

INFORMATION SERVICES—2Q FY'18 BOS REVIEW

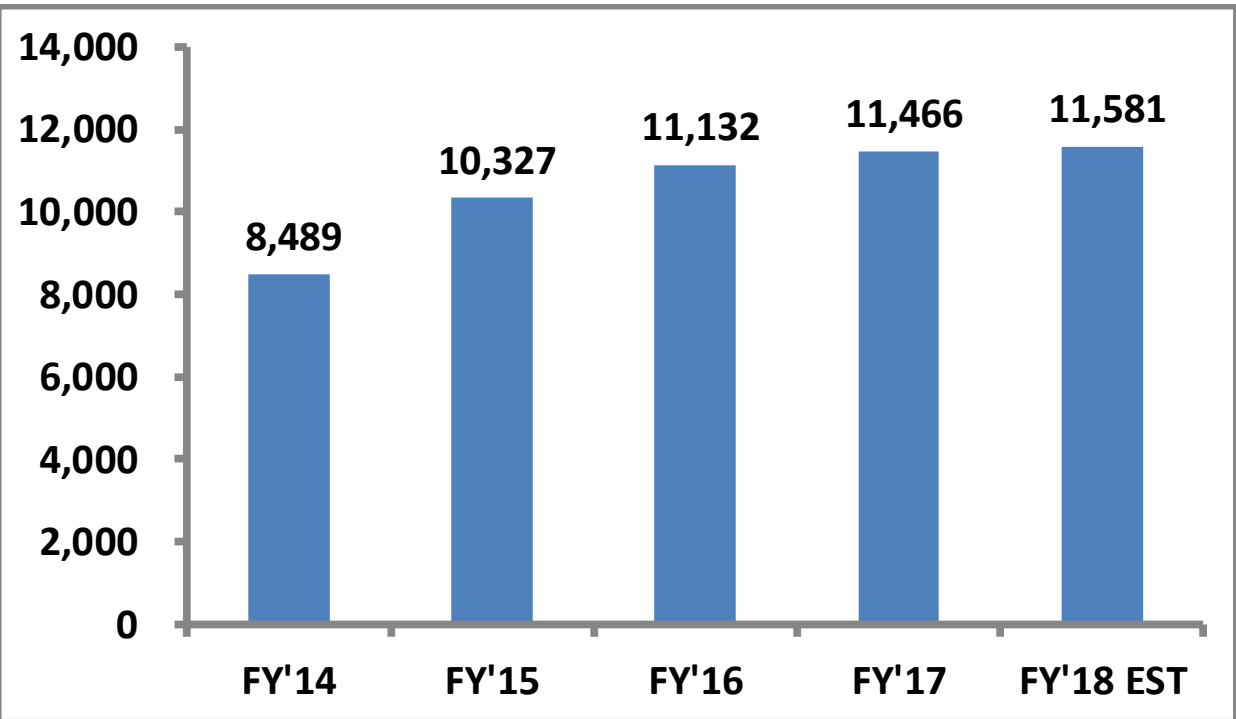
Jane Reeve- Director/Chief Information Officer

April 10, 2018



IS Operational Technology Statistics

Work Order Volume



	FY'14	FY'15	FY'16	FY'17	FY'18
Work Order Resolution					(Jul-Dec)
0-7 Days	79.6%	82.5%	83.8%	79.5%	76.7%
Goal	90%				
> 7 Days	20.4%	17.5%	16.2%	20.5%	23.3%

Network - Connectivity- Uptime %

	Actual	Goal	
FY'16	99.96%	99.99%	
FY'17	99.97%	99.99%	
FY'18 est	99.99%	99.99%	

Software App's (Primary) Uptime %

	Actual	Goal	
FY'16	99.97%	99.99%	
FY'17	99.98%	99.99%	
FY'18 est	99.99%	99.99%	

Calendar Year	2016	2017
Emails Processed	9,134,478	5,954,164
SPAM Emails Blocked	6,313,176	2,797,375
Percentage	69.1%	47.0%
Legitimate Emails Delivered	2,821,302	3,156,789
Percentage	30.9%	53.0%

FY'18 Operational Technology Project Summary

Number of Projects	Total FY'18	Completed		Expected	
		1Q'18	2Q'18	3Q'18	4Q'18
Public Safety	9	1	0	4	4
Financial Systems	3	0	1	2	0
All Other Projects	17	1	1	9	6
Total	29	2	2	15	10

Projects on Hold: (Pending PS Safety System RFP)

Animal Control Software

E911 Map Evaluation

Upgrade/Replace MSAG Mapping System

Note: Emergent issues and related projects are acted on and prioritized on an as needed basis.

FY'18 Operational Technology Projects *(continued)*





	Completed		Expected	
	1Q'18	2Q'18	3Q'18	4Q'18
Public Safety:				
1) After Hours Public Safety Service Desk Support	✓			
2) Mobile Device Management & BYOD Evaluation			✓	
3) Password Reset Program				✓
4) Implementation of Image Trends Software (FREM)			✓	
5) Interactive Training Studio Equipment (FREM)			✓	
6) I-Simulate Training System - (FREM)			✓	
7) Body Cameras (Implementation)- (Sheriff's Office)				✓
8) In Car Camera Upgrades- (Sheriff's Office)				✓
9) FirstNet (Awaiting Guidance from the State)				✓





	Completed		Expected	
	1Q'18	2Q'18	3Q'18	4Q'18
Financial Systems:				
10) VITA - TEBS Project (Phone Bills from VITA)		✓		
11) Personal Property Simulation for the Budget Department			✓	
12) Lifetime Dog Tag Changes (State Legislation)			✓	





FY'18 Operational Technology Projects *(continued)*





	Completed		Expected	
	1Q'18	2Q'18	3Q'18	4Q'18
All Other Projects:				
13) Implementation of Library Services @ Berkeley- Fiber & High Speed Internet			✓	
14) SQL Consolidation & Virtualization Optimization				✓
15) SAN Solution Replacement			✓	
16) Patch Management Evaluation & Implementation				✓
17) Project Server Upgrade			✓	
18) Upgrade Internet Pipe			✓	
19) Annual Network Health Assessment			✓	
20) GIS-Pictometry Aerial Captures			✓	
21) GIS-VGIN Aerial Captures		✓		
22) GIS-Upgrade ESRI Software to ARCGIS 10.6				✓
23) GIS-Address Attribution- (meet NG911 requirements and better information to the public)	✓			
24) GIS-Dataset Enhancements - (Structure data for Local Gov't Model Implementation)				✓
25) ESRI Local Government Database Implementation				✓
26) GIS Website Updates and Enhancements				✓
27) GIS-Base Map Enhancements			✓	
28) GIS-Public Hearing Web Map (Community Development)			✓	
29) GIS- Traffic Count Web Map (Transportation Dept)			✓	

CIP Technology Project Summary as of 12/31/2017

	#	%	
All CIP Projects:			
On-Time and On- Budget	8	61.5%	
Projects On Hold	0	0.0%	
Projects Behind Schedule	0	0.0%	
Projects Not Yet Started	5	38.5%	
Total Active Projects	13	100.0%	
Projects Completed (FY'18)	2		
Projects Transferred (FY'18)	1	To Finance	

Public Safety:			
On-Time and On- Budget	4	66.7%	
Projects On Hold	0	0.0%	
Projects Behind Schedule	0	0.0%	
Projects Not Yet Started	2	33.3%	
Total	6	100.0%	
Projects Completed (FY'18)	1		







Financial Systems:			
On-Time and On- Budget	2	66.7%	
Projects On Hold	0	0.0%	
Projects Behind Schedule	0	0.0%	
Projects Not Yet Started	1	33.3%	
Total	3	100.0%	
Projects Completed (FY'18)	0		
Projects Transferred (FY'18)	1	To Finance	




All Other CIP Projects:			
On-Time and On- Budget	2	50.0%	
Projects On Hold	0	0.0%	
Projects Behind Schedule	0	0.0%	
Projects Not Yet Started	2	50.0%	
Total	4	100.0%	
Projects Completed (FY'18)	1		





- **Two CIP Technology projects were completed during the first half of FY'18.**
- Public Safety CIP-(GP1705)-E911 Call Handling & Equipment Upgrade**
 - All Other CIP- (GP1709)-VoIP Telephony System Enhancements**

Note: The OneSolution Financial System Project has been transferred to the Finance Department for management of the project

CIP Technology Projects as of 12/31/2017

Public Safety-CIP Projects		
Project	Status	Comments
Public Safety Radio System- Phase 5		In Operation 12/16, Phase 5 after go live clean up of old system, expected completion Nov'18
Fiber Project		Anticipated completion June 2018
Public Safety System Replacement Phases 1-3		Phase 1 Complete; Phase 2 Complete; Phase 3 RFP 3Q FY'18
Tone Paging		Working on quote with desired vendor
Next Generation 911 (NG911)		Working with State on ESI-Net Plan
Public Safety System Phase 4 (Implementation)		Dependent on Phase 3 RFP Results
Completed FY'18		
E911 Call Handling & Equipment Upgrade		Project successfully completed on-time and on-budget

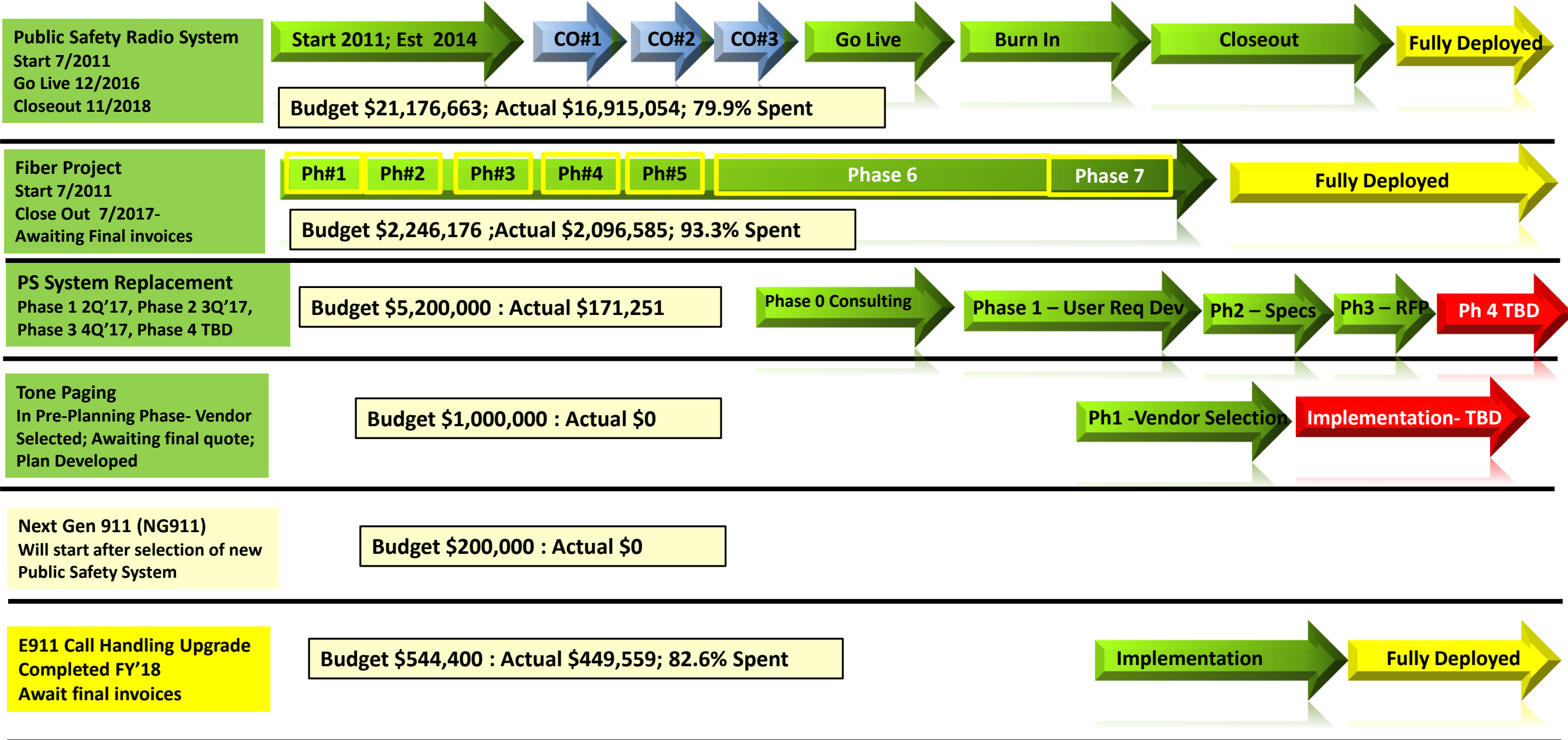
Financial Systems-CIP Projects		
Project	Status	Comments
Electronic Time Management		Deployed County-Wide; Working through remaining punch list with vendor
Real Estate Project		Anticipated Go Live January 2019
Personal Property		Commence After Completion of Real Estate Proj.
Completed FY'18		
Transferred FY'18		OneSolution Financial System- Transferred to Finance for Project Mgmt

All Other-CIP Projects		
Project	Status	Comments
Technology Replacement Program		On-Going Program; Annual Phases & Funding
Community Development System Upgrade		Reviewing Quote from Vendor; In pre-planning phase; Commence 3Q FY'18
Parks & Recreation System Upgrade		Commence 3Q FY'18
Upgrade County Website		Commence 3Q FY'18
Completed FY'18		
VOIP Telephone System		Project successfully completed on-time and on-budget

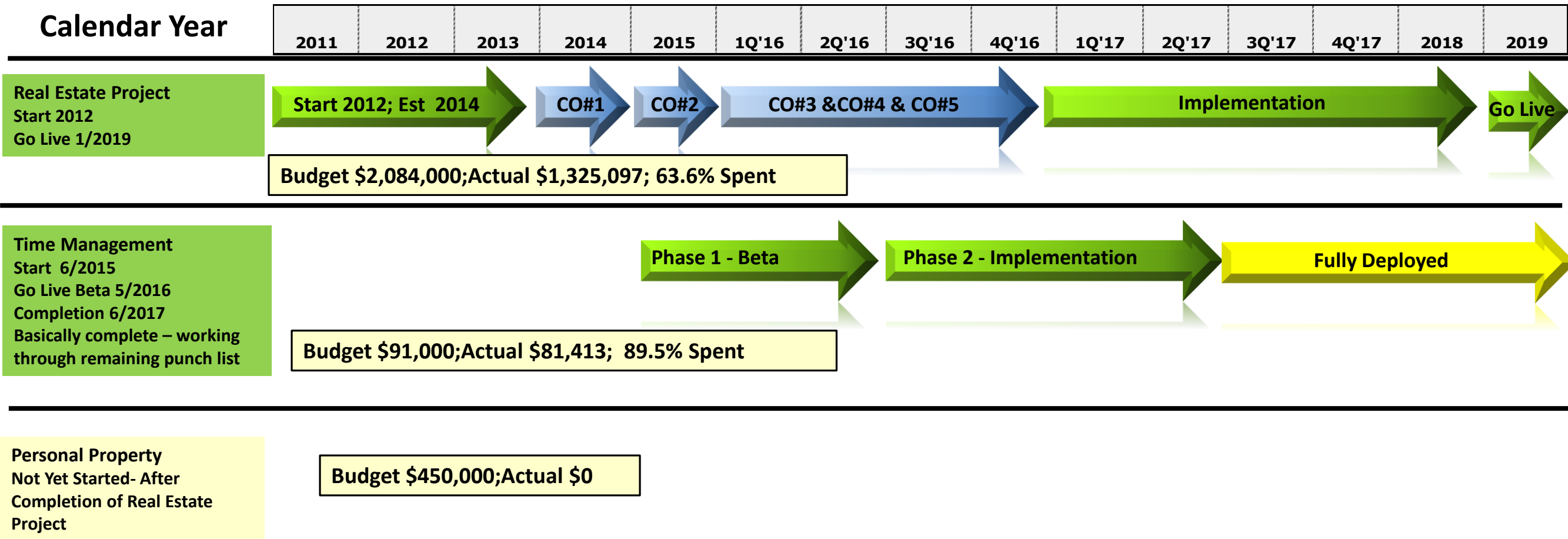
Public Safety-Current CIP Projects-Time Line

Calendar Year

2011	2012	2013	2014	2015	1Q'16	2Q'16	3Q'16	4Q'16	1Q'17	2Q'17	3Q'17	4Q'17	2018	2019
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Financial Systems-Current CIP Projects-Time Line



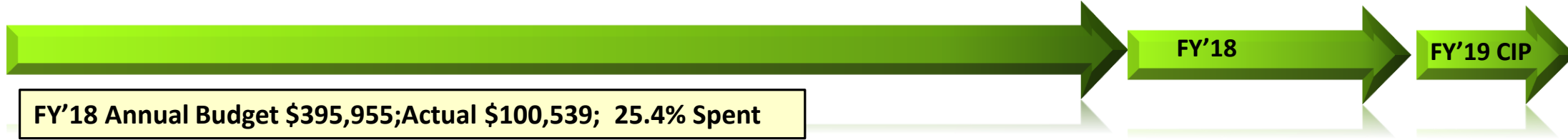
Note: The OneSolution Financial System Project has been excluded in this presentation as it has been transferred to the Finance Department for Management of the project.

All Other-Current CIP Projects-Time Line

Calendar Year

2011	2012	2013	2014	2015	1Q'16	2Q'16	3Q'16	4Q'16	1Q'17	2Q'17	3Q'17	4Q'17	2018	2019
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Technology Replacement Program
On-Going – Annual CIP Funding



Community Development System Upgrade- Currently in pre-planning phase, awaiting formal quote

Budget \$261,395; Actual \$11,735; 4.5% Spent

Pre-Planning

Upgrade County Website
Not Yet Started
Commence 3Q FY'18

Budget \$243,000; Actual \$0

Parks & Rec System Upgrade
Commence 3Q FY'18

Budget \$150,000; Actual \$0

VOIP Telephone System
Completed- FY'18
Await final invoices

Budget \$350,000; Actual \$283,757; 81.1% Spent

RFP Process

Implementation

Fully Deployed

Public Safety Major Projects Completed FY'14-18

Description	Completion	Budget
1 E911 Call Handling and Equipment Upgrade	Nov 2017	\$544,000
2 After Hours Public Safety Service Desk Support	Sep 2017	\$76,000
3 Circuit Court Security Cameras	Jun 2017	\$301,638
4 CJIS Network Upgrade	Jun 2017	\$10,000
5 911 ECaTS Data Analytics	Mar 2017	Level of Effort
6 Remote Computing Upgrade for PS Vehicles (VPN)	May 2017	\$20,000
7 Body Worn Camera Selection Team	Nov 2016	Level of Effort
8 Citizen Alert (Spotsy Alert)	Dec 2016	\$18,000
9 Fire Rescue 5	Oct 2016	\$50,000
10 Fire Rescue 11	Oct 2016	\$50,000
11 Document Storage interface with Commonwealth Attorney's System	Sep 2016	Level of Effort
12 Implementation of Active911	Sep 2016	\$3,000
13 New Parcel viewer Website	Aug 2016	\$4,500
14 Implementation of Terrain GIS Software for Search & Rescue Trailer	Aug 2016	\$300
15 Replace DocView with CarFax	Aug 2016	Level of Effort
Planned and deployed faster new faster wireless AP's for DVR system allowing complete video download of Sheriff's	Jul 2016	\$14,680
16 vehicles.		
17 RSA Token Refresh required for dual authentication (State Mandated) - 3 year refresh	Jul 2016	\$10,148
18 Planned and installed SafeZone for Sheriff's Office for public to use for online purchase exchanges	Jun 2016	Level of Effort
19 GIS Software Upgrade ArcGIS 10.3	Jun 2016	\$37,700
20 Fireview Refresh	Jun 2016	\$5,000
21 Mobile Data Security/HIPAA/VCIN/NCIC	Jun 2016	Level of Effort
22 Expansion of MDTs for FREM	Jun 2016	\$47,800

Public Safety Major Projects Completed FY'14-18 (continued)

Description	Completion	Budget
23 Upgrade of tone paging system Company 4	Jun 2016	\$1,000
24 FBI/VCIN Security Audit-audit completed-waiting for final report from State Police and FBI	Jun 2016	Level of Effort
25 Body Camera Proof of Concept	May 2016	Level of Effort
26 Evaluate Dynamic Imaging Replacement/Refresh - Mug Shot mgmt System-System upgraded and replaced	May 2016	\$3,000
27 Implement Additional Security Measures - FBI Audit	Apr 2016	Level of Effort
28 Upgrade of tone paging system Company 3	Apr 2016	\$22,858
29 Upgrade of tone paging system Company 1	Mar 2016	\$750
30 Public Safety CAD/ Records Management Mobile Data Major Systems Upgrade	Feb 2016	\$27,600
31 Upgrade of tone paging system Company 7	Feb 2016	\$16,302
32 Replaced XGEN servers and moved all SQL databases to their own server, XMobile & XRMS & CAD on their own new server	Feb 2016	\$50,000
33 Upgrade servers/database versions - existing CAD system	Jan 2016	\$7,600
34 CAD/RMS interface with Commonwealth Attorney's System	Dec 2015	\$12,000
35 EOC Video Conferencing	Jul 2015	\$7,501
36 Implementation of WeatherBug weather station- FREM EOC	May 2015	\$701
37 Sheriff Office phase out of XP MDT (State Mandated)	Dec 2014	\$207,030
38 e911 Map Printing	Sep 2014	\$8,500
39 e911 Telephony System Upgrade 2014	Sep 2014	Incl in Maint
40 Upgrade County's main 3945 WAN router, to accommodate county facility growth	Aug 2014	\$21,761
41 GIS Refresh	Apr 2014	\$38,572
42 GIS Website	Apr 2014	\$11,364
43 GIS Software Upgrade ArcGIS 10.1	Apr 2014	\$54,143
44 Quetel Evidence & Quartermaster System	Mar 2014	\$50,495
45 RSA Advanced Dual Authentication-VCIN (State Mandated)	Aug 2013	\$54,143
46 Close Rescue 3	Jul 2013	Level of Effort
Total Public Safety		\$1,788,086

All Other Major Projects Completed FY'14-FY'18

Description	Completion	Budget
1 VoIP Telephony System Upgrade	Dec 2017	\$350,000
2 VITA Tebs (Phone Billing)	Nov 2017	Level of Effort
3 GIS-Address Attribution Project	Sep 2017	Level of Effort
4 VGIN Aerial Captures	Aug 2017	\$36,000
5 Cloud Assessment - Phase 1	Jun 2017	\$15,000
6 Fiber to Belmont Library (Part of Fiber Project CIP)	May 2017	Part of CIP
7 Fiber to Berkeley Library (Part of Fiber Project CIP)	Apr 2017	Part of CIP
8 SQL Assessment	Apr 2017	\$14,000
9 Vsphere Upgrade	May 2017	\$2,093
10 Solar Winds Upgrade	Jun 2017	\$2,000
11 Laboratory Information Management Systems - Phase 1 (Utilities)	Apr 2017	Level of Effort
12 Annual Network Health Assessment	Feb 2017	\$30,000
13 Community Development -Software Upgrade Evaluation	Feb 2017	\$1,000
14 Multi-Decimal Tax Rate - Real Estate	Dec 2016	\$10,000
15 Land Records for the Circuit Court	Dec 2016	\$80,000
16 NADA Upgrade (National Automobile Dealers Association)	Dec 2016	\$10,000
17 Personal Property Update for Trucks	Dec 2016	Level of Effort
18 Metaviewer Upgrade	Dec 2016	\$40,000
19 Electronic Signatures Evaluation	Dec 2016	\$1,000

All Other Major Projects Completed FY'14-FY'18 (continued)

Description	Completion	Budget
20 CODE 1 Upgrade (USPS Address Verification)	Nov 2016	Level of Effort
21 AS/400 System Upgrade - Increased Storage and Created Development LPAR	Sep 2016	\$11,000
22 GIS- Active Directory Parcel Viewer	Aug 2016	\$4,000
23 WebFarm Decommissioning	Apr 2016	\$2,000
24 Project Management Professional (PMP) training for IS Project Managers	Oct 2015	\$20,000
25 SAN Implementation	Apr 2015	\$91,155
26 Archive Manager	Dec 2014	\$13,208
27 Courthouse Walking Tour	Dec 2014	Level of Effort
28 Server Virtualization	Dec 2014	\$497,889
29 African American Heritage Trail Interactive Website	Nov 2014	Level of Effort
30 Circuit Court- Land Records System	Nov 2014	\$80,000
31 Major Software Upgrade for Commonwealth Attorney's Office	Nov 2014	\$90,000
32 Microsoft Exchange Rebuild	Nov 2014	\$200,000
33 Sophos UTM	Nov 2014	\$128,403
34 EChecks Replacement	Oct 2014	Per transaction
35 FTP Server - IPSwitch	Sep 2014	\$27,000
36 GIS Aerials	Sep 2014	\$195,000
37 Verizon MPLS	Sep 2014	\$15,025
38 Courthouse Walking Tour with Esri Story Map Application- Beta	Aug 2014	Level of Effort
39 WAN Router Refresh	Aug 2014	\$54,046
40 Negotiation of Comcast & Cox Franchise Agreements	Mar 2014	\$203,000
41 Quetel Evidence/Quartermaster	Mar 2014	\$50,495
42 Community Development (CRW Upgrade)	Dec 2013	\$859,000
43 AS/400 System Upgrade (software refresh) and IBM iSeries Replacement (hardware refresh)	Sep 2013	\$250,000
44 IVR Refresh	May 2013	\$20,000
45 New P&R Web Page	Feb 2013	\$10,000
Total Other Projects		\$3,412,314

CIP Project Descriptions –Public Safety

Public Safety Radio System:

This initiative provides for the replacement of all Public Safety voice subscriber portable and mobile radios, which enhances communications security, ensuring that Public Safety users are on the same platform to provide immediate and systematic response to emergencies, and maintains performance, availability, reliability, provides capacity for growth due to increase in county population and demand for public safety services. Other users of the Public Safety Radio System include Schools, Utilities, Parks and Recreation, General Services, Planning, Administration and special events.

Fiber Network Installation:

Run fiber connectivity strategically throughout County, collaborating with the Schools' fiber network. Once completed monthly recurring costs for network connectivity are expected to be greatly reduced or eliminated. This would also reduce network infrastructure duplication by collaborating with the schools network infrastructure, and create redundancy for connectivity. The installation will connect 28 key locations across the county to the fiber network, greatly improving the county's infrastructure and public safety responsiveness. In addition the fiber network will aid in enhancing the Information Services strategic abilities in providing disaster recovery and business continuity planning and for those entities.

New Public Safety System:

The Public Safety Computer Aided Dispatch System (CAD) requires a hardware and software replacement life cycle to keep the functionality and capabilities of the system current with updated technology, hardware, software and additional required security and functionality. The CAD System is the core technology supporting telephones, operating systems upgrades as well as the intake and dispatch response functions for all Spotsylvania County public safety agencies including Fire and Rescue, Sheriff, Animal Control and the 911 Center. This project's goal is to evaluate the need to update the current Public Safety 911 CAD system and associated components, by taking a look at the entire Public Safety system and the needs of its users, and determine the requirements for the replacement of the system. Many of the improvements/enhancements to the system will be driven by federal and state mandates.

CIP Project Descriptions –Public Safety

Digital Alerting (Tone Paging)

Information Services is in the preliminary stages of developing a plan for a digital alerting system for fire and rescue first responders, to replace the current tone alerting system. Plans to replace radio communicated tone alerts with digital alerts connected via fiber to all fire and rescue stations are in progress. This project provides a turn-key system replacement of fire station alerting (FSA) components. This alerting system is a critical part of the 911 systems and public safety response, and is a requirement specified in the National Fire Protection Association (NFPA) 1221 Standard. The new Digital Alerting System brings the Fire and Rescue Department's station alerting system to a new technical level that will permit integration with Public Safety Computer Aided Dispatch System and possibly with the Records Management Systems (CAD/RMS) allowing for improved response times and the underlying record management.

Next Generation 911 (NG911):

New, emerging technology requires the country and Spotsylvania to move to the next level of improving public safety for citizens. NG911 is based on an emerging digital-replacement solution that requires a new statewide infrastructure. This new platform is based on emerging Federal and State mandated standards. The goal in this multi-phased initiative is to monitor, evaluate and implement NG911 mandates as standards and requirements are defined by federal and state agencies.

911 Phone System & Equipment Upgrade: - Completed FY'18

Basic 911 (911) provides the caller the ability to reach a Public Safety Access Point (PSAP) by dialing the digits 911. The technology is based on a legacy analog platform. Basic 911 is nearing end-of-life and will need to be replaced. The goal is to upgrade the 911 phone system to meet digital standard, the upgrade will also entail replacing existing Microsoft XP units (which have reached end of life) with Windows 7.

CIP Project Descriptions –Financial Systems

Electronic Time Management:

The County purchased a Time Management and Attendance System that allows employees to electronically submit their time for work tasks and projects, and provide attendance records to be processed through the County's payroll system, with a staggered implementation of all County departments throughout 2016 and 2017. Spotsylvania County Government employs approximately 1,200 employees, (full-time and part time), with regular and irregular shifts. The new time system will eliminate the manual process for tracking time worked and will streamline paperwork processes associated with employee time tracking and the production of the payroll.

Replace Treasury Legacy System (Real Estate Project):

The Treasurer and Commissioner of Revenue have a 20 year old legacy system in place that streamlines and automates the tax records billing, and tax collections process. Information Services has determined, based on industry trends, that the existing system reached the end of its life cycle years ago, and is in process to examine a replacement. The existing system is not meeting the needs of the Treasurer and the Commissioner of Revenue. The new real estate and personal property systems will replace the county's legacy tax records and revenue collections system with (COTS) Windows-based client server applications. These systems replace a legacy platform that is no longer easily supported in the industry.

Replace Personal Property Legacy System:

The Treasurer and Commissioner of Revenue have a 20 year old legacy system in place that streamlines and automates the tax records billing, and tax collections process. Information Services has determined, based on industry trends, that the existing system reached the end of its life cycle and is in need of replacement. In short, the existing system is not meeting the needs of the Treasurer and the Commissioner of Revenue. Personal Property cannot move forward until the Real Estate Project has been completed. The new personal property systems will replace the county's legacy tax records and revenue collections system with (COTS) Windows-based client server applications. These systems replace a legacy platform that is no longer supported in the industry.

CIP Project Descriptions –All Other Projects

Technology Replacement Program:

PC/Printers/Servers/Switches/UPS Upgrade Program - This program is Information Services ongoing and scheduled replacement for replacing technology at the end of its useful life. The budget is set annually, Annual costs will vary based on planned volumes and complexity.

County Telephone System (VOIP Upgrades) –Completed FY’18-Upgrade voice-over-internet-protocol (VoIP) telephony system features and capabilities. Ensure that VoIP telephony system continues to meet staff and citizen needs. The current VOIP core phone system is nearing end of support. In order to continue to maintain a properly functioning phone system; service upgrades, software upgrades and refresh of some equipment will be required. This funding will be utilized to upgrade the VOIP phone system in good working order.

Community Development Software Upgrade- Upgrade current Development Software to Trakit-9.0 which is designed to streamline the workload and synchronize activity across all departments and outside operations, all the TRAKiT system tools are tightly linked to the Geographical Information System (GIS)-centric database. Using a single screen, users gain easy access to all system areas for creating, issuing and tracking activity directly from the parcel fabric. An intuitive information-tree format anticipates users’ needs to help identify and monitor current activity and its impact on future operations.

Parks and Recreation System Upgrade- Upgrade current legacy Parks and Recs Software from Vermont Systems which has reached the end of its support lifecycle to a COTS Application that will meet all requirements and streamline workflows.

Upgrade County Website:

Update of website to take advantage of newer technology & functionality. Web Consultant requirements in progress. Ideally a RFP to be issued in the first quarter of 2017.