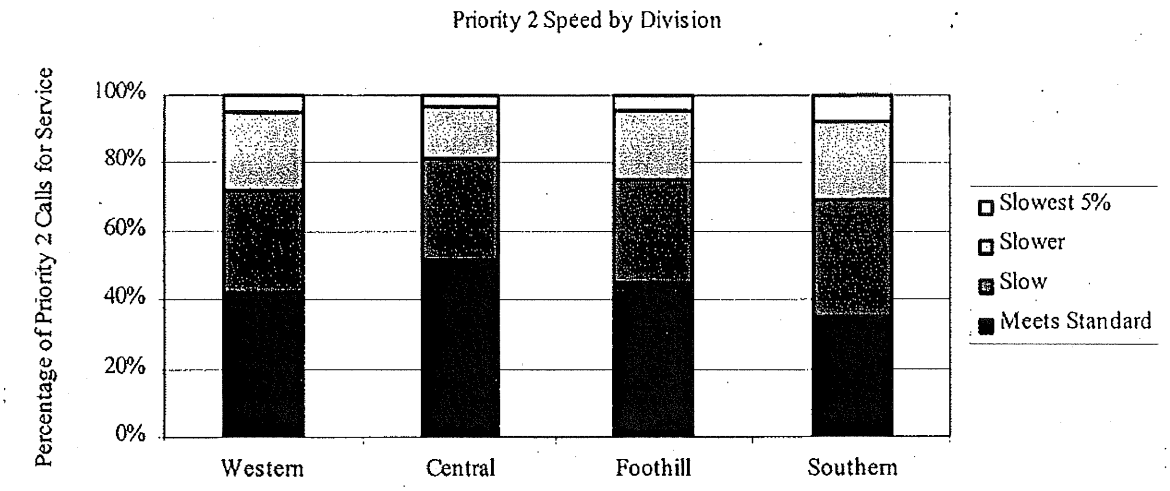
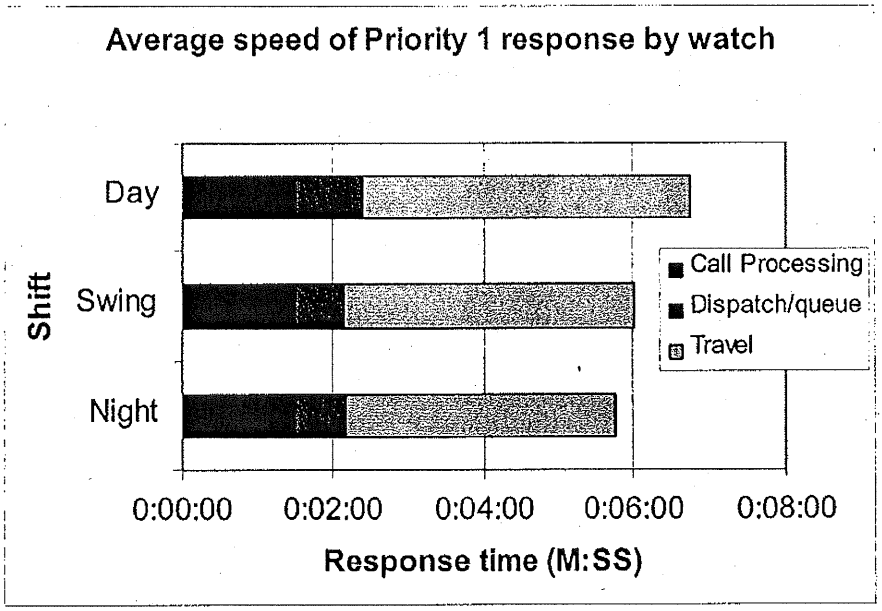


Figure 13: Speed of Priority 2 Response by Division


Priority 2 Speed by Division
Percentage of Priority 2 Calls for Service
100%
80%
60%
40%
20%
0%
Western
Central
Foothill
Southern
Slowest 5%
Slower
Slow
Meets Standard

Finding 6: There is a marked difference in the response times, both in dispatch and travel, between the watches.[26] Specifically, the day shift is slowest for both Priority 1 and Priority 2 response times, and the night shift is fastest. This is shown in Figure 14 and Figure 15.[27] These findings are calculated using the one-week data set described above.

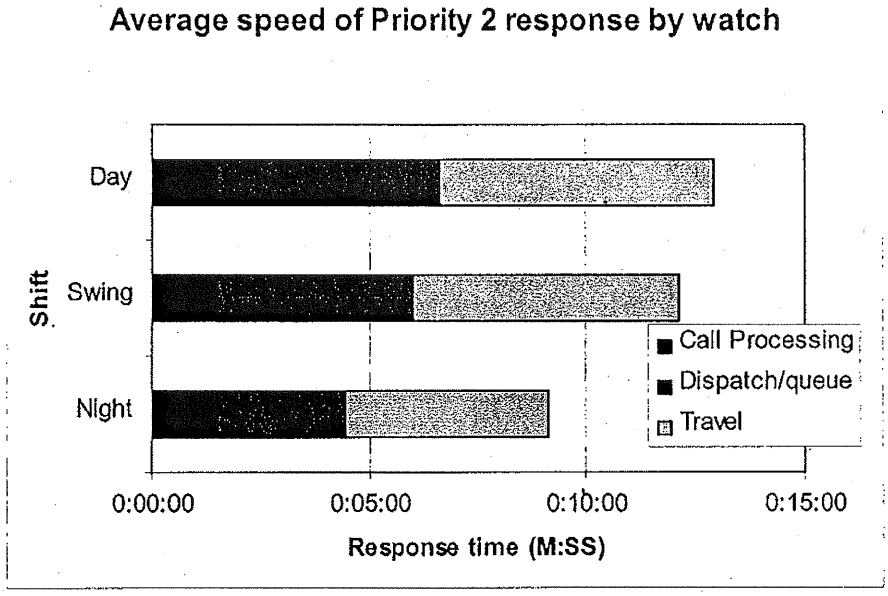
Figure 14: Speed of Priority 1 Response by Watch



[26] As of June 2002, the San Jose Police Department has the following three-watch system: Day (6 am – 4 pm); Swing (3 pm – 1 am), and Night (9 pm – 7 am).

[27] The day shift can be extremely busy because it includes morning and afternoon rush hour traffic accidents and traffic tickets, and after-school break-ins and vandalism. The night shift, while it does have some extremely violent crime, often does not have the sheer volume of the day shift.

Figure 15: Speed of Priority 2 Response by Watch



3.2.3 Current business transactions and citizen usage transactions

A small study, a partnership between LRI and Sergeant Guy Bernardo of the SJPD, was conducted in February 2002 indicates that approximately one-third of the citizens visiting the Police Administration Building, nearly 10,000 people annually, would be better served if they could visit a substation on the southern end of San Jose instead.

Citizens visit the Police Administration Building for several reasons, listed in **Figure 16**.

Figure 16: Citizen Visits to Police Administration Building[28]
Registration -- for sex, narcotics, or arson offenses. These people are required to have fingerprints and photos on file with the San Jose Police Department.
Warrants -- self surrender or payment of warrants
Reports of Identity Theft. These require photographs and fingerprints as well
General Records Functions
Crime and Accident reporting
Requesting copies of reports
INS clearances
Auto Desk
Vehicle releases, tow problems, etc.
Vehicle Inspections and Citation Sign off
Megan's Law Computer, which provides review of registered sex offenders
Permits
Reporting to Detective Units for interviews and follow up investigations
General Questions, most commonly regarding arrested persons

In order to determine citizen usage patterns, a small study was conducted over the week of 2/19/02 – 2/25/02 in which the ZIP code of every citizen entering the Police Administration Building lobby was collected. Once a substation is operational, citizens from its proposed service area could visit the substation instead of the downtown Police Administration Building to conduct their business. The proposed service area includes zip codes 95111, 95118, 95119, 95120, 95121, 95123, 95124, 95125, 95135, 93136, 95138, 95139, and 95148. The results of the survey can be seen below in Figure 17 and Figure 18:

[28] From Civilian Visits to PAB: data provided by Sgt. Guy Bernardo, Document SJPD 013 in the Appendix.

Figure 17: Home ZIP Code of Citizens visiting Police Administration Building in February 2002

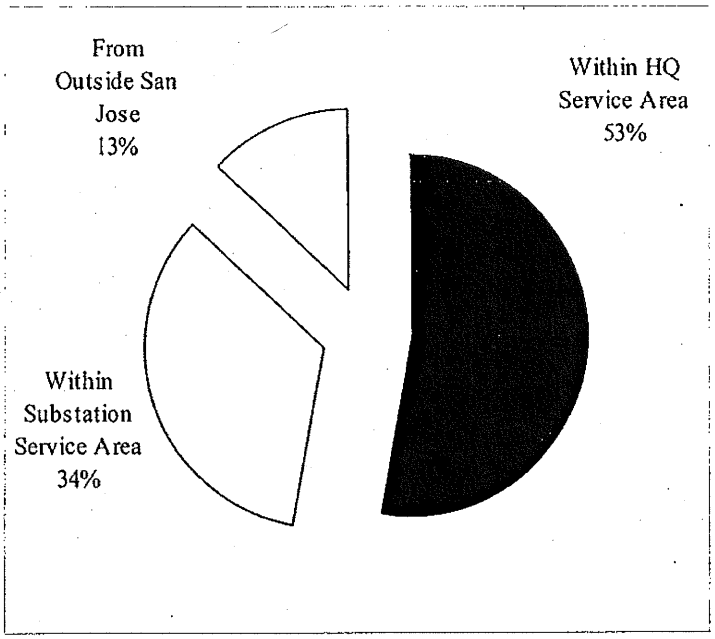


Figure 18: ZIP Codes of Citizens visiting Police Administration Building

Home Zip Code	This one-week study	One year projection	Percent
Within Proposed Police Administration Building / Headquarters service area	288	15,017	53%
Within Proposed substation service area	186	9,699	34%
Outside San Jose[29]	72	3,754	13%
Total	546	28,470	100%

[29] The visitors from outside of San Jose were mainly from the Greater Bay Area, most popularly Santa Clara, San Leandro, Salinas, Greenwood, Milpitas, San Francisco, and Sunnyvale, with visitors from as far away as Hat Creek and Duncans Mills.

3.2.4 Current employee commuting patterns

Currently, Police Department patrol officers report for their shift at the Police Administration Building, at 201 W. Mission Street in downtown San Jose. They walk to the locker rooms and change into uniform, all on their own time. Once on salaried time, the officers attend briefing, review messages and bulletins, obtain safety equipment, and locate their assigned vehicles, and then drive their patrol cars from the Police Administration Building to their respective beats. During the watch, they may have occasion to return to the Police Administration Building with an arrestee, with evidence, to make a report, for repairs to equipment or vehicles, or for other reasons. This is called a midshift return. At the end of their watch, the patrol officers drive from their beats back to the Police Administration Building, return their vehicles and equipment, submit reports, change into their civilian clothes, and return to their homes. When the employee commute is analyzed, only that commute from the Police Administration Building to the beat, any midshift returns, and the return from the beat to the Police Administration Building is analyzed. Travel time to and from the employees' homes is not counted as a police employee commute, because that time is done on the employees' own time, not on Police Department time.

There are two costs measured here:

- Mileage cost, which reflects gasoline, vehicle maintenance, and depreciation
- Salary cost, which reflects the cost of the officer's time for the commute.

The total cost of the commute measured here is the mileage cost plus the salary cost.

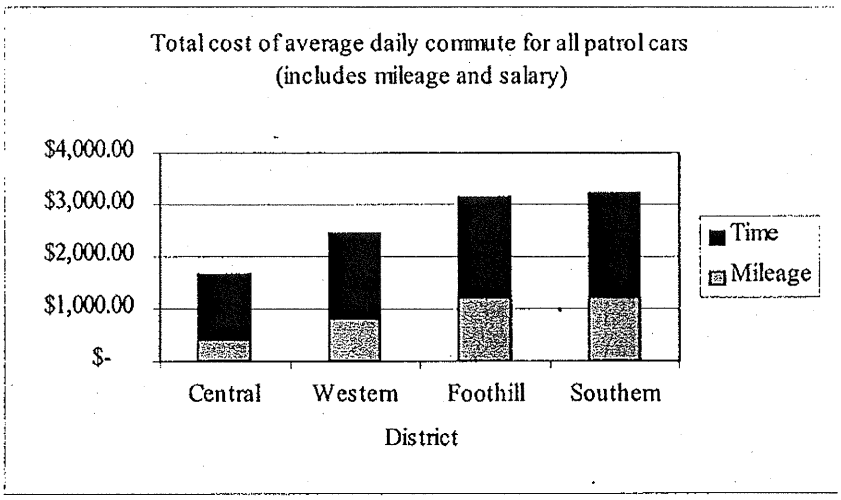
This analysis relies upon background data provided by the San Jose Police Department and some assumptions about officer behavior. The assumptions are detailed in the Appendix and summarized here:

Background Data and Assumptions
An officer will make a midshift return approximately once every 4.3 shifts.[30]
The vehicle mileage cost is $0.82/mile.[31]
There are, on average, approximately 276 officers out on any given day, each in his/her own patrol car.[32,33]
Commute time and mileage provided by SJPD are representative.

[30] Source: Midshift Return data from Sergeant Guy Bernardo of the San Jose Police Department, Document SJPD 026 in the Appendix.
[31] Source: Vehicle per-mile cost and Salvage value of police car data from Susan Cox, Documents SJPD 009 and SJPD 016 in the Appendix.
[32] Source: Patrol Staffing BFO Team Allocation from David Keneller, Document SJPD 019 in the Appendix.
[33] According to Susan Cox of the SJPD, the assumption of one officer per car is approximately correct.

As they were commuting to and from their beats, San Jose Police Department patrol officers clocked their time and trip mileage. This dataset contained 150 observations of time and trip mileage as actually measured by officers. The data was taken in February 2002.[34]

Figure 19: Cost of Average Daily Commute Mileage and Salary



Finding 1: On an average day, over all 3 watches, San Jose Police Department patrol officers spend over $10,000 in mileage and salary time commuting to all beats. The Southern and Foothill Districts are the most costly of these. This is shown in Figure 19.

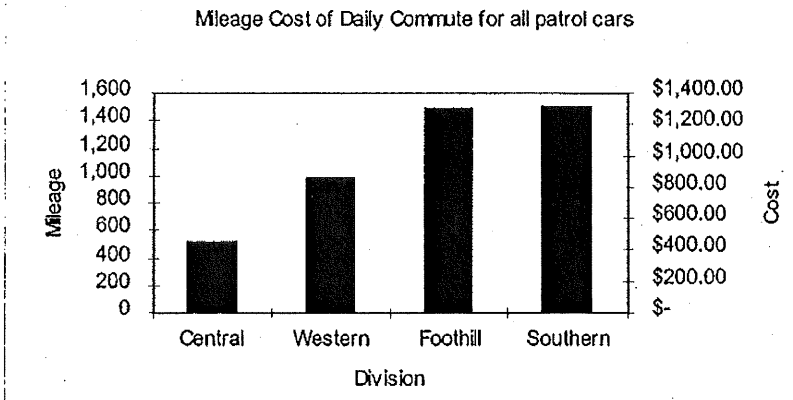
Division District	Average Cost of mileage for one patrol car	Average Mileage cost of all patrol cars	Average Cost of employee time for one patrol car	Average Cost of employee time for all patrol cars	Average Cost of commute for one patrol car (mileage plus employee time)	Total cost: mileage plus employee time for all patrol cars
	(dollars per day)	(dollars per day)	(dollars per day)	(dollars per day)	(dollars per day)	(dollars per day)
Central	$ 6.13	$ 419.77	$ 18.01	$ 1,233.86	$ 24.14	$ 1,653.63
Foothill	$ 17.11	$ 1,215.14	$ 27.06	$ 1,921.40	$ 44.18	$ 3,136.54
Southern	$ 18.82	$ 1,223.43	$ 30.73	$ 1,997.55	$ 49.55	$ 3,220.98
Western	$ 11.20	$ 806.54	$ 22.56	$ 1,624.35	$ 33.76	$ 2,430.89

[34] Source: Time and Trip Data for Patrol Officer Commute from Susan Cox, Document SJPD 017 in the Appendix.

Total	$ 13.25	$ 3,664.88	$ 24.51	$ 6,777.16	$ 37.77	$ 10,442.05

Detail of Mileage Cost: On an average day, over all 3 watches, San Jose Police Department patrol officers drive nearly 4500 miles, at an average cost of over $3600. This is shown in Figure 20. Again, the Southern and Foothill Divisions are the most costly of these.

Figure 20: Mileage Cost of Daily Commute for all patrol cars[35]

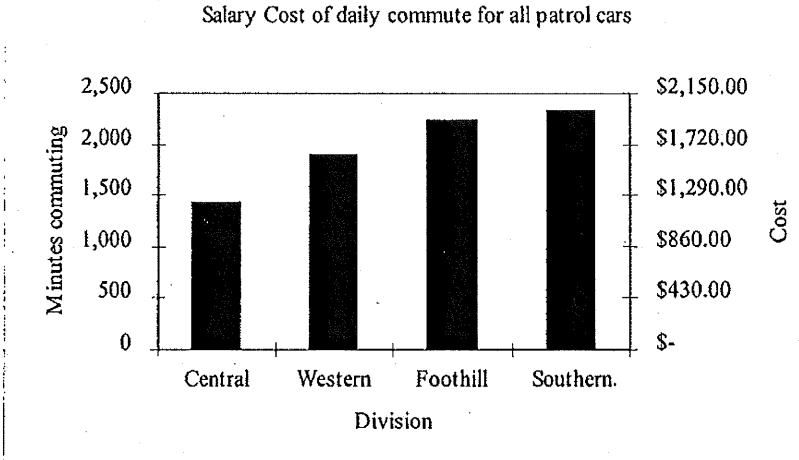


Division District	Average Number of patrol cars per day	Average Cost per mile on marked police vehicle	Average Mileage for one patrol car (round trip + midshift returns)	Average Cost of mileage for one patrol car	Average Miles for all patrol cars	Mileage cost of all patrol cars
	(all watches)	(dollars)	(miles)	(dollars per day)	(miles per day)	(dollars per day)
Central	68.5	$ 0.816	7.51	$ 6.13	514.42	$ 419.77
Foothill	71	$ 0.816	20.97	$ 17.11	1489.14	$ 1,215.14
Southern	65	$ 0.816	23.07	$ 18.82	1499.30	$ 1,223.43
Western	72	$ 0.816	13.73	$ 11.20	988.41	$ 806.54
Total	276.5	$ 0.816	16.24	$ 13.25	4491.28	$ 3,664.88

[35] Reflects mileage costs only; does not include salary costs.

Detail of Salary Costs: On an average day, over all 3 watches, San Jose Police Department patrol officers spend over 7800 minutes (130 hours) commuting and doing midshift returns at an average salary cost of over $6700. Again, the Southern and Foothill Divisions are the most costly of these. This is shown in Figure 21.

Figure 21: Salary Cost of Daily Commute for all Patrol Cars[36]



Division District	Average Number of patrol cars	Average Cost per minute of employee time (officer and sergeant)	Average Employee time for one patrol car (round trip + midshift returns)	Average Cost of employee time for one patrol car	Average Employee time for all patrol cars (round trip + midshift returns)	Cost of employee time for all patrol cars
	(all watches)	(dollars)	(minutes)	(dollars per day)	(minutes per day)	(dollars per day)
Central	68.5	$ 0.860	20.95	$ 18.01	1434.99	$ 1,233.86
Foothill	71	$ 0.860	31.47	$ 27.06	2234.61	$ 1,921.40
Southern	65	$ 0.860	35.74	$ 30.73	2323.17	$ 1,997.55
Western	72	$ 0.860	26.24	$ 22.56	1889.14	$ 1,624.35
Total	276.5	$ 0.860	28.51	$ 24.51	7881.91	$ 6,777.16

[36] Reflects salary costs only; does not include mileage costs.

4 Phase I Appendix

4.1 Listing of contact people

Company	Name	Phone	Email	Title
San Jose Police Department 201 W Mission St San Jose, CA 95110	Lt. David Keneller	(408) 277-5250	david.keneller@ci.sj.ca.us	Lieutenant
	Susan Cox	(408) 277-5234	susan.cox@ci.sj.ca.us	Capital Program Manager
	Kim Guzman	(408) 277-4198	kim.guzman@ci.sj.ca.us	Manager, OSSD
	Jan Alford	(408) 277-5200	jan.alford@ci.sj.ca.us	Crime Analysis Unit
	Gaetano Bernardo	(408) 277-5200	gaetano.bernardo@ci.sj.ca.us	Crime Analysis Unit
	Bernice dela Rosa	(408) 277-4106	bernice.delarosa@ci.sj.ca.us	Crime Analysis Unit
	Steven Di Noto	(408) 277-4106		Crime Analysis Unit
	Patricia Fay	(408) 277-4106	patricia.fay@ci.sj.ca.us	Crime Analysis Unit
	Kristine Lee	(408) 277-4106	kristine.lee@ci.sj.ca.us	Crime Analysis Unit
Marcy Li Wong Architects 816 Bancroft Way Berkeley, CA 94710	Marcy Wong	(510) 843-0916	mlwarch@mlwarch.com	Principal
	Kent Royle	(510) 843-0916	mlwarch@mlwarch.com	Architect
EKONA Architecture and Planning 121 Second Street Studio Suite 333 San Francisco, CA 94105	John Hunter	(415) 543-0707	jahunter@ekona.com	Senior Associate
	Rahman Batin	(415) 543-0707	rbatin@ekona.com	Project Manager
Leading Resources, Inc. 1812 J Street Suite 2 Sacramento, CA 95814	Eric Douglas	(916) 325-1190	efdouglas@leadingresources.com	Project Manager
	Carrie Beam	(925) 256-0475	cmbeam@leadingresources.com	Consultant

4.2 Listing of data sources

Reference	Author/ Source	Description
Marcy Wong Architects		
MLW 001	KR	Draft meeting notes from November 14, 2001 meeting
MLW 002	KR	Notes from conversation with Sucet
MLW 003	KR	Fax regarding Measure O
San Jose Police Department		
SJPD 001	DK	NPOP - Neighborhood Policing Operations Plan (large binder)
SJPD 002	DK	Cost savings; substation location in email
SJPD 003	JA	Personnel salary; vehicle cost; customer visits to OSSD
SJPD 004	DK	Substation staffing scenario, dated 1-11-02
SJPD 005	DK	Substation staffing scenario, dated 1-28-02
SJPD 006	KL	Civilian jobs in PAB: number, type, and salary
SJPD 007	KL	Civilian jobs in PAB: number, type, and salary
SJPD 008	KL	Civilian jobs in PAB: number, type, and salary
SJPD 009	SC	Vehicle per-mile cost
SJPD 010	BD	CFS (Calls for service) log for one typical week in 2001
SJPD 011	SC	Midshift responses (returns to PAB)
SJPD 012	SC	Department budget costs
SJPD 013	GB	Civilian visits to PAB
SJPD 014		SJPD Patrol Beats (Word document map)
SJPD 015		SJPD Patrol Divisions (Word document map)
SJPD 016	SC	Salvage value of police car
SJPD 017	SC	Time and Trip Data for Patrol Officer Commute
SJPD 018	DK	Patrol Staffing November 2001 (Confidential; hard copy)
SJPD 019	DK	Patrol Staffing BFO Team Allocation (hard copy)
SJPD 020	SC	Police Department Budget Summary
SJPD 021	SC	Police Department Budget Details
SJPD 022	SC	Confirmation of patrol car price

SJPD 023	SC	Additional Time and Trip Data (addendum to SJPD 017)
SJPD 024	SC	Validation of Data Requests 2
SJPD 025	SC	Staffing Scenario C Salary Information
SJPD 026	GB	Midshift Return Analysis
SJPD 027	SC	Community Services Lease Costs

San Jose City Council

SJCC 001	Focus on the Future: San Jose 2020 General Plan (large document with maps)

Other

HHA 001	Analysis of the Feasibility of Establishing Police Substations, report by Hughes, Heiss, and Associates and David J. Powers and Associates, 1982. From SJPD R&D Library, Reference 11A.012REF.
HHA 002	Analysis of Police Substation Feasibility Through the Year 2000, report by Hughes, Heiss, and Associates and David J. Powers and Associates, 1987. From SJPD R&D Library, Reference A11.013.dREF.

4.3 *Staffing Scenario Details*

SUBSTATION STAFFING SCENARIOS A, B & C

BUREAU/ DIVISION/UNIT	POSITION	PLAN A	B	C
Chief of Police	(1) Deputy Chief	0	1	1
Bureau of Administration	(1) Facility Mgr. (5) Property Clerks (1) Supply Clerk	7	7	7
Bureau of Technical Services	(1) Network Engineer (1) Network Technician (23) Police Data Specialist for A (25) Police Data Specialist for B & C	25	27	27
Bureau of Investigations	(1) Captain (4) Lieutenants (20) Sergeants (80) Officers (1) Secretary (3) Office Specialist	109	109	109
Bureau of Field Operations Community Services	(78) personnel are a combination of sworn and civilian	0	0	78
Bureau of Field Operations Administration	(1) Sergeant (1) Officer (1) Secretary (2) Office Specialists	5	5	5
Front Lobby/ Pre-Processing	(4) Sergeants (18) Officers	22	22	22
Metro	(1) Sergeant (5) Officers	6	6	6
Violent Crime	(1) Sergeant (5) Officers	6	6	6
Traffic Enforcement Unit	(3) Sergeants (21) Officers	24	24	24
Southern Division Redeployment	(1) Captain (24) Sergeants (6) Lieutenants (136) Officers	167	167	167
5 Year Plan Beat Staffing	(11) Officers	11	11	11

5 Year Plan Response Time Reduction	(21) Officers		21	21	21
Beat Officer Positions Dist L & P[37]	(36) Officers		36	36	36
Department of Parks and Recreation			0	10	10
Department of Planning, Building and Code Enforcement			0	10	10
General Services Administration	(4) Janitors (1) Motorcycle Mechanic (1) Clerical (1) Supervising Mechanic	(5) Mechanics (2) Parts Specialists (1) Senior Mechanic	15	15	15
Volunteers	Non-CSJ Payroll		0	4	4
Victim Witness, Next Door, Rape Crisis	Non-CSJ Payroll		0	3	3
		Totals	**454**	**484**	**562**

[37] District L surrounds the intersection of Senter and Tully Roads in central San Jose; District P surrounds the intersection of Aborn and San Felipe, in southeastern San Jose.

4.4 Vehicle mileage calculations

Depreciation:

Initial Cost of Car:	$49,000.00	Source: SJPD 022 SC (SJPD 003 JA had as $47,000)
Salvage value:	$ 1,900.00	Source: SJPD 016 SC (range $1000-$2800)
Cost:	$47,100.00	
Mileage:	100,000	Source: SJPD 016 SC
Depreciation cost per mile:	$ 0.47	

Maintenance Cost:

Annual Maintenance Cost	$4,900	Source: SJPD 003 JA
Years in Service:	5	Source: SJPD 024 SC
Total Maintenance:	$24,500	
Maintenance per mile:	$0.25	

Operating Cost:

Miles per gallon	14	Source: SJPD 024 SC
Cost per gallon of fuel	$1.40	Source: SJPD 024 SC
Fuel cost per mile:	$0.10	

Total Operating Cost Per Mile:

Depreciation Cost	$0.47
Maintenance Cost	$0.25
Operating Cost	$0.10
Total Cost per Mile	$0.82

4.5 Employee Commute Data

Following is the number of patrol cars given by the SJPD.[38,39]

Division	District	Number of beats in this district	Number of Patrol Cars on Watch 1	Number of Patrol Cars on Watch 2	Number of Patrol Cars on Watch 3	Total All Watches
Central	E	4	5.0	5.5	5.0	15.5
	K	6	6.0	7.0	6.5	19.5
	R	5	7.0	7.5	5.5	20.0
	V	4	4.0	5.0	4.5	13.5
Central Total		**19**	**22.0**	**25.0**	**21.5**	**68.5**
Foothill	C	6	6.5	9.0	5.5	21.0
	M	5	5.5	6.5	4.5	16.5
	P	6	6.0	7.5	4.5	18.0
	W	4	5.0	5.5	5.0	15.5
Foothill Total		**21**	**23.0**	**28.5**	**19.5**	**71.0**
Southern	A	5	6.0	6.5	4.0	16.5
	T	5	4.5	6.0	4.5	15.0
	X	5	5.0	7.0	5.0	17.0
	Y	5	5.0	7.0	4.5	16.5
Southern Total		**20**	**20.5**	**26.5**	**18.0**	**65.0**
Western	F	5	5.0	6.0	5.0	16.0
	L	6	7.0	7.5	6.0	20.5
	N	6	6.0	7.5	4.5	18.0
	S	6	6.0	7.0	4.5	17.5
Western Total		**23**	**24.0**	**28.0**	**20.0**	**72.0**
Grand Total		**83**	**89.5**	**108.0**	**79.0**	**276.5**

[38] Source: Patrol Staffing November 2001: watch and beat staffing spreadsheet from David Keneller, Document SJPD 018 in the Appendix.

[39] Where the number of patrol cars is not a round number (for example, 6.5 patrol cars), it reflects the SJPD's split week scheduling. This would mean for half the week there were 6 cars in that district, and for the other half the week, there were 7 cars in that district.

Following is the time and trip data given by the San Jose Police Department.[40]

Division	District	Number of observations	Miles	Off Peak commute time (minutes)	Peak commute time (minutes)
Central	E	4	1.8	3.7	8.7
Central	K	7	3.9	5.2	11.3
Central	R	14	4.6	7.3	18.3
Central	V	4	1.0	3.5	4.3
Central Subtotal		29 total	3.55 Average	5.77 Average	13.36 Average
Foothill	C	10	7.1	8.4	12.2
Foothill	M	7	7.5	6.7	11.4
Foothill	P	8	12.8	14.7	21.3
Foothill	W	20	6.5	9.6	16.5
Foothill Subtotal		45 total	7.91 Average	9.79 Average	15.60 Average
Southern	A	11	10.4	12.9	19.2
Southern	T	20	7.8	9.7	15.8
Southern	X	11	7.9	8.5	17.0
Southern	Y	10	11.2	12.9	18.2
Southern Subtotal		52 total	9.03 Average	10.74 Average	17.23 Average
Western	F	5	3.6	7.1	10.8
Western	L	6	6.6	9.3	14.4
Western	N	6	7.2	10.8	13.5
Western	S	13	4.5	6.1	11.0
Western Subtotal		30 total	5.31 Average	7.85 Average	12.15 Average

[40] Source: Time and Trip Data for Patrol Officer Commute from Susan Cox, Document SJPD 017 in the Appendix.

San Jose Police Department
Decentralization Plan

Investigation of a Police Substation
In South San Jose:
Cost/Benefit Analysis of Decentralization

Draft: Part Two of a Three Part Study
August 19, 2002

Prepared by Marcy Li Wong Architects and
EKONA Architecture + Planning, in association with
Leading Resources, Inc.

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Table of Contents

1 EXECUTIVE SUMMARY

With the passage in March 2002 of Measure O, a $159 million public safety bond benefiting police and fire, the San Jose Police Department obtained funding to build a southern policing substation.

This report is the second in a three-part series of reports prepared by Marcy Li Wong Architects, EKONA Architecture and Planning, and Leading Resources, Inc. (LRI), which were retained by the San Jose Police Department to perform the needs analysis, architectural programming and design concept for a southern police substation.

In this report, a total of ten different scenarios are investigated: three substation locations, three staffing scenarios for each location, and a "headquarters only, no substation" option for comparison purposes only.

This report contains the results of a detailed cost benefit analysis. Calculations were done on the vehicle mileage costs, the amount of officer time spent traveling to and from beats with and without a substation at the different locations, and the total salary cost of the commute. Expected Priority 1 and Priority 2 response times for the Southern division of San Jose, with and without substation, were also calculated.

Figure 1 shows a map of the proposed substation locations.

Figure 1: Map of Proposed Substation Locations

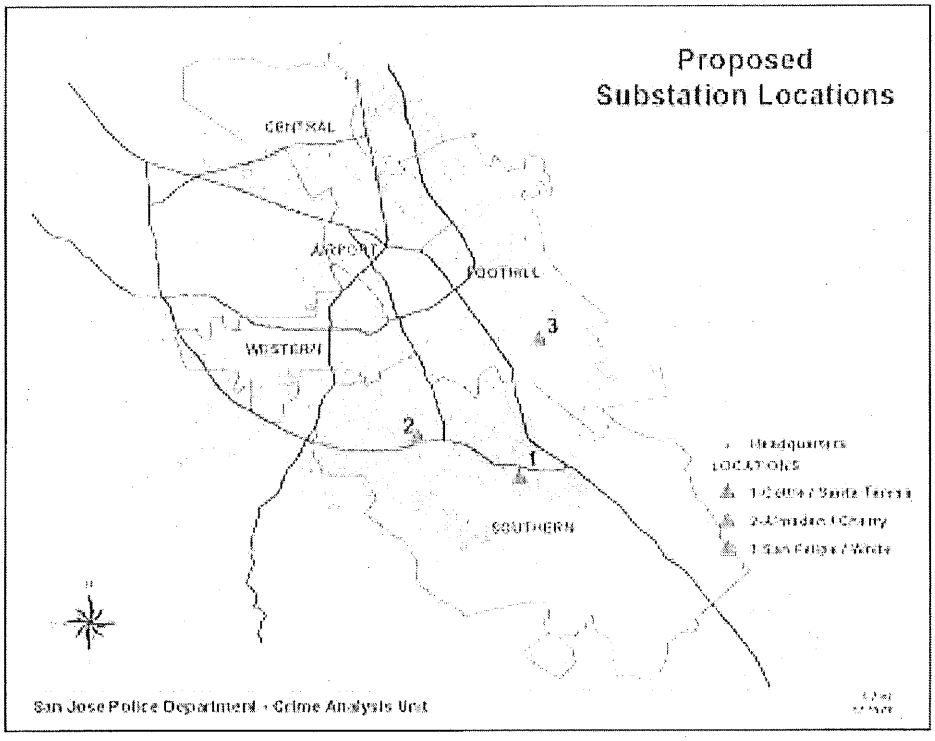


Figure 2 below summarizes the results of the location analysis and provides a basic ranking. This ranking is for the cost/benefit criteria in this study only; it does not include land costs and availability, geotechnical, environmental, or other factors which are beyond the scope of this study, but should be considered in selection of potential substation locations.

Figure 2: Cost/benefit Ranking of Substation Locations for Year 2007

Location	Average emergency response time[1]	Percentage of emergency calls served within 6-minute target[2]	Annual net savings of hours spent traveling to and from beats	Annual mileage cost (millions of dollars)[3]	Cumulative Score[4]
Headquarters only, no substation (for comparison)	7:56	42%	-0-	$1.48	
Santa Teresa and Cottle Roads (South San Jose)	7:18 Rank: 1	53% Rank: 1	10,080 Rank: 1	$1.14 Rank: 2	1.25 (Best)
Almaden and Cherry (South San Jose)	7:36 Rank: 2	49% Rank: 2	4,752 Rank: 2	$1.05 Rank: 1	1.75 (Second)[5]
Aborn and San Felipe (Southeast San Jose)	7:52 Rank: 3	46% Rank: 3	3,600 Rank: 3	$1.14 Rank: 2	2.75 (Third)

The rankings for 2027 are the same as for 2007 for the substation locations; the location at Santa Teresa and Cottle Roads remains the best location overall for the combination of fastest average emergency response time plus lower mileage costs.

This study shows that the City of San Jose will derive the greatest benefit from building a southern substation at or near Santa Teresa and Cottle Roads. This location provides the most substantial benefits in terms of the commute mileage and time, and the number of officer hours saved. If other factors make this site undesirable or infeasible, the second-best location is Almaden and Cherry in South San Jose. The third-choice location, Aborn and San Felipe in southeast San Jose, does provide some measurable benefits over the "headquarters only, no substation" scenario.

[1] The average emergency response time includes a projected travel time of 4:59, or nearly 5 minutes, due to traffic congestion.
[2] The emergency calls here are the Priority 1 calls, "imminent danger to life and property." More details on less urgent Priority 2 calls can be found later in the report.
[3] Dollar costs are given in constant 2002 dollars throughout this report for ease of comparison.
[4] Cumulative Score is an average of the ranks for the factors considered. A 1 is the best cumulative score; a 3 is the least.
[5] The Almaden and Cherry location is a close second to the best alternative. There is more distance between the second and third alternatives.

Figure 3 below shows the cost ranking for the three different staffing scenarios. This ranking encompasses the cost criteria in this study only; it does not include capital or operating costs of a substation, or other factors which are beyond the scope of this study.[6]

The major qualitative benefits of a substation are redundancy of police facilities in case of emergency, and easier citizen access and better citizen service. Scenario C, the full-service substation, also provides the additional benefits of in-house Community Services Division and more Crime Prevention Officers deployed to the southern part of the city.

Figure 3: Cost ranking for Small, Medium, and Full-service substations in 2007

Scenario	Total annual salary costs (millions of dollars)	Total annual Community Services Lease (millions of dollars)	Total annual salary plus CSD lease costs (millions of dollars)	Cost Ranking
Headquarters only, no substation (for comparison)	$175.343	$0.665	$176.008	
Scenario A: a small, 454 person substation	$183.966	$0.665	$184.631	1
Scenario B: a medium, 484 person substation	$185.587	$0.665	$186.252	3
Scenario C: a full-service, 562 person substation	$185.734	$0	$185.734	2

In 2007, Scenario C, the full-service substation, will provide greater qualitative benefits for the money spent than either Scenario A or Scenario B. By 2027, the projected costs of Scenario C, the full-service substation, become very slightly greater[7] than the costs for Scenario B, making the full-service and medium substations equivalent options. Scenario A, the smaller substation, costs almost as much as the full-service one in Scenario C, but Scenario A provides less functionality and will have less room to accommodate population growth.

This study also finds that the City of San Jose will derive the greatest benefit from building the full-service substation, Staffing Scenario C. This substation, for a very small increase in cost above the other two options, will provide a full range of benefits to the city, including vehicle maintenance and the Community Services Division of the San Jose Police Department. The

[6] The capital and operating costs will be covered in Phase III of this report.
[7] The cost difference is less than one-third of one percent, a statistically insignificant amount.

other two staffing options, the small and medium-sized substations, provide some of the same functionality; however, the City of San Jose can obtain the best value per dollar spent using the full-service substation approach.

The Appendix of this report contains detailed information on calculations, projections, and assumptions.

2 INTRODUCTION

2.1 Summary of Phase I Report

The Phase I report analyzed current police operations, measuring current and proposed staffing configurations, current response time to various parts of the city, current business transactions, and current employee commuting patterns. That report found that the San Jose Police Department currently spends large amounts of money and time traveling between the Police Administration Building and its beats, particularly those in the southern region. During peak hours, it can take an officer significantly longer to reach a beat in the southern region, and a longer commute means that there are correspondingly fewer hours available for the officer to perform police duty.

The Phase I report also found that citywide, currently the Police Department serves most of its Priority 1 calls within the 6 minute goal, and over half of its Priority 2 calls within the 8 minute goal. However, the Southern Division lags significantly behind the rest of the city in both dispatch time and travel time for Priority 1 and Priority 2 calls. This lag is partly due to lower officer availability because of the long commutes, and partly due to the long travel time because of the greater distances in the Southern division.

Finally, the Phase I report found that, annually, nearly 10,000 citizens[8] of San Jose who live in the Southern district must make the trip north, to the Police Administration Building located at 201 West Mission Street in downtown San Jose, to do business with the police. These citizens would be better served by a police substation in their own neighborhood.

This report continues where the Phase I report finished. In this report, population growth, traffic congestion, and a variety of other factors, and project costs and benefits for a southern substation to the year 2027 are taken into account. This data is compared to the existing "headquarters only, no substation" scenario to more clearly demonstrate costs and benefits.

2.2 Population and Traffic Congestion

The current Police Administration Building is in downtown San Jose and currently serves the entire city. A substation would be in the southern or southeastern region, and would serve roughly the southern 1/3 of the city, leaving the Police Administration Building to serve the northern 2/3 of the city. For the purposes of this study, the substation service area is considered to be the entire current Southern Division, plus two beats on the border, Beats L and P. This

[8] This data came from a survey of citizens in the lobby of the Police Administration Building taken in February 2002. The interested reader can find more detail on this in the Phase I Report, under "Current Business Transactions and Citizen Usage Patterns."

translates to a dividing line which begins approximately on State Route 85 in southwestern San Jose, travels north on Highway 87, and then east on Tully Road out to the foothills.[9]

The population of San Jose is both increasing and the city is expanding more to the South.[10] Over the next 20 years, this is anticipated to substantially increase the number of citizens, and hence the number of calls for police service, in the substation service area. This can be seen in Figure 4 and Figure 5.

Figure 4: Population Projection for San Jose

Year	Headquarters Service Area[11]	Substation Service Area[12]	Total
2000	551,917	343,026	894,943
2005	568,618	388,182	956,800
2010	583,171	427,529	1,010,700
2015	592,243	452,057	1,044,300
2020	598,966	470,234	1,069,200
2025	606,256	489,944	1,096,200
2030	620,710	529,022	1,149,732

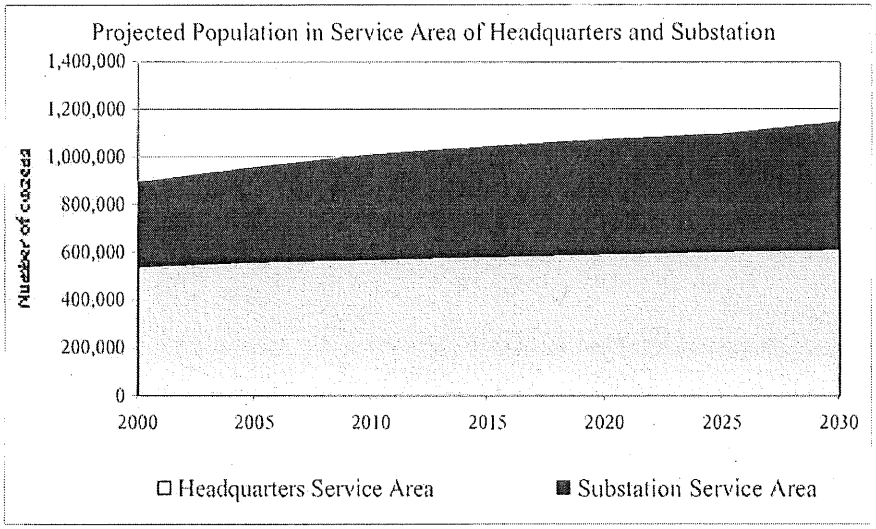
[9] This report models the substation service area as the entire Southern Division (Beats A, T, X, and Y) and Beats L and P. In reality, there is some of Beat L which is north of the dividing line described on Tully Road, and a small portion of Beat P which is also north of the dividing line on Tully Road. It is expected that the future five years will contain some re-districting by the Police, possibly in tandem with the substation, so these service areas are approximate.

[10] This population projection for the City of San Jose is based upon information provided by the Association of Bay Area Governments (ABAG) and the City of San Jose General Plan for the year 2020. This population estimate is not intended to be a detailed demographic one, which would take into account differing age groups, fertility rates, immigration patterns, and employment. Rather, this estimate is a broad prediction of the City's population growth and location as it relates to a new police substation.

[11] Population of Headquarters Service area is calculated from total population. Total population is from United States Census for 2000.

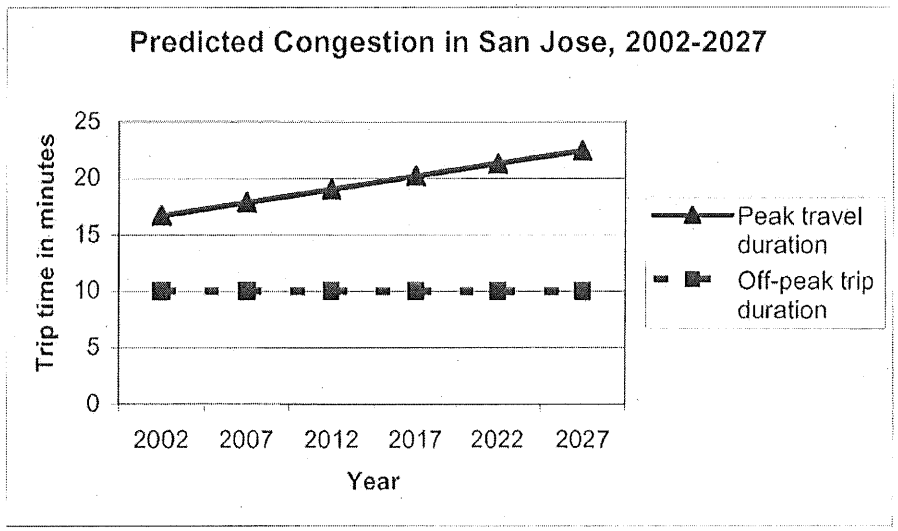
[12] Population of Substation Service area is calculated from total population. Total population is from United States Census for 2000.

Figure 5: Projected Population Distribution in San Jose, 1970-2030



Moreover, traffic congestion is projected to increase as well, making an already slow commute even slower, and further draining the resources of the Police Department. As the San Jose Police Department adds more officers to the Southern division to keep pace with the population growth in that region, the longer commute will become even more expensive in terms of time and money. This is shown in Figure 6.

Figure 6: Predicted Congestion in San Jose Between 2002 and 2027[13]



[13] Congestion figures from Santa Clara Valley Transit Authority.

2.3 *Qualitative Benefits of a Substation*

2.3.1 Improvements in community safety

A southern substation would improve community safety.

In these days of heightened security awareness, many public safety agencies are putting into place disaster backup plans. Currently, due to facilities limitations, the San Jose Police Department does not have a secondary location that could serve as a backup headquarters if something should happen to the current headquarters. In addition to terrorist attack, this building is in a seismically active zone and is susceptible to earthquake damage, fire, flood, and other natural disasters.[14] The southern substation would provide an emergency backup facility if something were to happen to the downtown headquarters. In an emergency, it would allow the San Jose Police Department to seamlessly maintain communications, coordinate policing, and continue to serve the citizens of San Jose at a time when they would need it the most.

Existing facilities are often cramped and require expensive renovation. For example, the police have planned a $2.9 million Emergency Operations Center (EOC) Communications project, which will renovate the entire fourth floor of the Police and Communications Building (PAC). It will reconfigure all interior walls, expand the dispatch area and increase the size of the Emergency Operations Center (EOC). However, such projects are not a long-term solution to the problem of city growth and increased need for police facilities.

Additionally, the substation would improve the lobby safety and security at the current Police Administration Building in downtown San Jose. Current facilities limitations require the police to spend excessive time and energy to maintain safety. For example, the current lobby is small and crowded, and often citizens must wait for a long period of time. During this time, some citizens need to use the restroom, but there is no restroom in the lobby. The officer must let the citizen into the secured area of the Police Administration Building in order to use the restroom. This means that the officer must either escort the citizen to the restroom, wait, and escort the citizen back to the lobby, using valuable officer time for this task, or the officer must allow the citizen free, unescorted access to the secured area of the Police Administration Building. Citizens come to the Police Administration Building for several reasons. Many come to obtain copies of police reports or to check police databases; others come to obtain information, to assist police with detective work and information, or to release vehicles from impound. A relatively small number of citizens are required to register as sex offenders or come to self-surrender on an arrest warrant. A substation would have restrooms directly off of the lobby, allowing the police to maintain security and safety with less effort. Officers could spend their time addressing citizen requests for service, rather than escorting them to restrooms.

[14] The Police Administration Building at 201 W. Mission is currently (2002) undergoing a $2.5 million seismic retrofit project which will build four new shear walls, reinforce the building foundation, and bolt the second and third floors together. However, at best, any earthquake upgrade will only help, but not eliminate, the risk. There is the ever-present possibility of a large seismic event, or "the big one," which few buildings will survive intact regardless of seismic upgrade measures.

The substation would also provide confidential interview rooms for rape crisis, family violence, and other confidential cases. Currently, due to space limitations, police headquarters does not always have physical facilities to provide the victims of these crimes with a confidential interviewing environment.

Additionally, the southern substation will enable improved Priority 1 and Priority 2 response time to emergency calls, when compared with the no substation option. The southern division currently has the slowest average dispatch time for these calls, and the longest average travel time to these calls, yielding citywide the slowest overall average response time. While some of the delay in serving these calls is due to traffic congestion and travel time which would not be affected by the substation, it is anticipated that the southern substation will provide improved dispatch time due to greater officer availability to the citizens in the southern division. Because the population growth in San Jose is anticipated to be primarily in the South, this will provide a greater service to an increasing number of citizens over the next 20 years.

Finally, the police have completely and thoroughly outgrown their current headquarters. The entire Community Services Division is currently leasing off-site office space at a cost of over $665,000 per year. In addition to being a drain on the finances, this split of police personnel makes it more difficult to coordinate public service. Information is more difficult to share; meetings are more difficult to convene; and parts of the department end up working in "islands of knowledge." The substation would provide the means to bring the Community Services Department back under the same roof.[15]

2.3.2 Improvements in patrol time availability

Proactive patrol time is the time an officer spends actively patrolling his or her beat, on prevention, intervention, and enforcement. This does not include time spent on meals, meetings, or other non-patrol activities. A southern substation will increase proactive patrol time in the South.

Currently, officers can spend large amounts of time traveling from the headquarters in downtown San Jose to their beats in the Southern division. This is time which is not spent performing the duties of a police officer: proactive patrol, responding to emergency calls, providing information, writing reports, appearing in court, and a variety of other activities. Less time spent commuting will increase the number of hours in a shift each officer can spend performing actual police duties; moreover, a shorter commute will improve officer morale and provide a fresher officer to the community.

The benefits of the shorter travel time will be particularly evident when an officer needs to make a midshift return. A midshift return is a trip the officer makes from the beat back to headquarters or the substation in the middle of his or her shift, most commonly with an arrestee, evidence, or

[15] One of the options considered, the "full-service substation," would build a substation large enough to bring Community Services Division of the Police Department back under the same roof, allowing them to integrate their services more easily with the rest of the Police Department. Currently, the Community Services Division is not housed in the Police Administration Building, but instead is renting off-site space in downtown San Jose.

for repair on a vehicle or equipment. Currently, on any given day, approximately 20% of the officers on the streets of San Jose will make a midshift return to the building. Reducing the commute time for a midshift return will free up additional police officer hours for better community policing.

Analysis shows that in 2007, a southern substation could free up over 10,000 hours per year of police time which would otherwise be spent on the commute and midshift returns.[16]

2.3.3 Improvements in community service

The southern substation will also improve community service in the southern divisions. In 2002, nearly 10,000 citizens who live in the Southern division must make the trip north each year to do business with the San Jose Police Department. This number is expected to approach 15,000 citizens by the year 2027.[17] Citizens do business with the police for variety of reasons, including to use police databases, to obtain copies of various reports, to obtain information, to pay fines, to release a vehicle from impound, or to help an investigation by offering information. A substation will allow these citizens easy access to the police in their own neighborhood. The number of people living in South San Jose is expected to increase substantially over the next 20 years, so a Southern substation will improve community service to a growing number of citizens.

Additionally, some of the staffing scenarios investigated here co-locate other closely related City of San Jose services with the police at the substation. The services are the Department of Parks and Recreation, and the Department of Planning, Building, and Code Enforcement. If these services are located in a southern substation, citizens living in the southern areas who wish to do business with the city in person will be able to make reservations for city parks, obtain permits, and do other business without making the trip north to the downtown headquarters of these departments.[18]

2.3.4 Benefits to the GSA Fleet of Vehicles

The southern substation would include vehicle maintenance facilities. In addition to providing maintenance for San Jose Police Department vehicles, this means that any vehicle in the GSA fleet, including fire and city maintenance vehicles, could also go to the new location for both refueling and maintenance. This would be particularly important for Fire Truck Number 1, which is too large to refuel at normal service stations.

[16] More detail can be found in the "Details of Commute Costs" Section.
[17] More detail can be found in the "Overview of Benefits" Section.
[18] The City of San Jose is moving into Internet-based e-government as well, so it may be possible to do much business over the Internet in the future as well. However, some transactions, such as those which require a signature or a thumbprint, and self-surrenders will always need to be done in person.

3 PHASE II: COST/BENEFIT ANALYSIS OF DECENTRALIZATION

3.1 Tasks 4 and 5: Analyze Transportation and Service Impacts of Current versus Decentralized Approach

3.1.1 Options for a Southern Substation

Three staffing scenarios and three different locations for the southern substation were investigated. Combining these together gives a total of nine different options for the southern substation. More details of each option will be given later in this report, but briefly, the options are shown in Figure 7.

Figure 7: Nine Different Options for a Southern Substation were Investigated[19]

Location		Staffing Scenario A Small substation	Staffing Scenario B Medium substation	Staffing Scenario C Full-service substation
Location 1	Santa Teresa and Cottle Roads, in South San Jose	1A	1B	1C
Location 2	Almaden and Cherry, in South San Jose	2A	2B	2C
Location 3	Aborn and San Felipe, in Southeast San Jose	3A	3B	3C

3.1.2 Overview of costs and benefits

This section will provide an overview of all ten options considered here: three substation locations times three staffing scenarios for each location, plus the "headquarters only, no substation" option investigated for comparison purposes.

The projected total annual cost, in constant 2002 dollars, for all options is shown in Figure 8 for the year 2007 and in Figure 9 for the year 2027. There is less than a 6% difference in cost between operating the most expensive substation option in 2007 and running a "headquarters only" operation; by 2027, this difference shrinks to less than 3%.

[19] A tenth option, the "Headquarters Only, No Substation" option, was also investigated. It is used for comparison purposes throughout the report and projects performance through the next 20 years if no substation is built.

Figure 8: Projected Annual Operating Costs for 2007[20,21]

2007 Annual Costs					
	Salary for all personnel, both locations	Mileage Cost of Commute	Community Services Division (CSD) Lease	Total Police Operating Costs, Both Locations	% difference from "HQ only, no substation" option
Head-quarters Only, No Substation	$ 175,342,997	$ 1,476,526	$665,200	$177,484,723	-0-
1A	$ 183,966,321	$ 1,135,967	$665,200	$185,767,488	4.7%
1B	$ 185,586,768	$ 1,135,967	$665,200	$187,387,935	5.6%
1C	$ 185,733,564	$ 1,135,967	$ -	$186,869,531	5.3%
2A	$ 183,966,321	$ 1,047,033	$665,200	$185,678,555	4.6%
2B	$ 185,586,768	$ 1,047,033	$665,200	$187,299,001	5.5%
2C	$ 185,733,564	$ 1,047,033	$ -	$186,780,597	5.2%
3A	$ 183,966,321	$ 1,140,730	$665,200	$185,772,251	4.7%
3B	$ 185,586,768	$ 1,140,730	$665,200	$187,392,698	5.6%
3C	$ 185,733,564	$ 1,140,730	$ -	$186,874,293	5.3%

[20] Costs are in 2002 dollars.
[21] The operating and capital costs will be accounted for in Part III.

Figure 9: Projected Annual Costs for 2027

2027 Annual Costs					
	Salary for all personnel, both locations	Mileage Cost of Commute	Community Services Division (CSD) Lease	Total Police Operating Costs, Both Locations	% difference from "HQ only, no substation" option
Headquarters Only, No Substation	$200,130,366	$1,708,305	$665,200	$202,503,871	-0-
1A	$204,308,047	$1,276,447	$665,200	$206,249,694	1.8%
1B	$206,289,031	$1,276,447	$665,200	$208,230,678	2.8%
1C	$207,500,135	$1,276,447	$ -	$208,776,582	3.1%
2A	$204,308,047	$1,176,508	$665,200	$206,149,755	1.8%
2B	$206,289,031	$1,176,508	$665,200	$208,130,739	2.8%
2C	$207,500,135	$1,176,508	$ -	$208,676,643	3.0%
3A	$204,308,047	$1,294,368	$665,200	$206,267,616	1.9%
3B	$206,289,031	$1,294,368	$665,200	$208,248,600	2.8%
3C	$207,500,135	$1,294,368	$ -	$208,794,503	3.1%

These cost summaries show that the salary costs of the personnel are the driving force behind the cost figures. Moreover, they show that Option C, the full-service substation, is projected to cost less than Option B, the medium-sized substation, largely due to the savings on the Community Services Division lease. They also show that Location 2, at Almaden and Cherry in South San Jose, provides the shortest commute mileage to the beats.

The quantitative benefits of the substation are summarized below in Figure 10 and 11.[22] These quantitative benefits of a substation reflect the force of congestion in the San Jose Metropolitan area.

As congestion is predicted to increase, the travel time to emergency calls will go up, through no fault of the Police Department's. Currently, officers commute to their beats and, for the most part, remain in their beats for the course of their shift. When an emergency call is dispatched to the officer, the officer travels from his/her initial position within the beat to the location of the emergency. In the Southern Division, the long distances and heavy commuter traffic can make this a relatively long trip, even when the officer is driving in haste with lights and sirens. This intra-beat travel time has nothing to do with police dispatch time, but does significantly affect total response time.

[22] The interested reader can refer to the section on "Details of Priority 1 and Priority 2 Response Time Performance" for more information.

Currently, in the Southern Division, Priority 1 calls have an average dispatch time of 2:35 and an average travel time of 4:51, giving a total average response time of 7:26, of which 58% meet the 6-minute goal. In 2027, it is anticipated that congestion will increase the travel time to 5:32, which would require an extremely demanding dispatch time of 28 seconds in order to meet the 6-minute goal. If dispatch remains the same, at 2:35, but the travel time increases to 5:32, the average response time is already 8:07, or significantly over the 6-minute goal, again through no fault of the police department's. These numbers show that, just like everybody else in San Jose, the Police Department can expect to fight a losing battle against traffic congestion.

Figure 10: Projected Annual Benefits for All Options, 2007

2007 Annual Benefits			
	Percent of Priority 1 Calls from Southern Division Served Within 6 Minutes	Percent of Priority 2 Calls from Southern Division Served Within 8 Minutes	Number of Citizens Living in South Required to Making Trip North Annually
Headquarters Only, No Substation	42%	23%	11,421
1A	53%	31%	None
1B	53%	31%	None
1C	53%	31%	None
2A	49%	27%	None
2B	49%	27%	None
2C	49%	27%	None
3A	46%	25%	None
3B	46%	25%	None
3C	46%	25%	None

Figure 11: Projected Annual Benefits for All Options, 2027

2027 Annual Benefits			
	Percent of Priority 1 Calls from Southern Division Served Within 6 Minutes	Percent of Priority 2 Calls from Southern Division Served Within 8 Minutes	Number of Citizens Living in South Required to Making Trip North Annually
Headquarters Only, No Substation	4%	0%	14,295
1A	10%	0%	None
1B	10%	0%	None
1C	10%	0%	None
2A	7%	0%	None
2B	7%	0%	None
2C	7%	0%	None
3A	7%	0%	None
3B	7%	0%	None
3C	7%	0%	None

This data shows that Location 1 provides the best response time performance, even better than Location 2, which was shown above to have provided the least expensive commute.

Based upon this summary data, it is found that building a southern substation will be beneficial. The difference in annual operating cost is projected to begin at 6% over the current police costs for these functions, and to diminish to 3% for these functions.

In exchange for this modest additional cost outlay, the police will be able to slow the slide in Priority 1 and Priority 2 response times in the Southern division – this is a losing battle against congestion, travel times, and long distances, and a southern substation will help the police make the best use of their current and future resources.

Additionally, there will be numerous other benefits, such as the existence of a redundant backup facility in case of emergency, improved community service and presence in the Southern area, and better service facilities.

The analysis results in the conclusion that the most advantageous strategy is Option 1C, building a substation at Location 1, Santa Teresa and Cottle Roads, in South San Jose, and staffing it with 562 people in a "full-service substation." This staffing arrangement will provide the highest community service and the most value for the dollars spent in the construction and operation of the substation.

3.1.3 Details of Commute Costs

This section provides more detail on the calculation of commute costs.

To briefly recap some information from Phase I, police officers drive from their homes to the police station in street clothing, using their own vehicles, and on their own time. Once at the police station, the officers change into uniform, and drive to their beats in San Jose Police Department patrol cars. During their on duty time, officers may need to make a return to the police station with evidence, an arrestee, to write a report, or for repairs to equipment. A return to the police station during the middle of the shift is called a "midshift return." At the end of the shift, the officers drive from their assigned beats back to the police station, where they change into civilian clothing and then return home in their own cars.

The commute costs in this report are only the costs incurred by the San Jose Police Department to get the officers from the police station to their beats and back, plus any necessary midshift returns. The commute costs in this report do not include any time or expense traveling between the police station and the officers' homes.[23]

The commute costs in this report are further broken down into the following two categories:

- Mileage costs: gasoline, oil, depreciation, and other costs directly related to driving a marked police vehicle.
- Salary costs: the dollar cost of the time that officers spend commuting to and from their beats. This is time that the San Jose Police Department is paying for, but which is not spent performing police duties.

3.1.3.1 Methodology

The costs of the commute were calculated in the following manner.

1. The "time and trip" data was gathered from San Jose Police Department in February 2002. This initial data measured the actual mileage driven by officers on their commute from the Police Administration Building to various beats. It also measured the number of minutes required for each commute, and noted whether the commute was during peak or off-peak traffic hours.

- To obtain the 2002 mileage cost, all the miles driven on a daily basis by the San Jose Police Department were summed and multiplied by the per-mile vehicle cost ($0.82 per mile).[24]
- To obtain the 2002 salary cost of commute, all the minutes driven on a daily basis by the San Jose Police Department were summed and multiplied by the per-minute cost of a patrol officer ($0.86 per minute).[25]

[23] Due to the high cost of housing in San Jose, it is not uncommon for new police officers to live in Tracy or Stockton, with the corresponding commute of an hour or more to get to the San Jose police station. This commute, as with all San Jose Police Department employee commutes, is undertaken on the officers' own time, and at the officers' own expense.

[24] See the Appendix of the Phase I report for more details on how the $0.82 per mile cost was calculated.

- From this data the "peak traffic factor" experienced by the police was calculated. This data tells us that a commute that takes 10 minutes during off-peak hours will take 16.7 minutes during peak traffic hours.
- To obtain the 2002 number of midshift returns, a study of patrol logs was conducted and the weekly average was calculated to be one midshift return every 4.3 shifts.[26]

2. "Time and trip" data was then measured between the three proposed substation locations and the proposed substation service area.[27] These measurements were taken using a civilian driver during off-peak hours, and were multiplied by the "peak traffic factor" to obtain an estimate of the peak hour driving time.[28]

3. Several factors were used to project the cost of the daily commute forward to 2027. In particular,

- Congestion: expected to increase; the effect of congestion is to increase the number of minutes it takes the same officer to drive the same distance.
- Population: expected to increase; the effect of population increase is to increase the number of police officers who will be making the commute.
- Per-mile cost: expected to remain constant with inflation.
- Midshift returns: expected to remain constant at one midshift return for every 4.3 shifts.[29]

The resulting mileage and salary costs were projected over 20 years for the proposed headquarters service area and the proposed substation service area, as shown in Figures 12 through 17 below.

3.1.3.2 Results

Finding : A substation at Santa Teresa and Cottle Roads (Location 1) in South San Jose will reduce the total annual cost of commute in 2007 from approximately $4.3 million per year to approximately $3.6 million per year, a net savings of almost $800,000 per year. By 2027, the expected annual net savings reaches $1.06 million per year. The other two substation locations still produce cost savings, but they are not as substantial. This can be seen in Figures 12 and 13.

[25] The cost of a patrol officer is $0.86 per minute, or $51.60 per hour. This reflects a weighted average of the cost of the patrol officer ($50.28 per hour) and the cost of a patrol sergeant ($58.23 per hour). These reflect fully "loaded" salaries, including vacation and benefits. Currently, the Police Department has 163 sergeants and 826 officers; these numbers were used to come up with a weighted average cost of patrol personnel.

[26] This figure was calculated by Sergeant Guy Bernardo of the San Jose Police Department. Source: SJPD 026 GB, "Midshift Return Analysis."

[27] The proposed substation service area is the entire existing Southern Division, plus districts L and P.

[28] Because the San Jose police drive their commute obeying all traffic speed limits and signals, it is believed that the civilian driver is a good approximation of the expected police commute. A "Code Red" response, in which an officer drives using lights and sirens, is only in response to an emergency call, and not appropriate for daily commuting. Source: telephone conversation with Susan Cox of the San Jose Police Department.

[29] Naturally, with more officers on the police force, the total number of midshift returns will increase; however, a radical change in crime patterns or police standard operating procedures that would mean each individual officer would be more or less likely to require a return to the police station during an individual shift is not anticipated.

Figure 12: A Substation at Santa Teresa and Cottle Roads will save over $1 million in annual commute costs by 2027

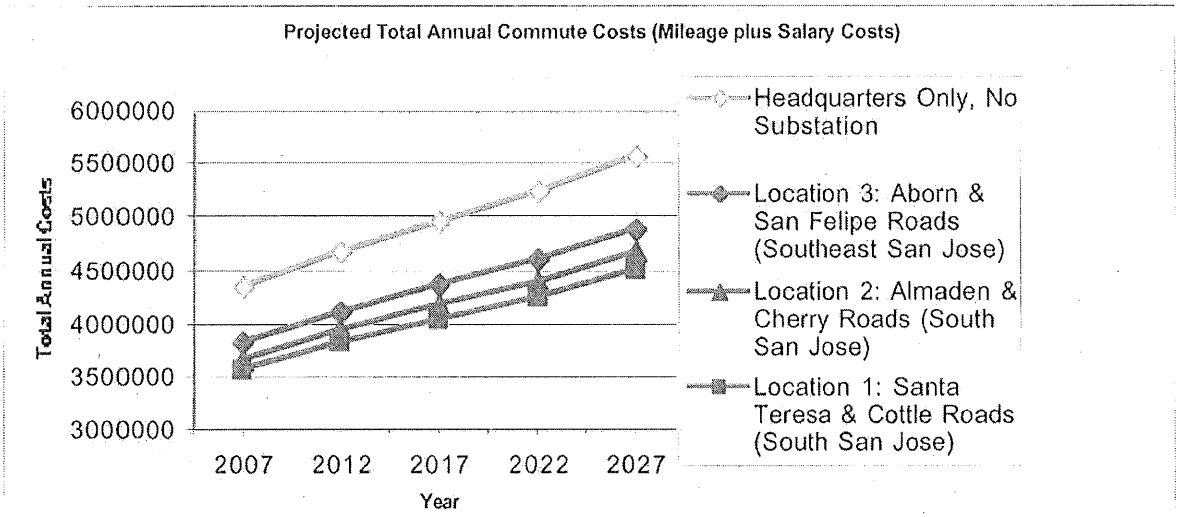


Figure 13: Projected Commute (Mileage + Salary) Costs and Anticipated Savings Over "No Substation" Option

	2007 Savings		2027 Savings	
Option	Projected Costs in 2007 (thousands of dollars)	Savings over "no substation" option in 2007 (thousands of dollars)	Projected Costs in 2027 (thousands of dollars)	Savings over "no substation" option in 2027 (thousands of dollars)
Headquarters Only, No Substation	$4,340	-- 0 --	$5,570	-- 0 --
HQ+Substation at Santa Teresa and Cottle Roads	$3,570	$770	$4,510	$1,060
HQ+Substation at Almaden and Cherry	$3,670	$670	$4,670	$900
HQ+Substation at Aborn and San Felipe	$3,820	$520	$4,890	$680

Finding: The vehicle mileage makes up approximately one-third of the total commute cost. The officers' salary cost makes up approximately two-thirds of the total commute cost. See Figures 14 and 15 for details.

Figure 14: Total Commute Costs by Vehicle Mileage and Salary Cost

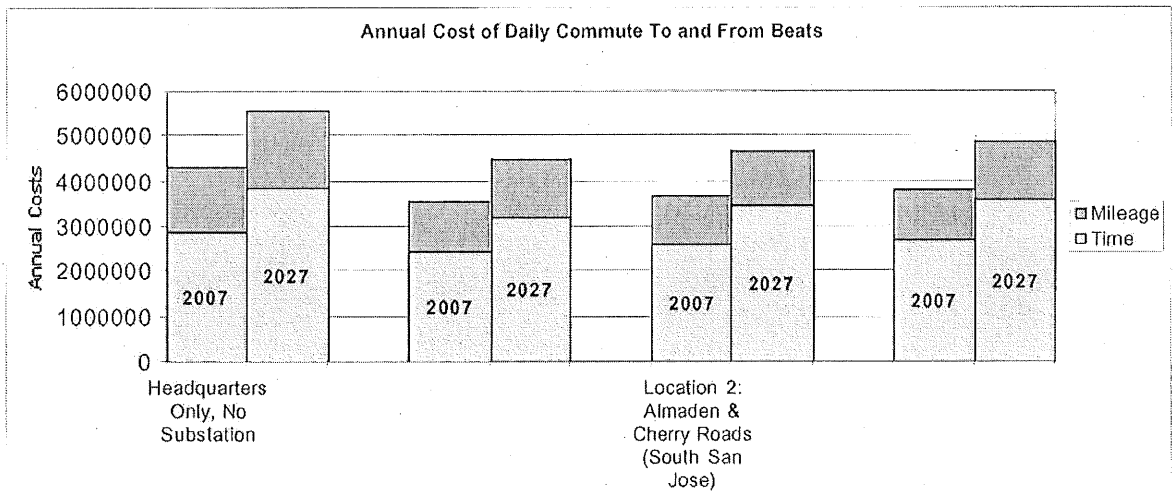
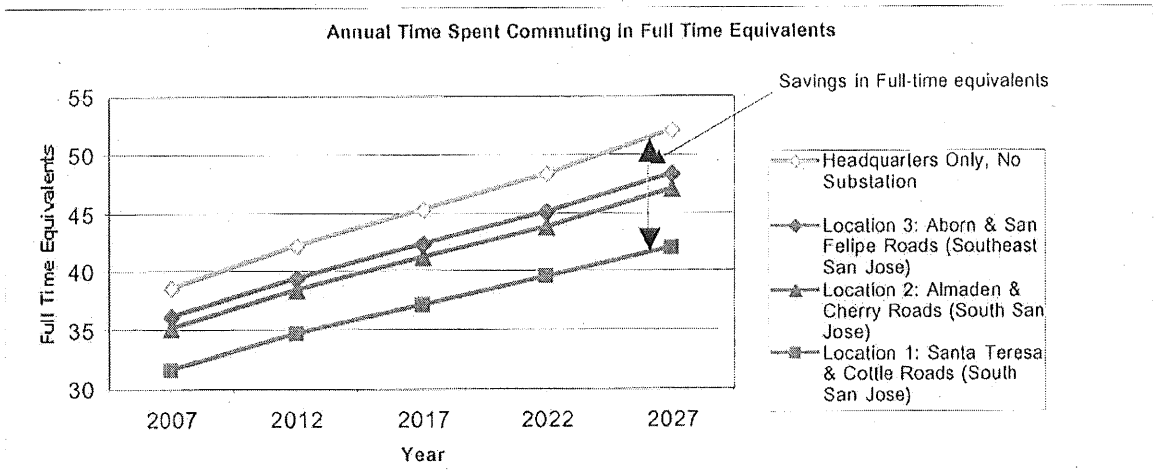


Figure 15: Detail of Total Commute Costs by Vehicle Mileage and Salary Cost

	Mileage		Salary	
Option	Projected Mileage Costs in 2007 (thousands of dollars)	Projected Mileage Costs in 2027 (thousands of dollars)	Projected Salary Costs in 2007 (thousands of dollars)	Projected Salary Costs in 2027 (thousands of dollars)
Headquarters Only, No Substation	$1,476	$1,708	$2,866	$3,863
HQ+Substation at Santa Teresa and Cottle Roads	$1,135	$1,276	$2,437	$3,229
HQ+Substation at Almaden and Cherry	$1,047	$1,177	$2,620	$3,492
HQ+Substation at Aborn and San Felipe	$1,140	$1,294	$2,683	$3,597

Finding: In 2007, without a substation, it is projected the San Jose Police Department will spend over 38 full-time equivalents of police officers on the commute.[30] The best location for a substation, Santa Teresa and Cottle Roads (Location 1), will save 7 full-time officer equivalents. In other words, with the southern substation at this location, the Police Department could provide the same service with 7 fewer officers. In 2027, the full-time officer equivalent savings approaches 10 officers. The savings are similar, but not as dramatic, for the other two locations investigated. This can be seen in Figure 16 and 17.

Figure 16: Full-time Equivalent Officer Hours Spent Commuting



[30] This is calculated using a 1440 hour service year. Out of the 2080 hours available in the work year, the average police officer receives 80 hours of vacation and another 80 hours of "comp" time, in lieu of pay for overtime work. The Police Department uses a factor of 0.75 to gauge availability, and to account for time an officer is unavailable for patrol due to medical leave, physical therapy, report writing, meetings, court appearances, and a variety of other activities. This leaves 1440 hours of active patrol time as the full-time equivalent of one officer.

Figure 17: Details of Full-time Equivalent Officer Hour Savings

	2007 Savings		2027 Savings	
Option	Projected FTE's spent commuting in 2007	Savings over "no substation" option in 2007	Projected FTE's spent commuting in 2027	Savings over "no substation" option in 2027
Headquarters Only, No Substation	38.6		52.0	
Substation at Santa Teresa and Cottle Roads	31.6	7.0	42.1	9.9
Substation at Almaden and Cherry	35.3	3.3	47.0	5.0
Substation at Aborn and San Felipe	36.1	2.5	48.4	3.6

3.1.4 Details of Salary Costs

As the population of San Jose grows, it is anticipated that the Police Department will also need to add staff to keep pace with the population growth. This portion of the staffing needs is completely independent of whether a substation is built or not.

As of July 2001, the San Jose Police Department had 1887 sworn and civilian employees of all ranks on staff. In 2002, the Police Department developed a Five-Year Staffing Plan to accommodate expected population growth through 2007. This Five-Year Plan calls for an additional 184 sworn and civilian personnel to be added to various departments and beats. Hence, in 2007, the Police Department expects to have 2071 sworn and civilian employees of all ranks on staff.

Once the substation is open, many of these employees will be redeployed to the substation. In addition, some new hires at the substation are anticipated. The new hires are mainly for lobby staffing, facilities management, and information technology and clerical support, and are required by the new facility.

This section of the report provides more details on the expected salary costs of the San Jose Police Department over the next 20 years with and without substation.

Three different staffing scenarios have been considered for the police substation. More details can be found in the Phase I report, but here in Figure 18 there is a brief recap of the three scenarios under consideration:

Figure 18: Overview of Substation Staffing Plans

Scenario	Description
Headquarters Only, No Substation	For comparison only Assumes no substation is built and all service is provided from downtown headquarters[31] 2071 sworn/civilian at headquarters[32]
Scenario A	Small substation of 454 people Mainly police personnel and vehicle maintenance 85 additional hires[33] 2156 people total at substation and headquarters
Scenario B	Medium substation of 484 people Scenario A plus City of San Jose employees (vehicle maintenance) and volunteers 26 further hires in addition to Scenario A[34] 2182 people total at substation and headquarters
Scenario C	Full service substation of 562 people Scenario B plus full redeployment of the Community Services Division of the SJPD 3 further hires in addition to Scenario B[35] 2185 people total at substation and headquarters
It is important to note that these scenarios are current projections which may be adjusted according to City of San Jose population, crime, and traffic patterns in 2007.	

[31] "Headquarters" refers to the downtown San Jose police operations. Currently, most of these take place out of the Police Administration Building (PAB), located at 201 West Mission Street. There is also the Police And Communications Building (PAC), and other rental space downtown as well.
[32] Per the Five-Year Plan.
[33] These 85 new hires are comprised of the following: 24 new sworn, 29 new civilian, and 15 new hires for vehicle maintenance. The sworn and civilian are on the Police Department payroll; the vehicle maintenance staff is not.
[34] These 26 further hires are comprised of the following: 1 Deputy Chief and 2 civilians on the San Jose Police Department payroll, and 23 civilians from the Departments of Parks and Recreations, and the Department of Planning, Building, and Code Enforcement.
[35] These 3 further hires are comprised of the following: 1 officer and 2 civilians, all on the San Jose Police Department payroll.

3.1.4.1 Methodology

The costs of the staffing scenarios were calculated in the following manner.

1. The 2001 actual staffing and anticipated additions under the Five-Year Plan were gathered from the San Jose Police Department.[36]
   - The Police Department provided the annual cost of salary for each job title. These figures were "loaded" by a factor of approximately 28%, so that they included vacation and benefits.[37]
   - Additional information regarding City of San Jose job titles and pay plans was taken from the city's web site.[38]

2. Several factors were used to project the cost of the staffing scenarios forward to 2027. In particular,
   - Population: expected to increase; in order to maintain the overall citywide ratio of 1.5 sworn per 1000 population, there is a projected increase in the number of police officers.
   - Population growth areas: it is expected that 72% of the population increase in San Jose will be in the substation service area.[39] Growth is projected in the number of officers staffed out of headquarters in proportion with the smaller population increase anticipated up north; the number of officers staffed out of headquarters in the southern area to grow in proportion with the larger population increase anticipated in the south is projected.
   - Salary: expected to remain constant with inflation and cost of living adjustments.

3. Based upon the population increase, the number of police required and the cost of the salaries over the next 20 years were projected. All costs were calculated in 2002 dollars.[40] This information was computed for each of the three proposed staffing scenarios, as well as for the "headquarters only, no substation" option for comparison purposes.

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[36] The numbers are from Marianne Bourgeois, Chief Financial Officer of the San Jose Police Department, and the Neighborhood Policing Operations Plan (NPOP) published in 2002 by Chief William Lansdowne.

[37] Source: SJPD 003, SJPD 006, SJPD 007, SJPD 008, SJPD 025, and telephone conversations with Marianne Bouregois.

[38] This information was gathered from the site at the direction of Susan Cox. As of July 2002, the information is available at: http://www.ci.san-jose.ca.us/hum_res/payplan/payplan.htm

[39] See the Population portion of the appendix for exact details of the 72% figure. In brief, it reflects the amount of available space zoned for residential building as laid out in the San Jose General Plan.

[40] An inflation factor and projected the salaries forward, adjusting them each year for inflation, and then taking a net present value calculation to determine the best option could have been added. However, net present value calculations are most useful when comparing two different actions at two different times. For example, if one were comparing a substation which opens in 2007 with a substation which opens in 2017, the net present value calculation would be the only way to give a fair comparison of the two costs in current dollars. However, because the current problem is one of location and staffing, not of the year in which the substation should be opened, the net present value calculation will add needless complexity without giving additional insight.

3.1.4.2 Results

The smallest of the substations, Scenario A, would cost approximately $9 million per year in additional payroll costs in the year 2007, above and beyond the approximately $175 million payroll for the "headquarters only, no substation" option. This reflects an increase of approximately 5%. The largest of the substations, Scenario C, would cost approximately $10 million per year in additional payroll costs, or an increase of 6%. Details of this can be seen in Figure 19 and Figure 20.

Figure 19: Projected Annual Salary Costs with and without a Substation

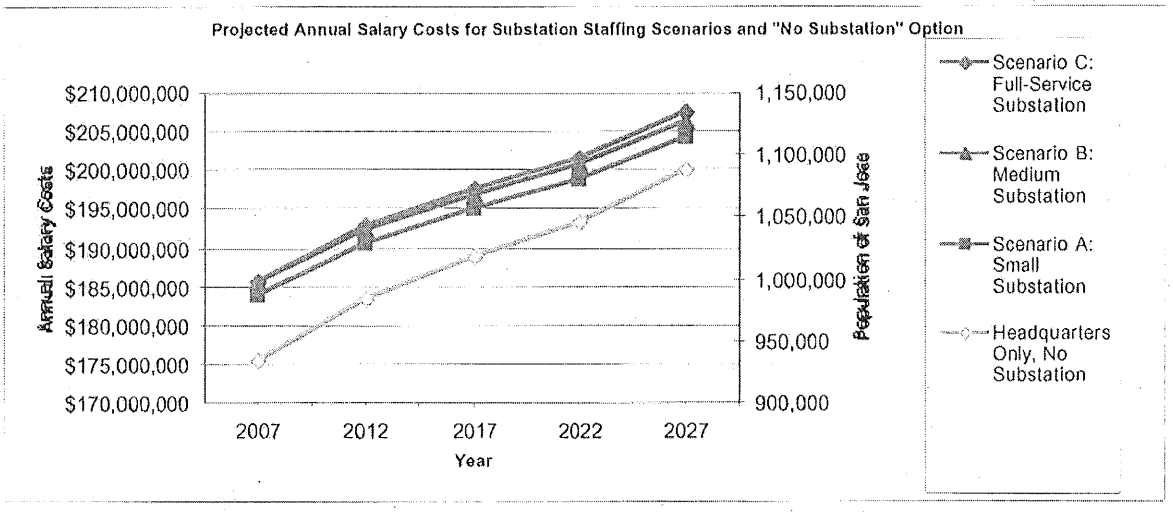


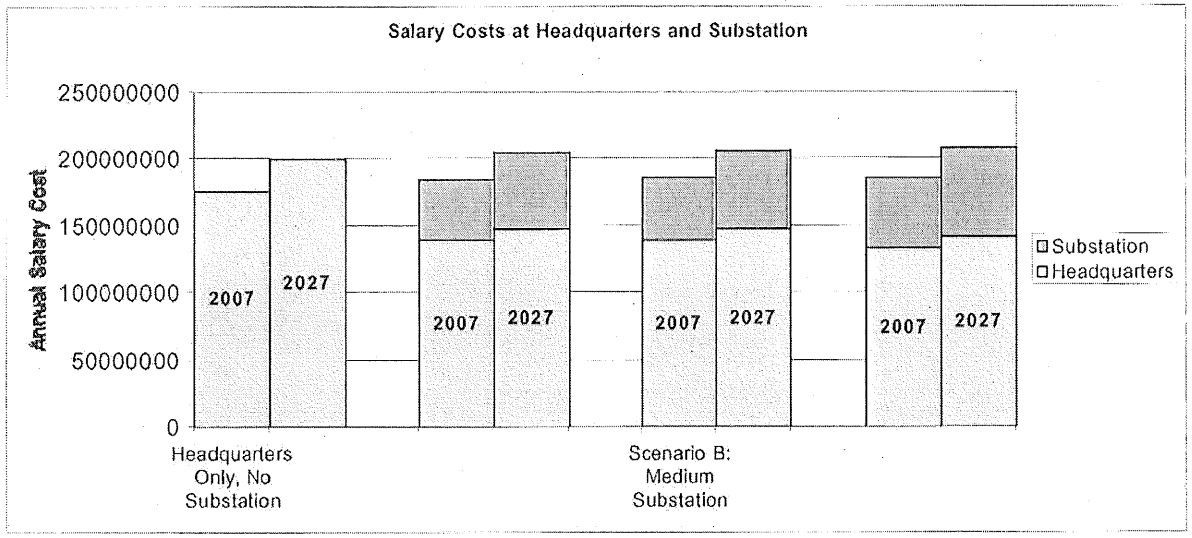
Figure 20: Details of Projected Salary Costs With and Without a Substation

Option	Projected Annual Salary Costs in 2007 (thousands of dollars)	Costs over "no substation" option in 2007 (thousands of dollars)	Projected Annual Salary Costs in 2027 (thousands of dollars)	Costs over "no substation" option in 2027 (thousands of dollars)
Headquarters Only, No Substation	$175,300	-- 0 --	$200,100	-- 0 --
HQ+Scenario A: Small Substation	$184,000	$8,700 (4.9%)	$204,300	$4,200 (2.1%)
HQ+Scenario B: Medium Substation	$185,600	$10,300 (5.9%)	$206,300	$6,200 (3.1%)
HQ+Scenario C: Full-service Substation	$185,700	$10,400 (5.9%)	$207,500	$7,400 (3.7%)

The majority of the increase in police staffing is patrol officer jobs, driven by population increases. This reduces the relative cost of the substation's "overhead" jobs, such as from lobby staff and facilities management, and accounts for the decrease in relative cost from 5.9% to 3.7% over the 20 years. In each scenario, the staff growth tracks the increase in population in that area. Because Scenario C has the largest initial staff at the substation, and the substation service area has the largest population growth factor, Scenario C is proportionately larger than the other two scenarios by the year 2027.

Finding: The salary costs at the substation are projected to be approximately 30 percent of the total salary costs. This can be seen in Figure 21.

Figure 21: Comparison of Salary Costs at Headquarters and Substation



3.1.5 Details of Priority 1 and Priority 2 Response Time Performance

3.1.5.1 Overview of response time performance

One of the primary benefits of the southern substation is the anticipated improvements in Priority 1 and Priority 2 response time calls. Currently, in 2002, the Southern Division has the slowest average response time and lowest percentage of calls meeting performance standards.

This section begins with a brief review the emergency call servicing process.[41] The Call for Service process analyzed here begins when an incident occurs. The citizen calls 911. The call is answered and processed, and, if appropriate, is passed on to a police dispatcher. If possible, the police dispatcher will immediately dispatch personnel; otherwise, there may be a delay at the police dispatcher if police are not available to respond right away. Priority 1 calls always take precedence over Priority 2 calls, no matter how long the Priority 2 caller has been waiting. After the call has been dispatched to the officer(s), there is a travel time while the officer(s) travel from their original locations to the scene of the call. The process ends when the officer arrives at the scene.

Data is presented for two of the above measures: dispatch time, and travel time. Dispatch time is measured from the time the police dispatcher receives the call until the call is passed on to an officer; travel time is measured from the time the call is passed on to an officer until the officer arrives at the scene.[42]

[41] The interested reader can see the Phase I report for more detail upon current call for service data and analysis.
[42] Source: Neighborhood Policing Operations Plan, Chapter 2, p. 14, Document SJPD 001 in the Appendix.

The purpose of this section is to begin with actual 2002 call for service data as provided by the San Jose Police Department, and then to project that forward using background assumptions and rules about congestion, population growth, and other factors. The beginning point of this data is given in Figure 22. It is important to note that for the Southern division, the travel time in particular is substantially longer than for the rest of the city.[43]

[43] This makes sense, especially considering that the Southern Division includes several large, sparsely populated residential areas which can take several minutes to traverse even in off-peak traffic hours and much longer during heavy congestion. In contrast, many of the downtown areas are geographically small and heavily populated, which makes travel time shorter in part because the distance is shorter.

Figure 22: Comparison of 2002 Average Response Time for Priority 1 And Priority 2 Calls for Service in the Southern Division and the Rest of the City

	Average Dispatch Time	Average Travel Time	Average Response Time (Dispatch + Travel)	Percent Meeting 6 Minute Service Standard
Priority 1 Calls in Southern Division	2:35	4:51	7:26	58%
Priority 1 Calls in Rest of City[44]	1:00	3:32	4:32	79%
Priority 2 Calls in Southern Division	5:11	6:55	12:06	48%
Priority 2 Calls in Rest of City	4:07	5:38	9:45	58%
Priority 1 Calls Citywide (Southern and Rest of City)	1:27	3:55	5:21	73%
Priority 2 Calls Citywide (Southern and Rest of City)	4:23	5:57	10:20	56%

3.1.5.2 Methodology

The model constructed here projects and predicts expected dispatch time, expected travel time, and expected response time for Priority 1 and Priority 2 calls for service. The projections are

[44] The city is divided into five divisions: Southern, Central, Western, Foothill, and Airport. The Priority 1 Calls in the rest of the city are from the Central, Western, Foothill, and Airport divisions.

anchored in actual 2002 police data and predicted behavior between 2007 and 2027. A model is only as good as its data and its assumptions, and projecting out 20 years is always difficult at best. The reader should look at these projections as possibilities rather than certainties.

In layman's terms, the expected dispatch and travel times were predicted as follows:

1. Began with the current dispatch and travel data for two regions of the city: the Southern Division, and the rest of the city.[45]

2. Created a priority queue model for the behavior of the Southern Division. A queue is a mathematical model which uses three parameters: the arrival rate of calls, the length of time it takes to service one call, and the number of servers which are available. The queue model gives information about the expected length of a wait in line - in this case, the expected length a caller will have to wait until the dispatch is complete.[46,47]

3. Over time, the parameters were adjusted as follows:
   - Arrival rate of calls: increased with population[48]
   - Length of time it takes to service one call: remained steady
   - Number of officers which are available: increased with new staffing hires[49]; further increased by savings in officer commute
   - Travel time: increased with traffic congestion

4. The resulting information was the expected dispatch length, the expected travel length, and the expected total response time, projected over 20 years, for:
   - The Southern Division, if no substation is built
   - The Southern Division, if the substation is built at Santa Teresa and Cottle Roads (Location 1, in South San Jose)
   - The Southern Division, if the substation is built at Almaden and Cherry (Location 2, in South San Jose)
   - The Southern Division, if the substation is built at Aborn and San Felipe (Location 3, in Southeastern San Jose)
   - For the purposes of comparison, data from headquarters service area is also included.[50]

[45] The substation service area will slightly different from these two divisions: the substation service area will be the existing Southern Division, plus Beat L from the Western division and Beat P from the Foothill Division. For the purposes of this projection, however, just the Southern Division and the rest of the city were used.
[46] In technical terminology, a M/M/s queue was used, where an assumption is made that calls for service arrive according to a Poisson process, and the length of time it takes to service any one call is exponentially distributed.
[47] This queuing model is set up to approximate the same discipline the police currently observe: all Priority 1 calls will be served before any Priority 2 calls are served. The parameters of the priority queue were adjusted so that the queue matched existing data.
[48] The increase in population expected in the substation service area was used, not the overall increase in population expected in San Jose.
[49] The San Jose Police Department currently has the ratio of 1.5 officers per 1000 population. As the city population grows, the Police Department will need to hire officers to keep pace with the population growth, regardless of whether a substation is built or not.
[50] As explained earlier, the headquarters service area is roughly the northern two-thirds of San Jose, and encompasses all areas which will not be served by the substation.

3.1.5.3 Findings regarding Priority 1 and Priority 2 response time for the Southern Divison

The average Priority 1 response time for the Southern Division is projected to increase over the next 20 years, and is projected to remain significantly slower than the response time in the headquarters service area over the same time frame. All of the substation options improve time over the "Headquarters Only, No Substation" option for the same time period. The best option for minimizing average Priority 1 response times is to build one substation at Location 1, Santa Teresa and Cottle Roads. The slowest expected Priority 1 times in all cases were seen when no substation was built. This can be seen in Figures 23, 24 and 25.

Figure 23: Projection of Average Priority 1 Response Time for Southern division

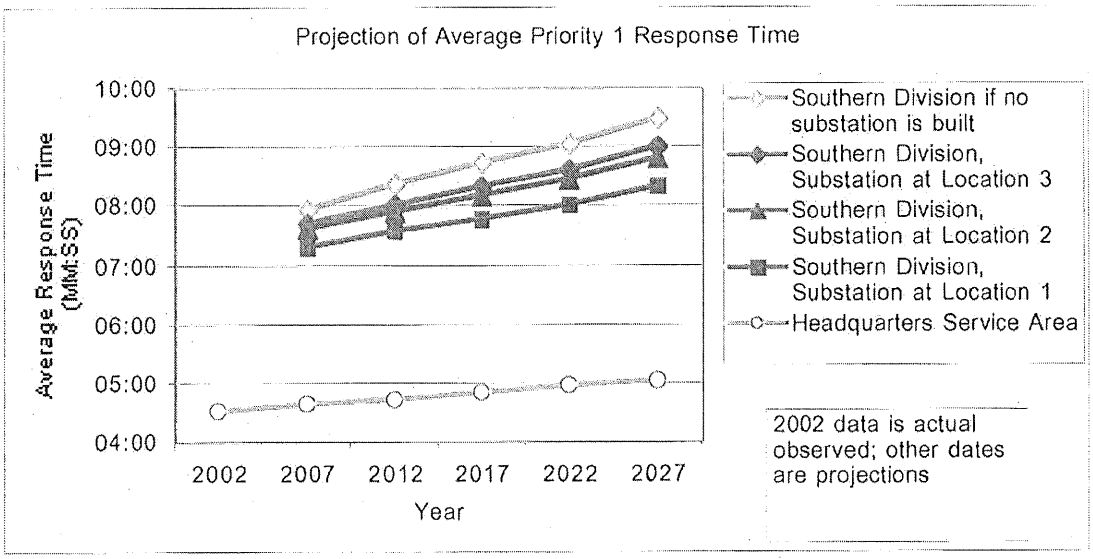


Figure 24: Closeup of Projection of Average Priority 1 Response Time for Southern division

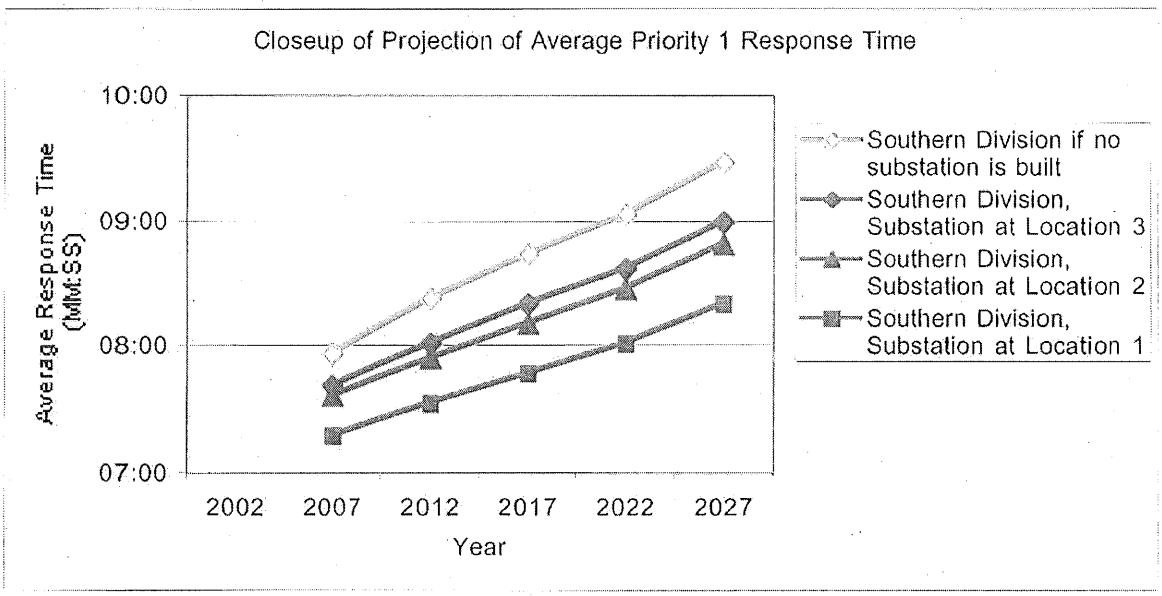


Figure 25: Percentage of Priority 1 calls expected to meet 6-minute performance standard for Southern Division

Year:	2002	2007	2012	2017	2022	2027
HQ Service Area[51]	79%	78%	78%	78%	78%	78%
Location 1		53%	45%	37%	24%	10%
Location 2		49%	39%	31%	19%	7%
Location 3		46%	38%	29%	18%	7%
No Substation[52]	52%	42%	35%	23%	12%	4%

Finding : The average Priority 2 response time for the Southern Division is projected to increase over the next 20 years, and is projected to remain significantly slower than the current headquarters service area. The best option for minimizing average Priority 2 response times is to build one substation at Location 1, Santa Teresa and Cottle Roads. The slowest expected Priority 2 times in all cases were seen when no substation was built, where expected response times exceed 15 minutes by the year 2017. This can be seen in Figure 26 and Figure 27.

[51] The performance of the Headquarters Service Area should not be affected by the substation one way or another; these figures assume the Headquarters Service Area will be affected by traffic congestion.
[52] The "No Substation" option forecasts performance of the Southern Division if no substation is built.

Figure 26: Projection of Average Priority 2 Response Time for Southern division

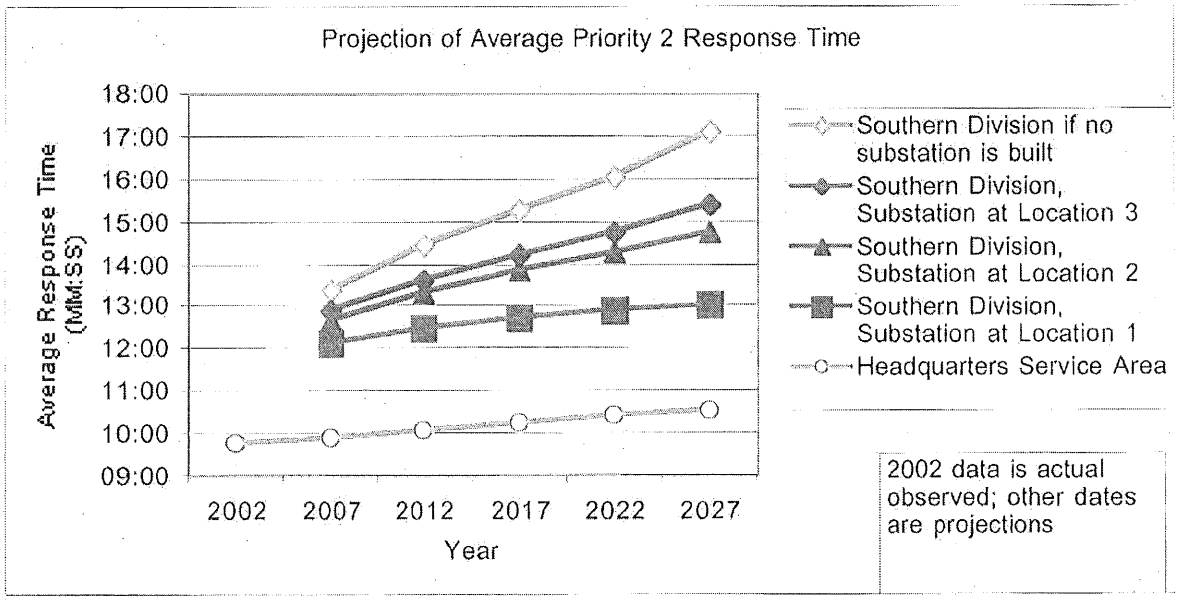


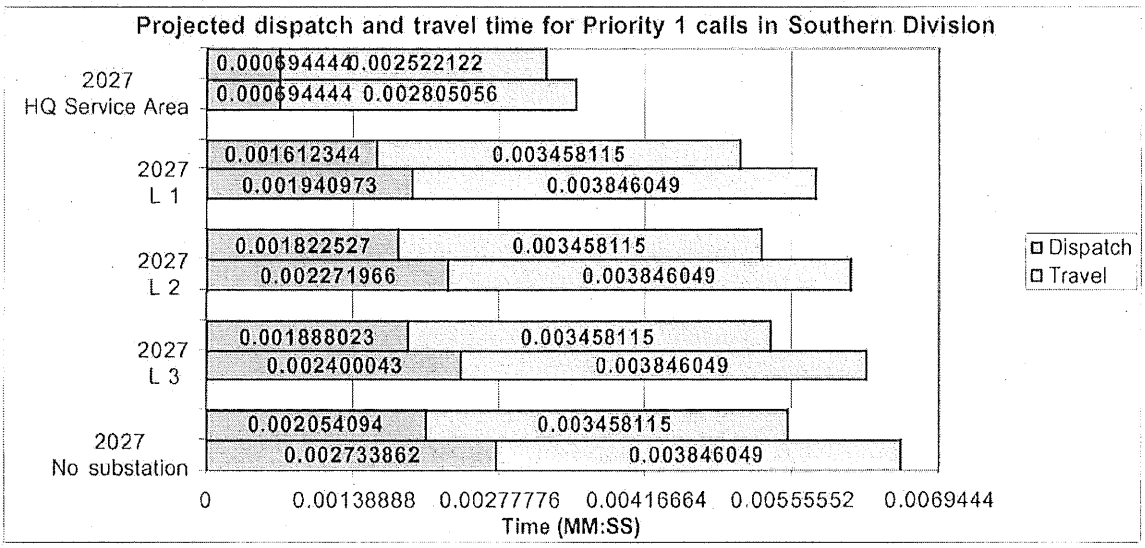
Figure 27: Percentage of Priority 2 calls expected to meet 8-minute performance standard

Year:	2002 (actual data)	2007	2012	2017	2022	2027
HQ Service Area	58%	57%	56%	55%	54%	53%
Location 1		31%	22%	11%	2%	0%
Location 2		27%	18%	8%	1%	0%
Location 3		25%	16%	7%	1%	0%
No Substation[53]	32%	23%	13%	5%	1%	0%

Finding: For Priority 1 calls, the Southern Division expected response times for the next 20 years are so slow mainly due to traffic congestion. The additional officer hours gained by using a substation can be reinvested and used to hold average dispatch time to a reasonably stable level over the time horizon. However, the expected travel time in the Southern Division for a Priority 1 call in 2027 is 5:32, which requires the dispatch time to be 28 seconds or faster in order to meet the 6 minute performance standard. This can be seen in Figure 28.

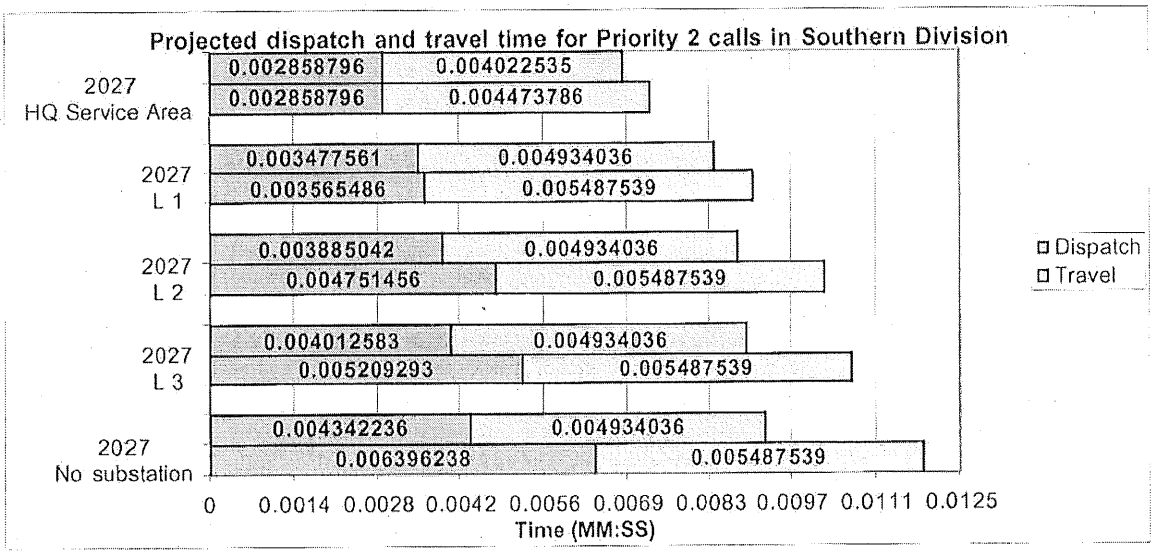
[53] The "No Substation" option forecasts performance of the Southern Division if no substation is built.

Figure 28: Projected Dispatch and Travel Times for Priority 1 Calls in the Southern Division



Finding: For Priority 2 calls, the Southern Division expected response times for the next 20 years are so slow due to a combination of dispatch time and traffic congestion. The additional officer hours gained by using a substation, especially for substation Location 1 at Santa Teresa and Cottle Roads, can be reinvested and used to hold average dispatch time to a reasonably stable level over the time horizon. However, the expected travel time in the Southern Division for a Priority 2 call in 2027 is 7:54, which requires the dispatch time to be 8 seconds or faster in order to meet the 8 minute performance standard. This can be seen in Figure 29.

Figure 29: Projected Dispatch and Travel Times for Priority 2 Calls in the Southern Division



4 Phase II Appendix

4.1 Background Data from the SJPD

Following are the assumptions and background data for the model of a South San Jose substation.

4.1.1 Vehicle Costs

The vehicle costs are $.82 a mile for each mile driven by a patrol car, marked or unmarked. This vehicle cost includes depreciation, maintenance, and operating costs. This figure applies to all mileage driven commuting to and from beats and on midshift returns.

4.1.2 Distance, Time and Congestion Measurements

The distance measurements from current headquarters at the Police Administration Building, 201 West Mission, San Jose, to each of the Police Department's 16 districts, were taken by San Jose Police Department patrol cars during their regular daily commute.

The time measurements from current headquarters to each of the Police Department's 16 districts were taken by San Jose Police Department patrol cars during the regular daily commute. During this commute, the officers drove in accordance with all speed limits and other posted signs. (A "Code Red," in which an officer uses lights and sirens, is only in response to an emergency call.)

The distance and time measurements, from each of the proposed substation locations to each of the Police Department's southern districts,[54] were taken by civilian vehicles during off-peak hours. These off-peak figures were then adjusted upward by the measured congestion figure, observed by police vehicles, to obtain an estimate of time for peak hours.

For 2002 baseline congestion figures, use is made of the time and trip data as actually measured by the San Jose Police Department patrol officers as they commuted to and from their beats. This data tells us that on average, a trip which will take 10 minutes during off-peak traffic hours will take approximately 16.7 minutes during peak hours.

For 2025 traffic congestion figures, use is made of the estimates given by Chris Augenstein, Traffic Engineer, of the Valley Transportation Authority, Santa Clara County. This data tells us that on average, a trip which will take 10 minutes during peak morning traffic hours in 2002 is estimated to take approximately 13.2 minutes during peak morning traffic hours in 2025.[CMB20] An off-peak trip, by definition in free-flowing traffic, will take the same amount of time in 2025 as it does currently.

[54] Since only the southern service areas would be assigned to a substation, distance was only measured from the southern service areas.

4.1.3 Population Measures and Projections

This estimate is not intended to be a detailed demographic one, which would take into account differing age groups, fertility rates, immigration patterns, and employment. Rather, this estimate is a broad prediction of the City's population growth and location as it relates to a new police substation.

[CMB21]The population data for San Jose for the years 1970, 1980, 1990 were provided by the San Jose Planning Department, as quoted by the San Jose Police Department, and the population data for San Jose for the year 2000 was provided by the United States Census. Population projections until the year 2025 were given by the Association of Bay Area Governments (ABAG). This gave a population of approximately 895,000 people in the year 2000, growing to approximately 1,150,000 in the year 2030.

Approximately 2/3 of San Jose's current Calls for Service and population currently fall in the northern PAB service area; the remaining 1/3 of San Jose's current Calls for Service and population currently fall in the southern Substation service area, per information provided by the Police Department.[55] This translates to a dividing line which begins approximately on State Route 85 in southwestern San Jose, travels north on Highway 87, and then east on Tully Road out to the foothills.

San Jose is projected to have a population of 1,010,700 people in 2010. The majority (73%) of the new housing units and population growth will occur in the southern districts, in the service area of a new Substation. Both these assumptions come directly from information from the San Jose 2020 General Plan.[56]

4.1.4 Staffing Scenarios

There are three staffing scenarios for the substation:

- Scenario A: a small substation of 454 people, mainly police personnel and vehicle maintenance.
- Scenario B: a medium substation of 484 people, adding City of San Jose employees and volunteers to Scenario A.
- Scenario C: a full-service substation of 562 people, increasing redeployment of police personnel from Scenario B.

All of the scenarios are for the year 2007. The study assumes that all of the personnel studied here – sworn and civilian police department employees, City of San Jose employees, and volunteers – will grow with the population. For example, if the population were to increase by 10 percent, the study assumes that all the personnel will increase by 10 percent as well.

[55] Source of data is NPOP, Chart 3-21, Beat Patrol Staffing Chart (SJPD 001).
[56] Source: San Jose 2020 General Plan, p. 21.

Currently, with only one centralized police headquarters, the City of San Jose has been able to maintain a ratio of 1.5 sworn officers per 1000 citizens citywide. The current staffing plans for the substation split the city into two distinct service areas: a northern service area which will be served from the headquarters, and a southern service area which will be served from the new substation. The current staffing plans call for a ratio of approximately 2.0 sworn officers per thousand citizens in the northern service area, and approximately 1.0 sworn officers per thousand citizens in the southern service area. (Overall, the city still comes in with a ratio of 1.5.) This difference can be explained by the fact that the headquarters house top brass and other non-patrol functions; moreover, the southern substation service area is more suburban and more affluent, and will likely have a lower crime rate than the north. The assumption here, which has been verified with the San Jose Police Department, is that it is okay to have two different officer ratios, so long as the overall city ratio remains approximately 1.5.

4.1.5 Detailed calculation of vehicle costs

Calculation of cost of driving one mile in marked SJPD car

Depreciation:		
Initial Cost of Car:	$ 49,000.00	Source: SJPD 022 SC
Salvage value:	$ 1,900.00	Source: SJPD 016 SC (range $1000-$2800)
Cost:	$ 47,100.00	
Mileage:	100,000	Source: SJPD 016 SC
Depreciation cost per mile:	$ 0.47	
Maintenance Cost:		
Annual Maintenance Cost:	$4,900	Source: SJPD 003 JA
Years in Service:	5	Source: SJPD 024 SC
Total Maintenance:	$24,500	
Maintenance per mile:	$0.25	
Operating Cost:		
Miles per gallon:	14	Source: SJPD 024 SC
Cost per gallon of fuel:	$1.40	Source: SJPD 024 SC
Fuel cost per mile:	$0.10	
Total Operating Cost Per Mile:		
Depreciation Cost:	$0.47	
Maintenance Cost:	$0.25	
Operating Cost:	$0.10	
Total Cost per Mile:	$0.82	

4.1.6 Detailed Calculation of Mileage, Time, and Trip Data

The actual data taken by the San Jose Police Department during 2002 commutes is as follows:

Data taken by SJPD					
Division	District	Number of observations	Miles	Off Peak commute time (minutes)	Peak commute time (minutes)
Central	E	4	1.8	3.7	8.7
Central	K	7	3.9	5.2	11.3
Central	R	14	4.6	7.3	18.3
Central	V	4	1.0	3.5	4.3
Foothill	C	10	7.1	8.4	12.2
Foothill	M	7	7.5	6.7	11.4
Foothill	P	8	12.8	14.7	21.3
Foothill	W	20	6.5	9.6	16.5
Southern	A	11	10.4	12.9	19.2
Southern	T	20	7.8	9.7	15.8
Southern	X	11	7.9	8.5	17.0
Southern	Y	10	11.2	12.9	18.2
Western	F	5	3.6	7.1	10.8
Western	L	6	6.6	9.3	14.4
Western	N	6	7.2	10.8	13.5
Western	S	13	4.5	6.1	11.0

The measurements to and from Substation 1, at the intersection of Santa Teresa and Cottle Roads in South San Jose, are as follows. The measurements are only for the existing Southern division and for districts L and P, which represent the proposed service area of the substation.

From Substation 1 to districts				
Division	District	Miles	Off Peak commute time (minutes)	Peak commute time (minutes)
Foothill	P	7.1	16.3	27.2
Southern	A	5.3	11.7	19.5
Southern	T	6.9	11.8	19.7
Southern	X	2.5	2.1	3.5
Southern	Y	1.8	1.7	2.8
Western	L	8.5	10.3	17.2

The measurements to and from Substation 2, at the intersection of Almaden and Cherry in South San Jose, are as follows:

From Substation 2 to districts				
Division	District	Miles	Off Peak commute time (minutes)	Peak commute time (minutes)
Foothill	P	7.0	12.7	21.2
Southern	A	2.6	3.8	6.3
Southern	T	2.2	7.1	11.9
Southern	X	3.5	10.0	16.7
Southern	Y	7.1	11.5	19.2
Western	L	4.6	11.1	18.5

The measurements to and from Substation 3, at the intersection of San Felipe and White roads in Southeastern San Jose, are as follows:

From Substation 3 to districts				
Division	District	Miles	Off Peak commute time (minutes)	Peak commute time (minutes)
Foothill	P	0	0.0	0.0
Southern	A	11.2	19.5	32.6
Southern	T	6.8	12.9	21.5
Southern	X	4.9	8.7	14.5
Southern	Y	7.3	11.2	18.7
Western	L	4.4	8.7	14.5

4.2 Sensitivity Analysis

Since many of the parameters here were estimates, rather than exact numbers, a sensitivity analysis was also run. The projected costs for "low" and "high" values of major parameters were computed, and the results are presented below. All figures in the body of the Phase II report are the "medium" numbers, because they represent the most likely scenarios. These can be seen in Figure 30.

Figure 30: Low, Medium, and High Values of Parameters

Parameter	Low[57]	Medium (used in body of this report)	High[58]	Comment
Vehicle cost per mile[59]	$0.65	$0.82[60]	$0.98	20% higher or lower
Congestion factor: a 22-minute trip in 2002 will take this long in 2025	22.0 minutes	29.0 minutes[61]	36.0 minutes	25% higher or lower
Midshift returns factor for the average officer	One midshift return every 5.26 shifts	One midshift return every 4.35 shifts[62]	One midshift return every 3.57 shifts	20% higher or lower
Population estimate for San Jose in 2027	1,005,852 people	1,117,613 people[63]	1,229,374 people	10% higher or lower
Number of sworn officers per 1000 population	1.25 sworn per 1000 population	1.54 sworn per 1000 population[64]	1.85 sworn per 1000 population	20% higher or lower[65]

The "medium" scenario, in which the "medium" values of all parameters were used, was run for the body of the Phase II report. The results of "high" and "low" scenarios are now reported.

- Low values of parameters – this scenario reflects the low value of all of the listed parameters. It assumes inexpensive vehicle cost per mile, low congestion, infrequent

[57] The "low" value of the parameter is that which will make the cost the smallest. For some parameters, such as cost per mile, the lower the parameter, the smaller the cost. For other parameters, such as number of midshift returns, the higher the parameter, the smaller the cost.

[58] The "high" value of the parameter is that which will make the cost the largest. For some parameters, such as cost per mile, the higher the parameter, the higher the cost. For other parameters, such as number of midshift returns, the lower the parameter, the higher the cost.

[59] In constant 2002 dollars.

[60] Source of "medium" data is San Jose Police Department; see Vehicle Mileage calculations in Appendix.

[61] Source of "medium" data is Santa Clara Valley Transit Authority; see Congestion calculations in Appendix.

[62] Source of "medium" data is San Jose Police Department, time and trip data taken by Sgt. Guy Bernardo. See Midshift Returns calculations in Appendix.

[63] Source of "medium" data is Association of Bay Area Governments (ABAG) population estimates and San Jose 2020 General Plan. See Population calculations in Appendix for more details.

[64] Source of "medium" data is San Jose Police Department, actual sworn per 1000 population number.

[65] Several factors could affect the number of sworn per 1000 population; a factor which would likely have a large effect would be a change in the crime rate in San Jose.

midshift returns, low population growth, and a lower ratio of sworn officers per 1000 population.

- High values of parameters – this scenario reflects the high value of all of the listed parameters. It assumes expensive vehicle cost per mile, high congestion, frequent midshift returns, high population growth, and a higher ratio of sworn officers per 1000 population.

Figure 31: Total Projected Costs in 2027 for Low, Medium, and High Parameter Values[66]

Option	Low	Medium	High	Percent difference between medium and low/high
Headquarters only, no substation	$161,954,857	$202,503,870	$243,391,192	+/- 20%
Headquarters + 1A	$165,057,639	$206,249,694	$247,694,533	+/- 20%
Headquarters + 1B	$166,679,997	$208,230,678	$250,034,143	+/- 20%
Headquarters + 1C	$166,983,680	$208,776,581	$250,822,267	+/- 20%
Headquarters + 2A	$165,002,246	$206,149,755	$247,530,256	+/- 20%
Headquarters + 2B	$166,624,605	$208,130,739	$249,869,866	+/- 20%
Headquarters + 2C	$166,928,287	$208,676,642	$250,657,990	+/- 20%
Headquarters + 3A	$165,067,572	$206,267,615	$247,723,992	+/- 20%
Headquarters + 3B	$166,689,930	$208,248,599	$250,063,601	+/- 20%
Headquarters + 3C	$166,993,613	$208,794,503	$250,851,726	+/- 20%

[66] Total costs include salary costs for all personnel at both locations, the vehicle mileage cost of the commute to/from beats, and the Community Services Division lease.

4.3 Details of Population Calculations

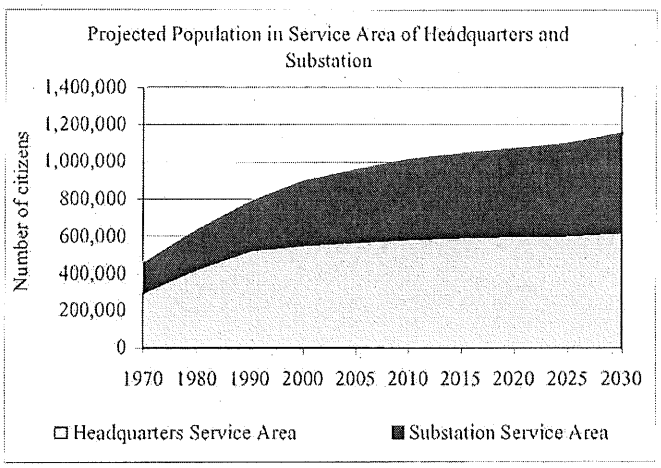
This section contains a population projection for the City of San Jose based upon information provided by the Association of Bay Area Governments (ABAG) and the City of San Jose General Plan for the year 2020. This population estimate is not intended to be a detailed demographic one, which would take into account differing age groups, fertility rates, immigration patterns, and employment. Rather, this estimate is a broad prediction of the City's population growth and location as it relates to a new police substation.

The population projection is summarized below:

Figure 32: Population Projection for San Jose[67]

Year	Headquarters Service Area	Substation Service Area	Total
1970	297,333	148,667	446,000
1980	420,000	210,000	630,000
1990	521,483	260,741	782,224
2000	551,917	343,026	894,943
2005	568,618	388,182	956,800
2010	583,171	427,529	1,010,700
2015	592,243	452,057	1,044,300
2020	598,966	470,234	1,069,200
2025	606,256	489,944	1,096,200
2030	620,710	529,022	1,149,732

Figure 33: Projected Population Distribution in San Jose, 1970-2030



[67] From Census Projection.

This estimate contains the following components:

1. **Background Data and Assumptions** about current population and population growth trends from various sources are assembled. The most important of these are:
   - San Jose will have a population of 1,010,700 people in 2010, per Association of Bay Area Governments figures.
   - The majority (73%) of the new housing units and population growth will occur in the southern districts, in the service area of a new Substation, per information in the San Jose General Plan for 2020.
2. **Calculations and Predictions** based upon these assumptions to predict the growth and distribution of San Jose's population. Most importantly,
   - 73% of San Jose's population growth is predicted to be in the southern districts.

Background Data and Assumptions

Background Data 1:
The population of San Jose in the past has been:

Year	Population
1970	446,000[68]
1980	630,000
1990	782,000
2000	894,943[69]

Background Data 2:
Approximately 2/3 of San Jose's current Calls for Service and population currently fall in the northern Headquarters service area; the remaining 1/3 of San Jose's current Calls for Service and population currently fall in the southern Substation service area. Figure 34 shows how the Call for Service Data from 2000 supports this assumption.[70]

[68] Source of 1970, 1980, and 1990 data is the NPOP, Chapter 4, Chart 4-1, "San Jose Population Growth." Original source of this data is the San Jose Planning Department (SJPD 001).
[69] Source of 2000 data is United States Census 2000 data for City of San Jose.
[70] Source of data is NPOP, Chart 3-21, Beat Patrol Staffing Chart (SJPD 001).

Figure 34: Distribution of San Jose's current Calls for Service and Population, 2000

	Headquarters Service Area	Substation Service Area	Total
Priority 1 Calls	4,890	2,273	7,163
Priority 1 Percent	68%	32%	100%
Priority 2 Calls	92,568	44,884	137,451
Priority 2 Percent	67%	33%	100%

Assumption 1:
There is a dividing line which will split the City of San Jose into two police service areas: a northern area, to be served by the Headquarters, and a southern area, to be served by the new substation. This translates to a dividing line which begins approximately on State Route 85 in southwestern San Jose, travels north on Highway 87, and then east on Tully Road out to the foothills.[71]

Assumption 2:
The population of San Jose in 2010 will be most likely approximately 1,000,000 people.[72]

Assumption 3:
San Jose looks to the south for the majority of its future population growth. There is a light rail line which serves the Almaden Valley; moreover, the City Plan Preferred Alternative for future urban growth is to develop the South Almaden Urban Reserve area into residential housing. Finally, the planned industrial campus development is located to the south in Coyote Valley.[73]

Assumption 4:
Between 1990 and 2010, the city expects 52,900 new housing units.[74]

Assumption 5:
The city's plan for managing this population growth contains the following two elements:

- Open up the South Almaden Urban Reserve area to 2000 new housing units.[75]
- Fill in vacant residential land within the 1993 Urban Service Area. 82% of the vacant residential land within the 1993 boundary lies in the southern Substation Service Area, as shown in Figure 35.[76]

[71] The exact dividing line may vary from this scenario depending on, among other things, crime patterns and any re-districting done by the SJPD between now and then.
[72] Source: San Jose 2020 General Plan, p. 21.
[73] Source is San Jose 2020 General Plan (SJCC 001, p. 32 and others).
[74] SJCC 001, p. 32, Figure 12, "Preferred Alternative."
[75] SJCC 001, p. 32, Figure 12 and p. 33, Figure 14.
[76] Source: SJCC 001, p. 13, Figure 3. See Figure 38 at the end of this section for more details.

Figure 35: Distribution of vacant land

Service Area	Vacant Land, Gross Acres	Percent
Headquarters	1173	18%
Substation	5272	82%
Grand Total	6445	100%

Calculations

Calculation 1:
73% of the new population growth between 1990 and 2010 will take place in the Substation Service Area. This assumes new population growth will follow the distribution of new housing.

Actual data is marked with an [A]; calculations based on actual data are marked with a [C]; and projections are marked with a [P].

Figure 36: Distribution of New Housing, San Jose 1990-2010[77]

Location	Headquarters Service Area	Substation Service Area	Total	Comments
Vacant residential land	6,300 [C]	28,700 [C]	35,000 [A]	Using 18% vacancy assumption in Headquarters Service Area
South Almaden Valley	0 [C]	2,000 [C]	2,000 [A]	All in Almaden
Other	7,950 [C]	7,950 [C]	15,900 [A]	Assume split evenly between Headquarters and Substation Service Areas
Totals	14,250 [C]	38,650 [C]	52,900 [A]	
Percentage	27% [C]	73% [C]	100% [C]	

Calculation 2:
Using the above assumptions, and assuming that the population growth will be approximately 73% in the Substation Service Area, the projected population is as follows. More details regarding the calculations can be found in Figure 37.

[77] Source: SJCC 001, p. 33, Figure 14.

Figure 37: Summary of Population Projection in Headquarters and Substation Service Areas, 1990-2020

Year	Population in Headquarters Service Area	Population in Substation Service Area	Population Total	Comment
Actual Population in 1990	521,483 [C] (33%)	260,741 [C] (66%)	782,224 [A] (100%)	Population from U.S. Census; distributed 2/3 to Headquarters Service Area; 1/3 to Substation Service Area;
Actual Population in 2000	551,917 [C]	343,026 [C]	894,943 [A]	Population from U.S. Census
Projected Population in 2010	583,171 [P]	427,529 [P]	1,010,700 [P]	ABAG Population estimate
Projected Population in 2020	598,966 [P]	470,234 [P]	1,069,200 [P]	ABAG Population estimate
Projected Population in 2030	620,710 [P]	529,022 [P]	1,149,733 [P]	Population estimate[78]

[78] Population estimate calculated by using a straight-line projection (linear regression) of the previous population figures. ABAG figures only extend until 2025, so the population in 2030 had to be projected.

Figure 38: Vacant Land in San Jose[79]

Gross Acres of Vacant Land						
Service Area	Planning Area	Single Family	Multi Family	Subtotal	Totals	Percent
Headquarters	Alum Rock	278.97 [A]	77.11 [A]	356.08 [A]		
Headquarters	Alviso	24.25 [A]	7.56 [A]	31.81 [A]		
Headquarters	Berryessa	388.74 [A]	87.59 [A]	476.33 [A]		
Headquarters	Central	12.72 [A]	80.9 [A]	93.62 [A]		
Headquarters	North San Jose	5.46 [A]	139.4 [A]	144.86 [A]		
Headquarters	West Valley	4.32 [A]	32.18 [A]	36.50 [A]		
Headquarters	Willow Glen	16.94 [A]	16.98 [A]	33.92 [A]		
Headquarters Total					1173.12 [A]	18% [C]
Substation	Almaden	455.54 [A]	18.38 [A]	473.92 [A]		
Substation	Cambrian/Pioneer	57.57 [A]	101.08 [A]	158.65 [A]		
Substation	Coyote	0 [A]	0 [A]	0 [A]		
Substation	Edenvale	563.02 [A]	310.20 [A]	873.22 [A]		
Substation	Evergreen	3440.93 [A]	17.87 [A]	3458.80 [A]		
Substation	South San Jose	91.45 [A]	216.22 [A]	307.67 [A]		
Substation Total					5272.26 [A]	82% [C]
Grand Total					6445.38 [A]	100% [C]

[79] Source: SJCC 001, p. 13, Figure 3.

Figure 39: Detailed Calculations of Projected Population in Headquarters and Substation Service Areas, 1990-2020

Year	Population in Headquarters Service Area	Population in Substation Service Area	Population Total	Comment
Actual Population in 1990	521,483 [C] (33%)	260,741 [C] (66%)	782,224 [A] (100%)	2/3 to Headquarters Service Area; 1/3 to Substation Service Area
+ Actual Increase 1990-2000	+30,434 [C] (27%)	+82,285 [C] (73%)	+112,719 [A] (100%)	27% of increase to Headquarters; 73% of increase to Substation
Actual Population in 2000	551,917 [C]	343,026 [C]	894,943 [A]	Population from U.S. Census
+ Projected Increase 2000-2010	+31,254 [P] (27%)	+84,503 [P] (73%)	+115,757 [P] (100%)	27% of increase to Headquarters; 73% of increase to Substation
Projected Population in 2010	583,171 [P]	427,529 [P]	1,010,700 [P]	ABAG Population estimate[80]
+ Projected Increase 2010-2020	+15,795 [P] (27%)	+42,705 [P] (73%)	+58,500 [P] (100%)	27% of increase to Headquarters; 73% of increase to Substation
Projected Population in 2020	598,966 [P]	470,234 [P]	1,069,200 [P]	ABAG Population estimate
+ Projected Increase 2020-2030	21,744 [P]	58,789 [P]	80,533 [P]	
Projected Population in 2030	620,710 [P]	529,022 [P]	1,149,733 [P]	Population estimate[81]

[80] Population estimate taken from the Association of Bay Area Governments (ABAG) population figures.
[81] Population estimate calculated by using a straight-line projection (linear regression) of the previous population figures. ABAG figures only extend until 2025, so the population in 2030 had to be projected.

4.4 Staffing Scenario Details

SUBSTATION STAFFING SCENARIOS A, B & C

BUREAU/ DIVISION/UNIT	POSITION	PLAN A	PLAN B	PLAN C
Chief of Police	(1) Deputy Chief	0	1	1
Bureau of Administration	(1) Facility Mgr. (5) Property Clerks (1) Supply Clerk	7	7	7
Bureau of Technical Services	(1) Network Engineer (1) Network Technician (23) Police Data Specialist for A (25) Police Data Specialist for B & C	25	27	27
Bureau of Investigations	(1) Captain (4) Lieutenants (20) Sergeants (80) Officers (1) Secretary (3) Office Specialist	109	109	109
Bureau of Field Operations Community Services	(78) personnel are a combination of sworn and civilian	0	0	78
Bureau of Field Operations Administration	(1) Sergeant (1) Officer (1) Secretary (2) Office Specialists	5	5	5
Front Lobby/ Pre-Processing	(4) Sergeants (18) Officers	22	22	22
Metro	(1) Sergeant (5) Officers	6	6	6
Violent Crime	(1) Sergeant (5) Officers	6	6	6
Traffic Enforcement Unit	(3) Sergeants (21) Officers	24	24	24
Southern Division Redeployment	(1) Captain (24) Sergeants (6) Lieutenants (136) Officers	167	167	167
5 Year Plan Beat Staffing	(11) Officers	11	11	11
5 Year Plan Response Time Reduction	(21) Officers	21	21	21
Beat Officer Positions Dist L & P[82]	(36) Officers	36	36	36

[82] District L surrounds the intersection of Senter and Tully Roads in central San Jose; District P surrounds the intersection of Aborn and San Felipe, in southeastern San Jose.

(continued)

			PLAN A	PLAN B	PLAN C
Department of Parks and Recreation			0	10	10
Department of Planning, Building and Code Enforcement			0	10	10
General Services Administration	(4) Janitors (1) Motorcycle Mechanic (1) Clerical (1) Supervising Mechanic	(5) Mechanics (2) Parts Specialists (1) Senior Mechanic	15	15	15
Volunteers	Non-CSJ Payroll		0	4	4
Victim Witness, Next Door, Rape Crisis	Non-CSJ Payroll		0	3	3
		Totals	**454**	**484**	**562**

4.5 Details of Staffing Scenarios A, B, and C

Staffing Plan Adopted	Location	Job Title	Quantity Employed (2007)	Cost for All (2007)	Quantity Employed (2027)	Cost for All (2027)
Headquarters Only, No Substation	Headquarters	Top Brass	6	$ 1,192,564.00	6	$ 1,192,564.00
		Captains	12	$ 1,924,277.08	14	$ 2,198,165.38
		Lieutenants	57	$ 8,008,728.36	65	$ 9,148,635.40
		Sergeants	266	$ 32,260,287.54	304	$ 36,851,993.89
		Officers	1,145	$119,768,689.82	1,308	$ 136,815,737.29
		Civilian	548	$ 11,560,477.28	626	$ 13,205,915.71
		Other (CSJ, GSA, Volunteers)	13	$ 627,972.80	15	$ 717,354.11
		Total	**2,047**	**$175,342,996.88**	**2,338**	**$ 200,130,365.78**
	Substation	Top Brass	0	$ -	0	$ -
		Captains	0	$ -	0	$ -
		Lieutenants	0	$ -	0	$ -
		Sergeants	0	$ -	0	$ -
		Officers	0	$ -	0	$ -
		Civilian	0	$ -	0	$ -
		Other (CSJ, GSA, Volunteers)	0	$ -	0	$ -
		Total	**0**	**$ -**	**0**	**$ -**

Small Substation, Scenario A	Headquarters	Top Brass	6	$ 1,192,564.00	6	$ 1,192,564.00
		Captains	10	$ 1,622,310.00	11	$ 1,728,495.75
		Lieutenants	43	$ 6,025,805.00	46	$ 6,420,214.58
		Sergeants	203	$24,588,172.00	216	$ 26,197,552.07
		Officers	897	$93,814,539.00	956	$ 99,955,021.89
		Civilian	526	$11,100,862.42	560	$ 11,827,451.89
		Other (CSJ, GSA, Volunteers)	17	$ 627,972.80	18	$ 669,075.77
		Total	**1,702**	**$138,972,225.22**	**1,813**	**$ 147,990,375.94**
	Substation	Top Brass	0	$ -	0	$ -
		Captains	2	$ 324,462.00	3	$ 406,118.71
		Lieutenants	10	$ 1,401,350.00	13	$ 1,754,024.99
		Sergeants	54	$ 6,540,696.00	68	$ 8,186,780.04
		Officers	334	$34,932,058.00	418	$ 43,723,340.02
		Civilian	39	$ 823,067.75	49	$ 1,030,207.58
		Other (CSJ, GSA, Volunteers)	15	$ 972,462.40	19	$ 1,217,200.09
		Total	**454**	**$44,994,096.15**	**568**	**$ 56,317,671.42**

Medium Substation, Scenario B	Headquarters	Top Brass	6	$ 1,192,564.00	6	$ 1,192,564.00
		Captains	10	$ 1,622,310.00	11	$ 1,728,495.75
		Lieutenants	43	$ 6,025,805.00	46	$ 6,420,214.58
		Sergeants	203	$24,588,172.00	216	$ 26,197,552.07
		Officers	897	$93,814,539.00	956	$ 99,955,021.89
		Civilian	526	$11,100,862.42	560	$ 11,827,451.89
		Other (CSJ, GSA, Volunteers)	13	$ 627,972.80	14	$ 669,075.77
		Total	**1,698**	**$138,972,225.22**	**1,809**	**$ 147,990,375.94**
	Substation	Top Brass	1	$ 187,856.00	1	$ 187,856.00
		Captains	2	$ 324,462.00	3	$ 406,118.71
		Lieutenants	10	$ 1,401,350.00	13	$ 1,754,024.99
		Sergeants	54	$ 6,540,696.00	68	$ 8,186,780.04
		Officers	334	$34,932,058.00	418	$ 43,723,340.02
		Civilian	41	$ 865,276.35	51	$ 1,083,038.74
		Other (CSJ, GSA, Volunteers)	42	$ 2,362,844.40	52	$ 2,957,496.78
		Total	**484**	**$46,614,542.75**	**605**	**$ 58,298,655.27**

Large Substation, Scenario C	Headquarters	Top Brass	6	$ 1,192,564.00	6	$	1,192,564.00
		Captains	9	$ 1,460,079.00	10	$	1,555,646.17
		Lieutenants	41	$ 5,745,535.00	44	$	6,121,599.94
		Sergeants	195	$23,619,180.00	208	$	25,165,136.23
		Officers	864	$90,363,168.00	921	$	96,277,746.84
		Civilian	495	$10,446,629.08	527	$	11,130,396.74
		Other (CSJ, GSA, Volunteers)	13	$627,972.80	14	$	669,075.77
		Total	**1,623**	**$133,455,127.88**	**1,729**	**$**	**142,112,165.69**
	Substation	Top Brass	1	$187,856.00	1	$	187,856.00
		Captains	3	$486,693.00	4	$	609,178.07
		Lieutenants	12	$1,681,620.00	15	$	2,104,829.98
		Sergeants	62	$7,509,688.00	78	$	9,399,636.34
		Officers	368	$38,488,016.00	461	$	48,174,218.94
		Civilian	74	$1,561,718.29	93	$	1,954,752.84
		Other (CSJ, GSA, Volunteers)	42	$2,362,844.40	52	$	2,957,496.78
		Total	**562**	**$52,278,435.69**	**703**	**$**	**65,387,968.96**

4.6 Listing of Data Sources

Reference	Author/ Source	Description
Marcy Wong Architects		
MLW 001	KR	Draft meeting notes from November 14, 2001 meeting
MLW 002	KR	Notes from conversation with Sucet
MLW 003	KR	Fax regarding Measure O
San Jose Police Department		
SJPD 001	DK	NPOP - Neighborhood Policing Operations Plan (large binder)
SJPD 002	DK	Cost savings; substation location in email
SJPD 003	JA	Personnel salary; vehicle cost; customer visits to OSSD
SJPD 004	DK	Substation staffing scenario, dated 1-11-02
SJPD 005	DK	Substation staffing scenario, dated 1-28-02
SJPD 006	KL	Civilian jobs in PAB: number, type, and salary
SJPD 007	KL	Civilian jobs in PAB: number, type, and salary
SJPD 008	KL	Civilian jobs in PAB: number, type, and salary
SJPD 009	SC	Vehicle per-mile cost
SJPD 010	BD	CFS (Calls for service) log for one typical week in 2001
SJPD 011	SC	Midshift responses (returns to PAB)
SJPD 012	SC	Department budget costs
SJPD 013	GB	Civilian visits to PAB
SJPD 014		SJPD Patrol Beats (Word document map)
SJPD 015		SJPD Patrol Divisions (Word document map)
SJPD 016	SC	Salvage value of police car
SJPD 017	SC	Time and Trip Data for Patrol Officer Commute
SJPD 018	DK	Patrol Staffing November 2001 (Confidential; hard copy)
SJPD 019	DK	Patrol Staffing BFO Team Allocation (hard

		copy)
	SJPD 020	SC	Police Department Budget Summary
	SJPD 021	SC	Police Department Budget Details
	SJPD 022	SC	Confirmation of patrol car price
	SJPD 023	SC	Additional Time and Trip Data (addendum to SJPD 017)
	SJPD 024	SC	Validation of Data Requests 2
	SJPD 025	SC	Staffing Scenario C Salary Information
	SJPD 026	GB	Midshift Return Analysis
	SJPD 027	SC	Community Services Lease Costs

San Jose City Council

	SJCC 001	Focus on the Future: San Jose 2020 General Plan (large document with maps)

Other

	HHA 001	Analysis of the Feasibility of Establishing Police Substations, report by Hughes, Heiss, and Associates and David J. Powers and Associates, 1982. From SJPD R&D Library, Reference 11A.012REF.
	HHA 002	Analysis of Police Substation Feasibility Through the Year 2000, report by Hughes, Heiss, and Associates and David J. Powers and Associates, 1987. From SJPD R&D Library, Reference A11.013.dREF.