

MEMORANDUM

TO: Board of Trustees

THROUGH: Indra Winquest
District General Manager

FROM: Michael Gove
Director of Information Technology

SUBJECT: Review, discuss and possibly authorize the reallocation of funding amongst Fiscal Year 2020/2021 Information Technology Capital Projects as follows, re-allocate \$9,300 from Windows Office License (CIP # 1213CO1803), and re-allocate \$33,700 from Server Storage and Computing Hardware (CIP #1213CO1505), to augment, by \$43,000, Windows Server Operating System (CIP #1213CO1804).

STRATEGIC PLAN: Long Range Principle #5 – Assets and Infrastructure

DATE: August 1, 2020

I. RECOMMENDATION

That the Board of Trustees makes a motion to authorize the re-allocation of funding included in the FY2020/21 budget for specific Information Technology capital improvement projects, as follows, re-allocate \$9,300 from Windows Office License (CIP # 1213CO1803), and re-allocate \$33,700 from Server Storage and Computing Hardware (CIP #1213CO1505), to augment by \$43,000 Windows Server Operating System (CIP #1213CO1804).

II. BACKGROUND

The District's Information Technology department is responsible for operating, installing, configuring, and maintaining all of the district's digital assets as well as supporting the technical needs of full-time, part-time or seasonal employees 7 days a week 24 hours a day. The department operates 71 virtual servers across two datacenters. These 71 virtual servers operate various digital services for the district ranging from Point of Sale software to Email. Out of the 71 virtual servers 55 of them, operate on a Microsoft Windows Operating System.

Review, Discuss and Possibly Authorize the
reallocation of funding amongst Fiscal Year 2020/2021
Information Technology Capital Projects as follows, re-
allocate \$9,300 from Windows Office License (CIP #
1213CO1803), and re-allocate \$33,700 from Server Storage
and Computing Hardware (CIP #1213CO1505), to augment,
by \$43,000, Windows Server Operating System (CIP
#1213CO1804).

-2-

August 1, 2020

In January of 2020, Microsoft ended support for its Windows Server 2008 operating system. Staff had previously planned on upgrading the virtual servers on an as-needed piece-meal approach, only updating devices that needed upgrading based on their operating system's end of life. This fiscal year there would be 15 servers needing to be upgraded under this approach, transitioning to the Microsoft Server 2019 operating system.

There are currently two license models that are offered by Microsoft: Standard and Data Center. Standard licensing is what was previously put in place allowing Staff to purchase each server's operating system independently on an as-needed basis. Alternatively, the Data Center model provides for one license that cover all of the available 108 processing cores with an unlimited amount of hosted virtual servers.

Upon receiving a quote for the new licenses, Staff evaluated the cost to the District of options available under the Microsoft licensing requirements. The Standard licensing model pricing would be \$9,225.36 per every two virtual servers to upgrade to Windows Server 2019 costing a total of \$73,802.88 for the planned upgrade of 15 servers. Moreover, the Standard pricing model would result in a total cost of \$258,310 for all of the District's servers running the Windows operating system. (There is a larger number of Servers currently running the Microsoft Server 2012, which is projected to be end of life in 2023).

Under the Data Center licensing model - the District would purchase a single license to cover the amount of processing cores available to each virtual server; each datacenter has 108 cores available for its associated virtual servers. This puts the licensing cost at \$56,546.64 in FY2020/21 (upgrading the Admin. Data Center), and another \$56,546.64 in FY2021-22 for the Public Works data center upgrade).

Staff is thus recommending upgrading server licensing under the Data Center License model whereby the District would purchase a onetime license per data center. This option results in a savings of \$145,217 (over two years) and would allow Staff to upgrade all servers to Windows Server 2019. This allows easier support for district Staff only having one version of an operating system to maintain and brings the district's primary data center up to the latest support version of the Microsoft Server Operating System.

Review, Discuss and Possibly Authorize the
reallocation of funding amongst Fiscal Year 2020/2021
Information Technology Capital Projects as follows, re-
allocate \$9,300 from Windows Office License (CIP #
1213CO1803), and re-allocate \$33,700 from Server Storage
and Computing Hardware (CIP #1213CO1505), to augment,
by \$43,000, Windows Server Operating System (CIP
#1213CO1804).

-3-

August 1, 2020

While the annual licensing cost falls within the General Manager's existing contract authority, Board action is requested to re-allocate funding provided in the FY2020-21 capital budget for various IT projects for this purpose. Specifically, \$9,300 allocated for Microsoft Office Licenses (#1213CO1803) and \$33,700 allocated for Server Storage and Computing Hardware (#1213CO1505) is recommended to be reallocated to the Windows Server Operating System (#1213CO1804).

III. FINANCIAL IMPACT AND BUDGET

The recommendation contained in this report would result in a current year expenditure of \$56,546 to acquire virtual Data Center licenses for Windows servers supporting the District's needs. Funding for this purchase is proposed to come from the a combination of Information Technology capital projects included in the FY2020/21 approved budget funded via the General Fund.

Specifically, a 2020-21 Windows Server Operating System project (CIP#1213CO1804), funded at \$14,000 is proposed to be augmented by \$43,000 through reallocation of funding included in the Windows Office Licenses project (\$9,3000 – CIP#1213CO1803) and Server Storage and Computing Hardware project (\$33,700 – CIP#1213CO1505).

Information Technology staff anticipates the need for a similar license acquisition next fiscal year to provide for Windows Server Data Center licensing supporting the District Public Works operations. Funding for this purchase will be provided through the FY2021/22 budget from funding included in the multi-year I/T capital plan.

IV. ALTERNATIVES

Staff could continue on the as needed approach only upgrading the servers that need to be upgraded based on their operating systems end of life. This would result in a cost of \$73,802 this fiscal year and a total of \$258,310.86 for all of the District's virtual servers at the current quoted price.



Project Summary

Project Number:	1213CO1803
Title:	Microsoft Office Licenses
Project Type:	G - Equipment & Software
Division:	13 - Information Services
Budget Year:	2021
Finance Option:	
Asset Type:	CO - Computer Equipment
Active:	Yes

Project Description				
Project Internal Staff				
Information Technology Staff – installation & support + investigation of training options				
Project Justification				
<p>As of 2016, the primary version of Microsoft Office in use is 2007. The current offering from Microsoft is version 2016, which represents three iterations of upgrades. Several select District users have been upgraded to version 2013 and a few for 2016 for compatibility requirements for vendor supplied software. In order to remain progressive and compatible with vendor requirements and collaboration with other agencies and organizations, it is necessary to upgrade to a new version of Microsoft Office. For the same compatibility reason, we will update Exchange and SQL as well.</p> <p>Deployment services will be considered for the installation on over 200 PC's in the District.</p> <p>We are eligible for acquiring our licenses under a Government Purchasing Program. Microsoft is moving in the direction of subscription based licensing for Office. Benefits of subscription include: multiple device licenses per user, upgrades included as they are available, streaming installation, streaming/online versions. Based on the District's current 6+ year upgrade cycle and current subscription based pricing, standard licensing is more cost-effective. It is anticipated that subscription based licensing will remain the standard offering from Microsoft in the future. We will seek to utilize it to the extent available. There is also a Assurance Service which allows users access to the most recent version of a product throughout its life cycle. The District will look to use this service as a way to stay compatible for as long as possible.</p>				
Forecast				
Budget Year	Total Expense	Total Revenue	Difference	
2021				
Microsoft Office Licenses	9,300	0	9,300	
Year Total	9,300	0	9,300	
2022				
Microsoft Office Licenses	9,800	0	9,800	
Year Total	9,800	0	9,800	
2026				
Microsoft Office Licenses	10,500	0	10,500	
Year Total	10,500	0	10,500	
2027				
Microsoft Office Licenses	10,800	0	10,800	
Year Total	10,800	0	10,800	
2028				
Microsoft Office Licenses	11,100	0	11,100	
Year Total	11,100	0	11,100	
	51,300	0	51,300	
Year Identified	Start Date	Est. Completion Date	Manager	Project Partner
2019			Director of IT	



Project Summary

Project Number:	1213CO1804
Title:	Windows Server Operating System
Project Type:	G - Equipment & Software
Division:	13 - Information Services
Budget Year:	2021
Finance Option:	
Asset Type:	CO - Computer Equipment
Active:	Yes

Project Description			
Project Internal Staff			
Information Technology Staff – installation & support + investigation of training options			
Project Justification			
<p>As of 2016, the primary version of Microsoft Office in use is 2007. The current offering from Microsoft is version 2016, which represents three iterations of upgrades. Several select District users have been upgraded to version 2013 and a few for 2016 for compatibility requirements for vendor supplied software. In order to remain progressive and compatible with vendor requirements and collaboration with other agencies and organizations, it is necessary to upgrade to a new version of Microsoft Office. For the same compatibility reason, we will update Exchange and SQL as well.</p> <p>Deployment services will be considered for the installation on over 200 PC's in the District.</p> <p>We are eligible for acquiring our licenses under a Government Purchasing Program. Microsoft is moving in the direction of subscription based licensing for Office. Benefits of subscription include: multiple device licenses per user, upgrades included as they are available, streaming installation, streaming/online versions. Based on the District's current 6+ year upgrade cycle and current subscription based pricing, standard licensing is more cost-effective. It is anticipated that subscription based licensing will remain the standard offering from Microsoft in the future. We will seek to utilize it to the extent available. There is also a Assurance Service which allows users access to the most recent version of a product throughout its life cycle. The District will look to use this service as a way to stay compatible for as long as possible.</p>			
Forecast			
Budget Year	Total Expense	Total Revenue	Difference
2021			
Windows Server Operating System	14,000	0	14,000
Year Total	14,000	0	14,000
2026			
Windows Server Operating System	16,500	0	16,500
Year Total	16,500	0	16,500
2027			
Windows Server Operating System	16,500	0	16,500
Year Total	16,500	0	16,500
	47,000	0	47,000
Year Identified	Start Date	Est. Completion Date	Manager
2019			Director of IT
			Project Partner



Project Summary

Project Number:	1213CO1505
Title:	Server Storage and Computing Hardware
Project Type:	G - Equipment & Software
Division:	13 - Information Services
Budget Year:	2021
Finance Option:	
Asset Type:	CO - Computer Equipment
Active:	Yes

Project Description			
During 2014-15 the District replaced substantially all of its networks servers, switches and ancillary support equipment. Various service lives will be experienced that are likely to extend beyond the technological useful life of this equipment. Only time will tell which will dictate a replacement, based on end of life or technological incompatibility. For the purposes of this project, timing will be set by expected service life.			
Project Internal Staff			
IT staff will conduct annual evaluations of the condition of equipment and the relationship of operating software and platforms to compatibility and effectiveness for how the systems are used and operated.			
Project Justification			
The District has committed to building and maintaining a redundant private cloud operation. Reliable equipment utilizing current technology and operating systems is a key feature to having IT networks that supports all operations 24/7/365.			
Forecast			
Budget Year	Total Expense	Total Revenue	Difference
2021			
21 POE Switches	70,500	0	70,500
Admin Backbone Switch	14,600	0	14,600
PW Backbone Switch	6,700	0	6,700
Year Total	91,800	0	91,800
2022			
Admin Storage Net App	46,000	0	46,000
PW Storage Net App	46,000	0	46,000
Year Total	92,000	0	92,000
2025			
Nutanix Server Hardware Cluster, HyperVisor Licensing, & 5Yr Support Agreement for Admin	110,000	0	110,000
Nutanix Server Hardware Cluster, HyperVisor Licensing, & 5Yr Support Agreement for PW	110,000	0	110,000
Year Total	220,000	0	220,000
2026			
21 POE Switches	79,000	0	79,000
Admin Backbone Switch	16,300	0	16,300

PW Backbone Switch	7,500	0	7,500
Year Total	102,800	0	102,800
2029			
Admin Storage Net App	55,600	0	55,600
PW Storage Net App	55,600	0	55,600
Year Total	111,200	0	111,200
2030			
Nutanix Server Hardware Cluster, HyperVisor Licensing, & 5Yr Support Agreement for Admin	110,000	0	110,000
Nutanix Server Hardware Cluster, HyperVisor Licensing, & 5Yr Support Agreement for PW	110,000	0	110,000
Year Total	220,000	0	220,000
2031			
21 POE Swtiches	99,000	0	99,000
Admin Backbone Switch	20,500	0	20,500
PW Backbone Switch	9,400	0	9,400
Year Total	128,900	0	128,900
2035			
21 POE Swtiches	111,000	0	111,000
Admin (2) Support Sever for the Cluster	45,500	0	45,500
Admin Backbone Switch	22,900	0	22,900
Admin Host Server for the Cluster	26,000	0	26,000
License SQL Server and Related CALS	50,000	0	50,000
PW (2) Support Server for the CLuster	28,000	0	28,000
PW Backbone Switch	10,600	0	10,600
PW Host Server for the Cluster	26,000	0	26,000
Year Total	320,000	0	320,000
	1,286,700	0	1,286,700

Year Identified	Start Date	Est. Completion Date	Manager	Project Partner
2015			Director of IT	

This page left
intentionally
blank