County Connection

INTER OFFICE MEMO

To: Administration & Finance Committee **Date:** 02/16/2022

From: Chan Saechao, Director of IT **Reviewed by:** WC.

SUBJECT: 5 Year IT Replacement Plan

Background:

Staff has prepared a 5-year IT Replacement Plan for 2022 through 2026 (Attachment 1). The Administration & Finance Committee has recognized that up-to-date information and technology systems are critical and has traditionally reviewed 5-year plans for IT-related costs. This process was interrupted during the pandemic, but staff recognizes the importance of keeping the Board informed of current and upcoming major IT expenses. Information and technology systems have become a foundational component of every department in the Authority and knit together typically siloed units in ways that was unanticipated many years ago. The need for up-to-date and robust information and technology infrastructure is critical for the efficient daily operations of County Connection and our partnerships at the local, state, and federal levels.

Summary of Issues:

County Connection needs to update and replace critical software, hardware, and facility systems over the next five (5) years. Below is the summary of the projected IT expenses. The projects and replacement years presented are subject to change based on need, available technology and other unforeseen circumstances.

SOFTWARE

Finance Software Replacement:

The current finance software system which manages fixed assets, accounts payable, accounts receivables and general ledger was installed in 1996 and has served the Authority well but is clearly outdated. The software was created and supported by one individual with a closed proprietary source code which puts the Authority at risk were something to happen to the owner of the system. Staff proposes to replace this software with a modern cloud-based system providing greater reporting flexibility, redundancy, and customer service. A cloud-based system will reduce the amount of on-site hardware needed to manage finance but will still require a significant upfront expense to correctly import historical financial data into the new system, verify its accuracy and insure all new relevant reports work correctly.
PROJECTED EXPENSE: $93,000

Time & Attendance System (TAS) 2.0 - upgrade:

Managing Operator time, attendance, accruals, run assignments and federally required work/rest rules is very complicated and administratively challenging task. This labor-intensive process was largely managed manually on paper until TAS was created and installed at the end of 2018 and has been functioning for three years. Staff worked with a software development company, Dragon

Systems, to design and build the application. The system works stunningly well, exceeding expectations and has generated interest from a number of other Transit Agencies that have expressed interest in the application for potential use in their operations. The system was designed to be modular, capable of adding functionality as time and finances allows. Staff proposes adding a Training & Certification Module for managing and tracking the various training programs and certificates operators are required to have. Additionally, staff would like to add a vehicle management and assignment module, some enhanced payroll management features and develop a number of reporting enhancements. Staff is calling the added modules and functionality TAS 2.0
ESTIMATED EXPENSE: $90,000

Windows Server Upgrade:

The existing server operating system is Windows 2012 which will no longer receive patches and updates after 2023 requiring an upgrade to the latest version by the end of next year. Currently the latest version is Windows 2022 but by the time staff is prepared to install the upgrade there could be a later version. This is a necessary upgrade ensuring Authority servers function properly and maintain the highest level of security.
ESTIMATED EXPENSE: $50,000

SQL Database:

The Authority has multiple applications using MS SQL database as the backend, Trapeze (Scheduling Software), Clever Devices, TAS, SIMMS (Maintenance Management) and CSR (Customer Service Reporting). The current version of SQL is 2012 and will soon be at end of life and no longer supported by the manufacturer. Unlike Windows Server, Microsoft has not yet provided a hard date when support for the 2012 version will end. The latest version available is MS SEQL 2019 and staff believes it is prudent to plan for an upgrade.
ESTIMATED EXPENSE: $40,000

HARDWARE:

Host Server:

The IT department replaced most of the servers in 2016 and generally estimates a six to nine year lifespan for this equipment. Staff proposes to replace most of the host servers in 2025.
ESTIMATED EXPENSE: $120,000

Back-up Replacement:

The existing hardware and software solution was a server/hard drive solution built in 2018. Although it is only four years old, the growth of data through video media, Clever CAD/AVL and general databases has been extraordinary. Staff proposes to purchase a new faster data storage disaster recovery system that can keep pace with the growth of data moving forward and provide more security through greater redundancy.
ESIMATED COST: $30,000

Wi-Fi Upgrade:

This is part of another 6 to8-year replacement cycle. Wi-Fi is necessary for both portable devices within the buildings, as well as connection to buses in the yard for Clever Devices and Clipper data feeds. This fund was approved by the board in 2016. Due to COVID-19, this upgrade was put on hold.
ESTIMATED EXPENSE: $40,000

Replace Desktop Personal Computers:

The IT department replaced most of the Authorities desktops in 2017 and generally estimates a six to seven year lifespan for this equipment. Staff proposes to replace the bulk of the desktop PC's in 2024.

ESTIMATED EXPENSE: $70,000

TELECOMM:

Radio Recorder:

The Radio Recorder records radio conversation between Dispatch and the bus drivers. The current version requires very outdated software that will not operate on newer desktop PCs.

ESTIMATED EXPENSE: $30,000

Tablet Paratransit Van:

When the Authority contracted with TransDev one of the significant upgrades was a migration from paper manifests used by operators to digital manifests displayed on tablets. Using digital manifests on tablets has resulted in profound improvements to the service provided our customers allowing dispatchers to dynamically add or remove passenger pick-ups to improve on time performance. The tablets provide operators with live maps for navigation and provide another method of communicating with the dispatch office. The life span of tablets is 3-4 years and will need to be replaced soon and again in 2026.

ESTIMATED EXPENSE: $40,000

FACILITY:

Conference Room Equipment:

This includes all audio and video equipment in the Boardroom, the Training Room, and the Conference Rooms. This upgrade will set the standard for equipment and its replacement cycle.

ESTIMATED EXPENSE: $35,000

Network cable and Fiber rewire:

The current network ethernet cabling (Cat 5e) was installed in 1999 and has performed well for the last twenty years. Initially, in the 90's max network server and equipment operated at a max of 100 Mbps. The cabling infrastructure that was installed in 98 was capable of operating at 10 times that speed or 1Gigabit (1,000 Mbps). Having this extra capability has allowed the Authority to significantly expand and grow the entire network and upgrade the speed at which it works without having to replace the cabling infrastructure for over twenty years. The network is currently operating at 1,000 Mbps which represents the max capacity of the existing wiring infrastructure. As video media and online video based meetings have become more prevalent even 1,000 Mbps is becoming insufficient to manage the data throughput necessary for seamless network functionality.

Modern Ethernet cable is now up to Cat 7 which operates at ten times the speed of the existing infrastructure. There is a Cat 8 standard that operates 40 times faster than the existing network. Staff is still analyzing the best fit cabling infrastructure to meet the long term needs of the Authority.

ESTIMATED EXPENSE: $195,000

Automated Fuel Dispenser:

Currently staff manually enters the mileage and the amount of fuel dispensed into a bus on a computer next to the fuel island. Unfortunately, this has led to errors in data entry which has

resulted in incorrect fuel inventory. Staff proposes to purchase a system that automates the tracking of mileage and fuel data. An automated fuel dispenser will wirelessly connect to a module on the bus and capture the mileage as well as calculate the number of gallons of diesel dispensed. Automating this process also eliminated the need for a fueler to enter the information speeding up the fueling process potentially allowing for other work to be completed.
ESTIMATED EXPENSE: $150,000

Financial Implications:

Staff anticipates a 5-year cost of $1,033,000 for the proposed IT plan. The costs will be included in the TDA capital budget.

Recommendation:

Staff recommend that the A&F Committee put the 5 Year IT Replacement Plan for Board of Director to approve

Action Requested:

Staff requests that the A&F Committee put the 5 Year IT Replacement Plan for Board of Director to approve.

Attachments:

Attachment 1: 5-Year IT Plan

5 year IT Plan

	2022	2023	2024	2025	2026
Server Software					
Finance software		$ 93,000			
Tas Upgrade				$ 90,000	
Windows Server Upgrade					$ 50,000
SQL Database Upgrade					$ 40,000
Server Hardware					
Host Server				$ 120,000	
Back-up Server	$ 30,000				
Battery backup					$ 50,000
Network Harrdware					
Wifi Upgrade	$ 40,000				
Desktop Hardware			$ 70,000		
Replacement Desktop PCs					
Telecomm					
Radio Recorder			$ 30,000		
Tablet Paratransit	$ 20,000				$ 20,000
Building					
Conference Room Equip				$ 35,000	
Automate fuel Island		$ 150,000			
Network cable and Fiber rewire					$ 195,000
Annual Total	**$ 90,000**	**$ 243,000**	**$ 100,000**	**$ 245,000**	**$ 355,000**