AGENDA REPORT

TO: JOHN A. FLORES INTERIM CITY ADMINISTRATOR	**FROM:** Bryan M. Sastokas
SUBJECT: Supplemental Report on Status of ITD Help Desk Requests and Projects for OPD	**DATE:** April 6, 2015

City Administrator Approval		Date	4/16/15

COUNCIL DISTRICT: City-Wide

RECOMMENDATION

Staff recommends that the City Council accept this supplemental report that provides a summary and analysis of all Oakland Police Department (OPD) tickets and explanation of the on-call prioritization process. The report also provides information on current protocol for how the Information Technology Department (ITD) provides around-the-clock support to OPD seven days a week (24/7) for mission critical systems, and discussion about the backup and level of redundancy that exists in these systems.

REASON FOR SUPPLEMENTAL

This supplemental report is being provided at the request of the Public Safety Committee Chairperson Brooks. On March 24, 2015, the Committee requested:

- An explanation of the ticket prioritization process.
- Further parsing of OPD help desk tickets data based on categories.
- Information on the current ITD protocol for providing 24/7 support for mission-critical systems.
- A description of the backup and level of redundancy that exists in these systems.

OUTCOME

The Public Safety Committee of the City Council reviews the information provided in this report and directs staff relative to the report findings.

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EXECUTIVE SUMMARY

A high-level summary of help desk tickets for the period from January 1, 2014 to January 31, 2015 ("the reporting period") is in **Table 1** below. This is the time period analyzed in ITD's original report that was presented at the March 24, 2015 Public Safety Committee meeting.

Table 1: Help Desk Tickets from 1/1/14 to 1/31/15

Total Help Desk Tickets (i.e., open + closed)	3,497
Tickets Closed Between 1/1/14 and 1/31/15	3,109
Total Open Tickets as of 1/31/2015	388
% of total tickets closed during the period	89%
Avg. # Of Days Closed Tickets Took to Close	29.8

Further parsing of these tickets is provided in the Analysis section B.

Regarding the Committee's request for further explanation on current 24/7 IT support to OPD, ITD has a protocol in place to provide after-hours support for mission-critical systems (i.e., the radio system and 911 computer-aided dispatch CAD related systems). The process flow is described in Analysis section C.

Regarding the Committee's request for a description of backup and level of redundancy, a breakdown of support for mission critical systems is provided in Analysis section D.

BACKGROUND / LEGISLATIVE HISTORY

In an informational agenda report delivered to the Public Safety Committee for its March 24, 2015 meeting, ITD delivered an initial report on an analysis of help desk tickets and IT projects for OPD from January 1, 2014 to January 31, 2015. The Public Safety Committee then asked for a supplemental report containing the following:

- An explanation of the ticket prioritization process.
- Further parsing of OPD help desk tickets data based on categories.
- Information on the current ITD protocol for providing 24/7 support for mission-critical systems.
- A description of the backup and level of redundancy that exists in these systems.

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ANALYSIS

A. Help Desk Ticket Prioritization Process Overview:

The Public Safety Committee asked for an explanation of the ticket prioritization process. The following is an overview of that process.

ITD maintains an IT Help Desk Call Center to provide all Level 1 technical support to City staff (including OPD staff). The Help Desk is open from 9 am to 5 pm, Monday through Friday and consists of four (4) FTEs currently staffed by three full-time Operations Support Specialists (1 Vacancy). The ITD Help Desk Operations Support Specialists respond to help desk tickets for the entire city. While 3,497 OPD tickets were processed during the reporting period, the total number for the entire City was 15,588.

When a call or email initially comes in, the Operations Support Specialist performs Level 1 triage and troubleshooting to assist the caller. If the ticket cannot be resolved during this session or is identified as a system wide outage; the ticket is escalated. For system wide outages the ticket is escalated directly to an Information Systems Manager. Tickets that are non-system wide outages are handled with equal priority. The Operations Support Specialist forwards the ticket to the appropriate ITD Section for follow-up resolution.

The escalated tickets are then assigned by ITD Supervisors to ITD technical staff members based on their relevant knowledge, skills and availability. Response time for support varies depending on the volume of reported tickets, the availability of resources, and the thoroughness of the information provided. If a department has multiple tickets open that department may recommend a priority of which ticket is resolved first.

In areas where internal resources cannot resolve an issue, the City has existing maintenance and support contracts with vendors such as Motorola, AT&T, Harris, Verizon, Aviat, Microsoft, and Hewlett Packard (HP), some of which provide 24/7 monitoring and support services to our public safety mission critical systems.

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B. OPD Ticket Parsing Based By Category

The Public Safety Committee asked for a further parsing of all OPD help desk tickets. The following chart breaks down those tickets by Ticket Category, Tickets Received for the time period requested, and Open Tickets for the time period requested. The average completion time for help desk tickets was 29.8 days. Tickets that had a greater effect on this average are due to dependencies on third party resources (e.g., equipment purchase, cable service/Comcast, etc.)

The Number of Help Desk Tickets from Most Frequent Request to Least Frequent:

| Help Desk Tickets			
Ticket Category	OPD Tickets From 1/1/2014 - 1/31/2015	OPD Open Tickets on 1/31/2015	Percent Completed 1/1/2014 - 1/31/2015
Application	484	59	88%
Password	346	17	95%
Configuration / Set up	210	23	89%
Printer	190	22	88%
Network Account	182	19	90%
Software Installation	175	23	87%
Outlook	173	24	86%
Oracle	124	12	90%
Email	123	18	85%
Computer Access	119	12	90%
Computer	117	29	75%
iPAS	110	15	86%
Network Issues	94	3	97%
Server	93	3	97%
Telephone	93	1	99%
Hardware	81	12	85%
Inquiry	67	6	91%
OS/Desktop	66	16	76%
Network	61	8	87%
Software	56	12	79%
Move Add Change	53	0	100%
Telecom	53	0	100%
Police Mobile (Vehicle PC)	45	3	93%
Exchange	43	2	95%
Phone Trouble	36	1	97%
Internet	35	5	86%

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| Ticket Category	OPD Tickets From 1/1/2014 - 1/31/2015	OPD Open Tickets on 1/31/2015	Percent Completed 1/1/2014 - 1/31/2015
Mobile Device	28	5	82%
Voicemail	28	0	100%
Purchasing	26	11	58%
Virus/malware	26	3	88%
Network security	24	4	83%
Network Account Separation	17	0	100%
CAD	16	3	81%
Alarm	11	1	91%
Scanner	9	1	89%
IP Address	8	0	100%
Wiring	8	0	100%
Comcast	7	2	71%
Virus	7	1	86%
Purchase	6	2	67%
Fax	5	0	100%
Intranet	5	0	100%
VPN	5	2	60%
Copier	4	1	75%
Security	4	0	100%
Cable Service	3	1	67%
Network Account Relocation	3	2	33%
Police CAD	3	0	100%
Wireless	3	1	67%
Access Cards	2	0	100%
Cell Phone	2	0	100%
Wireless Device	2	1	50%
Adware/Spyware	1	1	0%
Boot Up / Shut Down	1	0	100%
Equipment Purchase	1	0	100%
GIS	1	1	0%
Project	1	0	100%
Radio	1	0	100%
Total	3,497	388	89%

C. Current 24/7 Support Protocols

The mission critical nature of first responder services requires high reliability and the best quality of support for public safety. Mission Critical Systems that are covered by 24/7 support are P25 Radio System, 911 / CAD and Field Based Reporting. Achieving this support requires adequate ITD Staffing levels, up to date maintenance contracts, pro-active monitoring protocols and procedures, and reliable infrastructure to minimize services interruption. The level of complexity and specialized, customizable applications inherent in our current IT infrastructure require an adequate and effective support system, which includes personnel, tools and processes.

The flowcharts of these after hours support protocols are provided below.

After Hours IT Support Protocol for Public Safety
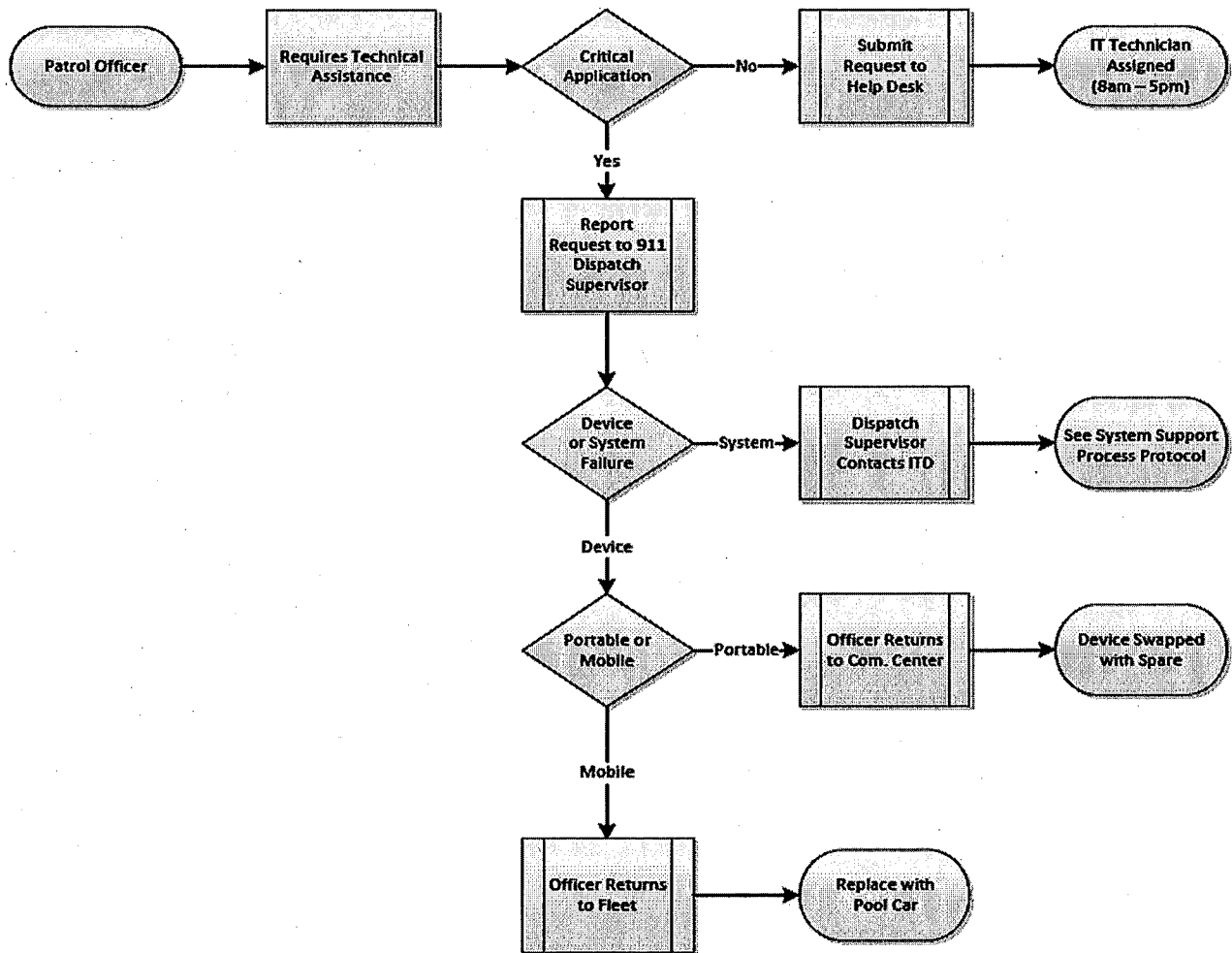
After Hours System Support Process Protocol
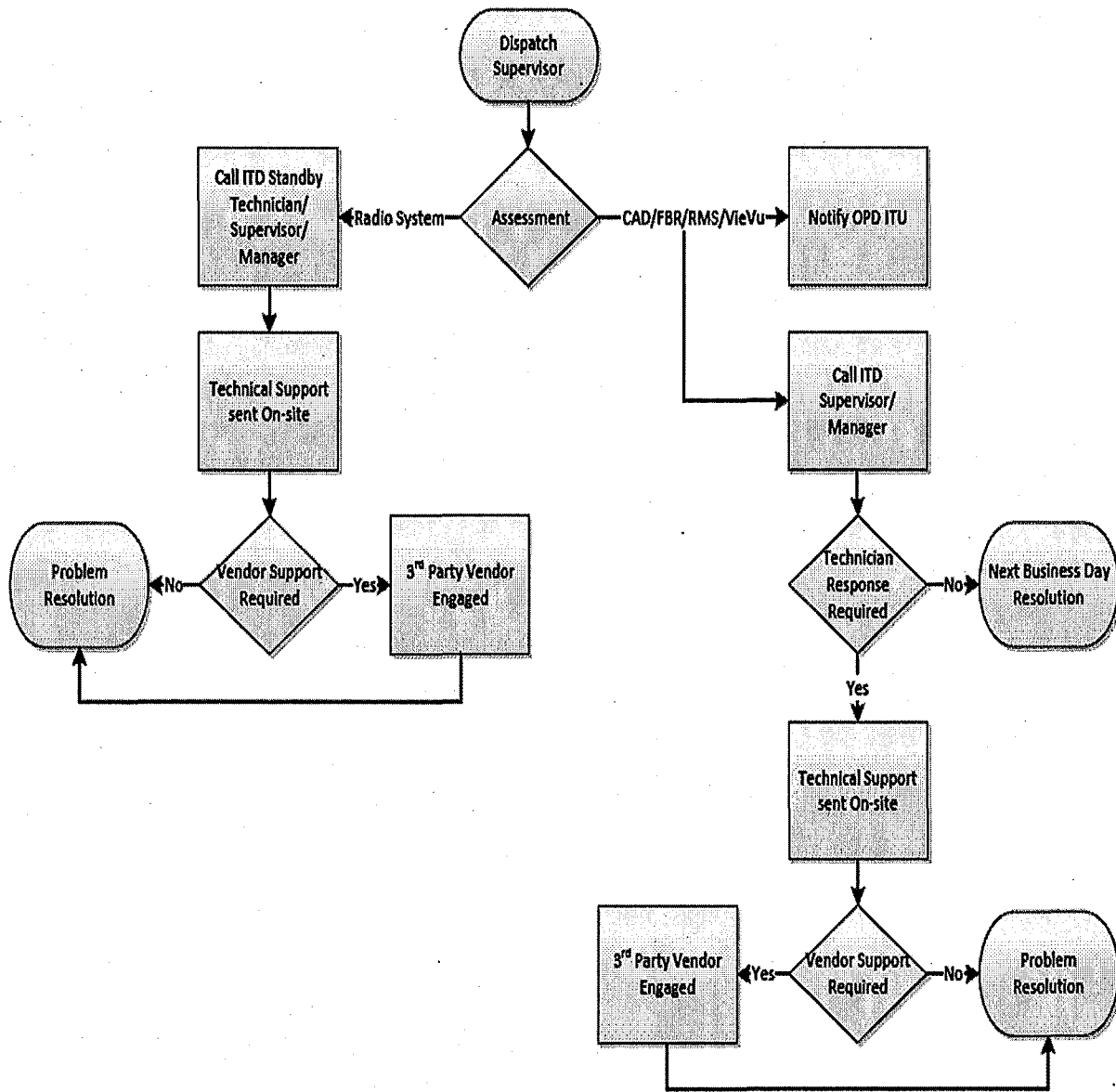
D. Backup Systems and Levels of Redundancy

The Public Safety Committee requested a description the current backup systems and levels of redundancy for mission critical systems. The following table illustrates the various levels of support and recovery locations.

Mission Critical Systems	Data Protection	Location	Redundancy	Vendor Support
P25 Radio System	User device data is replicated every hour between two diverse sites.	Split network architecture between two dispatch centers (OPD & OFD), each node act as redundant hot-standby in case of system failure	Multiple layers of equipment protection with limited single points of failure. In the event of complete network unavailability, radios users switch to State of CA Interop Repeater.	All components and remote sites are monitored 24x7x365 by the manufacturer at Network Operations Center with 2 hour priority on-site response.
911 Phone Switch	Data backup is maintained by AT&T	Primary Public Safety Answering Point (PSAP) is at OPD 911 Call Center with alternate answering ability at OFD Dispatch Center.	Each PSAP Center has a 911 phone switch. OPD and OFD PSAP's have the ability to provide alternate answering ability and full dispatch abilities to each other.	AT&T has a 24x7x365 911 Phone Switch monitoring, maintenance and support agreement.
911 Computer Aided Dispatch (CAD)	Each system has an attached Tape backup drive, and tapes could be used for data protection and data recovery	Primary CAD Server is at the OPD 911 Center and Backup CAD Server is at the OFD 911 Center	The two CAD System replicates the data, and manual failover is required	Motorola has a 24x7x365 911 CAD software maintenance and support agreement. There are couple other third party vendor agreements also in place
Mobile and Field Based Reporting (FBR)	Both systems are backup by enterprise backup system, and tapes are used for data protection and data recovery	Primary Applications and Backup Servers are at the OFD 911 Center	The two Mobile and FBR Servers don't have data replication, and manual data restore would be required from tapes in case of a system failure	Global has a 24x7x365 Mobile and FBR software maintenance and support agreement

COST SUMMARY/IMPLICATIONS

There are no funds requested as part this report.

PUBLIC OUTREACH/INTEREST

This item did not require any public outreach.

COORDINATION

In the preparation of this staff report, ITD coordinated with OPD, the City Administrator's Office, the Budget Office, and the City Attorney's Office.
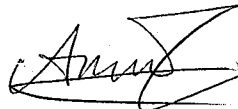
SUSTAINABLE OPPORTUNITIES

Economic: There are no specific economic opportunities created by the acceptance of this informational report.

Environmental: There are no specific environmental opportunities created by the acceptance of this informational report.

Social Equity: There are no specific social equity opportunities created by the acceptance of this informational report.

For questions concerning the contents of this report, please contact Ahsan Baig, Information Technology Department at 510-238-3010.

Respectfully submitted,

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Chief Information Officer

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