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Introduction

In accordance with the City Auditor's 2001-2002 Workplan, we performed an audit of the City of San Jose's (City) Customer Service Call Center's (Call Center) staffing. We conducted this audit in accordance with generally accepted government auditing standards and limited our work to those areas specified in the Scope and Methodology section of this report.

The City Auditor's Office thanks the Call Center's Customer Service Manager and staff for their cooperation during the audit.

Audit Scope, Objectives, And Methodology

The scope of this audit was to evaluate the efficiency and effectiveness of the Call Center's staffing. Our audit objectives were to:

- Evaluate whether the Call Center is optimally staffed and
- Determine the accuracy and reliability of the Call Center's telephone computer system data.

During our audit we:

- Verified the accuracy and reliability of the Nortel Networks Symposium Express Call Center (Symposium) telephone computer system that was used to generate data during the time period we reviewed;
- Verified the accuracy of the management reports prepared by Call Center staff from data generated by the Symposium telephone computer system;
- Obtained and reviewed telephone call volume data for the five-month time period from July 1 through November 30, 2001; and
- Requested that the Call Center staff track supplemental information to determine the types of calls received during off-peak hours.

We also interviewed the Call Center's Customer Service Manager and staff, the Budget Office staff, and the Information Technology Department (IT) staff. We also observed the Call Center's operations. Further, we contacted other jurisdictions regarding their call centers' operations.

The documentation we reviewed included:

- Symposium telephone computer system documentation;
- Symposium telephone computer system data;
- Call Center-prepared management reports; and
- Call Center procedures.

We tested and reviewed some of the general and application controls for the Symposium telephone computer system that we relied upon during this audit. We did this to determine the accuracy and reliability of information in the various computer reports we used. In addition, we interviewed Call Center, IT, and telephone computer system vendor staff. We also obtained and reviewed information to assess the accuracy and reliability of the computer-generated information we used during our audit. Finally, we toured the area where the Call Center's computer system is housed.

**Major
Accomplishments
Related To This
Program**

In Appendix E, the Call Center's Customer Service Manager informs us of the Customer Service Call Center's accomplishments.

Finding I

The City Council Should Consider More Efficient Staffing Options For The Call Center Which Could Save The City As Much As \$365,000 Per Year

The City of San Jose's (City) Call Center answers questions and responds to resident concerns 24 hours per day, 7 days a week. We found that the Call Center's call volume does not support 24-hours-per-day, 7-days-a-week staffing. In our opinion, using an answering service to handle off-peak hours calls could reduce Call Center costs by as much as \$365,000 per year without adversely impacting current service levels. Accordingly, we recommend that the City Council and the Administration consider using an answering service to handle the Call Center's off-peak hours calls and that the Office of Employee Relations review any labor relations implications resulting from using an answering service to handle the Call Center's off-peak hours calls.

Background

The City's Customer Service Call Center (Call Center) opened in January 2001 to answer resident questions and respond to resident concerns 24 hours per day, 7 days a week. The Call Center, which is adjacent to the City Hall lobby, is primarily responsible for handling telephone calls 24 hours a day, staffing the information desk during business hours, and processing service requests. In addition, the Call Center performs various other duties such as issuing City employee identification badges and building access codes, and scheduling meetings for City conference rooms. The Call Center currently has 19 budgeted positions, of which 15 are currently filled and 4 are vacant. The 19 budgeted positions include the following: an Assistant to the City Manager (Customer Service Manager), an Analyst (vacant), 4 Program Supervisors (Supervising Customer Service Representatives) (one vacant and frozen), and 13 Senior Office Specialists (Customer Service Representatives) (two vacant). The Supervising Customer Service Representatives and the Customer Service Representatives are primarily responsible for answering and responding to calls from the public. Typically, the Call Center is staffed with five to eight Supervising Customer Service Representatives and Customer Service Representatives during the City's normal

business hours, and it has established a minimum staffing level of two staff during the City's non-business hours because of safety concerns.

The Call Center's Call Volume Does Not Support 24-Hours-Per-Day, 7-Days-A-Week Staffing

We found that the Call Center's call volume does not support 24-hours-per-day, 7-days-a-week staffing. Specifically, our analysis of a five-month period from July 2001 through November 2001 found that 82 percent of the Call Center's calls occurred Mondays through Fridays from 8 a.m. to 5 p.m. (peak hours). The remaining 18 percent of the calls occurred on Mondays through Fridays from 5 p.m. to 8 a.m., weekends, and major holidays¹ (off-peak hours). In addition, the average call volume per hour is very low during the off-peak hours. Specifically, for the five-month period we analyzed, the Call Center received an average of 47 calls per hour during peak hours. On the other hand, the Call Center received an average of only 4 calls per hour during off-peak hours. Thus, the Call Center's call volume per hour is more than 10 times higher during peak hours than off-peak hours. Moreover, we found that on Mondays through Fridays, the call volume drops significantly at the end of normal business hours, continues to decrease throughout the night, and remains low until 7 a.m. Thus, a significant portion of the off-peak hours calls usually occurs from Mondays through Fridays between 5:00 p.m. and 9:00 p.m. In fact, for every day of the week from 9:00 p.m. to 6:00 a.m., the call volume averages less than two calls per hour. Considering that the average call lasts less than two minutes, this workload does not support staffing the Call Center with two staff during these hours. (Appendix B graphically displays the Call Center's average hourly call volume by the day of the week for the period July 2001 through November 2001. Appendix C numerically displays the Call Center's average hourly call volume by day of the week for the period July 2001 through November 2001.)

Although the call volume is low during off-peak hours, the cost to staff the off-peak hours is significant. Because the Call Center generally has at least two staff during off-peak hours, the City spends approximately \$389,000 annually to staff the 123 weekly off-peak hours. Consequently, the City's cost per call is significantly higher during these hours when compared to peak hours. For example, the cost per call during peak hours

¹ We included the following major holidays as off-peak hours: the 4th of July, Labor Day and Thanksgiving Day.

is \$7 per call, whereas, the cost per call during off-peak hours is \$16 per call. (Appendix D graphically compares the Call Center's average call volume by day of the week with the staffing during a nine-week period ending December 15, 2001.)

We found that the City could significantly reduce the Call Center's staffing costs by using an answering service to respond to calls during off-peak hours. We contacted an answering service to obtain an estimate of using an answering service to respond to off-peak hours calls. According to the answering service we contacted, they could respond to the Call Center's off-peak hours calls for about \$24,000 annually.

The several other local government agencies we contacted use either an answering service, a voice-mail system, or other methods to respond to off-peak hours calls at their call centers. For instance, Charlotte, North Carolina uses an answering service to handle off-peak hours calls and San Diego, California uses a voice-mail system to handle off-peak hours calls. Portland, Oregon has a recording that indicates that their call center is closed during non-business hours. Like San Jose, Mobile, Alabama has a 24-hours-per-day, 7-days-a-week call center. However, unlike San Jose, Mobile's call center also functions as its 3-1-1 center and is staffed during off-peak hours with only one person. Houston, Texas and Dallas, Texas currently provide citywide 3-1-1 service which allows residents to make all of their calls, including police non-emergency calls, to one phone number, 24 hours per day. The city of Los Angeles, California will implement citywide 3-1-1 service in July 2002. The City of San Jose is looking at the feasibility of Citywide 3-1-1 service in the next three to five years.

Besides the lower cost, our analysis below indicates that for off-peak hours calls the answering service could provide a comparable level of service to that of the Call Center. In addition, the answering service would satisfy the City's preference to have a live voice answering calls 24 hours a day, seven days a week.

As part of our audit, we requested that the Call Center track off-peak hours calls to enable us to determine the types of calls the Call Center receives during these hours. Exhibit 1 shows the types of calls, the number of calls, and the number of calls as a percentage of total calls for each type of call during the three-week period analyzed.

Exhibit 1 Analysis Of The Call Center's Calls During Off-Peak Hours

Call Types	Number Of Calls	Percentage Of Total Calls
Police-related	229	38%
Other agencies (primarily County law enforcement-related)	65	11
Department of Transportation (DOT)	57	10
Recycle Plus	33	5
City Hall admittance	19	3
Animal calls	18	3
Call Center	21	3
Code Enforcement	23	4
Other	139	23
Total	604	100%

As the above exhibit shows, the police and other agencies' calls represent almost 50 percent of the calls to the Call Center during off-peak hours. The police-related calls typically are non-emergency calls that the Call Center transfers to the San Jose Police Department (SJPD). The Call Center also receives a significant number of calls for various criminal justice agencies within the County. The Call Center either transfers these calls directly to those agencies or provides the caller with the number of the agency. About a third of the Department of Transportation (DOT) calls during off-peak hours are for services that require City staff to be dispatched. These calls include complaints such as sewer problems, traffic signal problems, and other traffic hazards. The Call Center transfers these calls directly to San Jose Fire Department (SJFD) Communications, which handles after-hours dispatch for the DOT.

Based on our analysis of the above calls, we believe that an answering service can provide service comparable to that of the Call Center. As noted above, the Call Center simply transfers calls to the appropriate department or agency, or it provides the caller with frequently requested phone numbers. An answering service could transfer 3-1-1 and 9-1-1 calls directly to the SJPD. Furthermore, it should be noted that the City's 3-1-1 and 9-1-1 systems are available for emergency and non-emergency calls 24 hours per day. An answering service could also transfer DOT calls directly to SJFD Communications for

dispatch. In other situations, an answering service should be able to provide the caller with the number of the appropriate department or agency to call.

It should be noted that the City is looking at the feasibility of Citywide 3-1-1 service as described on page 5. Therefore, the use of an answering service during off-peak hours may be viewed as an interim solution.

**Using An
Answering Service
To Handle
Off-Peak Hours
Calls Could Reduce
Call Center Costs
By As Much As
\$365,000 Per Year**

As part of our review, we have developed three alternative staffing options that would reduce the cost of the Call Center. All three options rely on an answering service to respond to calls during time periods for which the call volume is low. The primary difference in the three options is the amount of hours that Call Center staff answers the phones, versus the amount of hours the answering service is used. In other words, the more hours that the Call Center staff work, the lower the cost savings. The three options are based upon the Call Center's actual call volume during a five-month timeframe from July 2001 through November 2001. During this time, the Call Center received an average of 11,051 calls each month. Audit staff analyzed the calls to determine the call volume for different times and days of the week. Based on this analysis, we prepared the following peak hours configurations to identify alternative options to reduce costs and optimize the use of Call Center staff.

The three staffing options are as follows:

- Option 1: Monday through Friday 8 a.m. to 5 p.m.
- Option 2: Monday through Friday 7 a.m. to 6 p.m.
- Option 3: Monday through Friday 6 a.m. to 9 p.m.

Exhibit 2 below shows each of the three options, Call Center staff hours, the answering service hours, the projected number of calls and percentage of calls Call Center staff would handle, the estimated cost savings for each option in 2002-03, and the impact on full-time-equivalent positions.

Exhibit 2 Comparison Of Call Center Staffing Options 1, 2, & 3

Option	Call Center Hours	Answering Service Hours	Monthly Average Number Of Calls Handled By Call Center Staff	Percent Of Calls Handled By Call Center Staff	2002-03 Estimated Savings	Impact On Full-Time-Equivalent Positions
1	M-F 8 a.m.-5 p.m.	M-F 5 p.m.-8 a.m. Weekends & Major Holidays	9,036	82	\$365,000	6.15
2	M-F 7 a.m.-6 p.m.	M-F 6 p.m.-7 a.m. Weekends & Major Holidays	9,530	86	\$334,000	5.65
3	M-F 6 a.m.-9 p.m.	M-F 9 p.m.-6 a.m. Weekends & Major Holidays	9,893	90	\$270,000	4.65

As Exhibit 2 shows, all three options using the answering service would significantly reduce Call Center costs. We estimate that Option 1 would save the most money at \$365,000 per year, while Option 3 would save the least amount of money at \$270,000 per year. We also estimate that with Option 3, the Call Center would handle about 90 percent of the calls, while under Options 1 and 2, the Call Center would handle about 82 percent and 86 percent of the calls, respectively.

At the request of the Call Center's Customer Service Manager, we estimated the cost to have the Call Center staff answer calls for eight hours per day on Saturdays and Sundays. For any of the three options, staffing the Call Center for eight hours per day on Saturdays and Sundays would reduce the estimated savings by approximately \$51,000.

We recommend that the City Council and the Administration:

Recommendation #1

Consider using an answering service to handle the Call Center's off-peak hours calls. (Priority 2)

We contacted the City's Employee Relations Director regarding labor issues associated with the use of an answering service. The Employee Relations Director stated that, if the recommendation to use an answering service is approved, he should review any labor relations implications.

We also recommend that if Recommendation #1 is approved, the Office of Employee Relations:

Recommendation #2

Review any labor relations implications resulting from using an answering service to handle the Call Center's off-peak hours calls. (Priority 3)

CONCLUSION

We found that the Call Center's call volume does not support staffing the Call Center 24 hours per day, 7 days a week. In our opinion, using an answering service to handle calls during off-peak hours could reduce Call Center costs by as much as \$365,000 per year without adversely impacting current service levels.

RECOMMENDATIONS

We recommend that the City Council and the Administration:

Recommendation #1

Consider using an answering service to handle the Call Center's off-peak hours calls. (Priority 2)

We also recommend that if Recommendation #1 is approved, the Office of Employee Relations:

Recommendation #2

Review any labor relations implications resulting from using an answering service to handle the Call Center's off-peak hours calls. (Priority 3)