# MISSION

The mission of the Department of Forensic Sciences (DFS) is to produce high-quality, timely, accurate, and reliable forensic science with the use of the best available technology and practices, unbiased science, and transparency with the overall goal of enhancing public health and safety.

# SCOPE

DFS provides independent analysis of evidence and samples submitted by agencies within the District of Columbia and its federal neighbors. The Forensic Science Laboratory division analyzes evidence submitted from criminal charges, including DNA, fingerprints, firearms and digital technologies. DFS also provides expert witness testimony in defense of their analytical reports in the District's courts of law. The Public Health Laboratory division provides diagnostic and analytical testing for biological pathogens and chemical agents from clinical, environmental, or food sources and provides emergency response testing. The Crime Scene Sciences division collects analyzes, processes, and preserves evidence found at crime scenes in the District. The DFS Directorate supports the work of the entire agency through strategic direction, training, quality assurance, research, recruitment and hiring of personnel, information technology, data management, fleet management, procurement, and other administrative support services.

# **CAPITAL PROGRAM OBJECTIVES**

- Provide the infrastructure to retain data from high resolution cameras for crime scene photography, high resolution 3D Laser (LIDAR) Scanners for Crime Scene Mapping.

- Provide the infrastructure to facilitate a digital repository, called Mideo, to enhance the digital analysis of firearms and latent fingerprints.

- Provide the digital storage to utilize next generation sequencing equipment for DNA analysis and the analysis of public health samples.

- Support DNA mixture interpretation software, called STRMix, to accurately determine suspicious DNA on crime scene evidence.

- Invest in the digital infrastructure to market services provided by the Digital Evidence Unit to increase evidence intake.

- Maintain digital storage capacity for an operation that creates digital evidence at an average rate of 2-4 terabytes per day.

# HIGHLIGHTS OF RECENT ACCOMPLISHMENTS

# New software application investments:

Mideo - For digital workflow analysis in Fingerprints and Firearms as well as Digital Image Management.

STRMix - to accurately determine suspicious DNA on crime scne evidence.

MiSeq - Next Generation DNA Sequencing.

Leica 3D Imaging Solution - For constructing accurate 3D models of Crime Scenes.

## Elements on this page of the Agency Summary include:

• Funding Tables: Past budget allotments show the allotment balance, calculated as allotments received to date less all obligations (the sum of expenditures, encumbrances, intra-District advances and pre-encumbrances). Agencies are allowed to encumber and pre-encumber funds up to the limit of a capital project's budget authority, which might be higher than allotments received to date. For this reason, a negative balance on a project sheet does not necessarily indicate overspending or an anti-deficiency violation. A negative balance is permitted in this calculation of remaining allotment authority.

• Additional Appropriations Data (\$000): Provides a summary of the budget authority over the life of the project. The table can be read as follows:

• **Original 6-Year Budget Authority:** Represents the authority from the fiscal year in which budget was first appropriated through the next 5 years.

• Budget Authority Through FY 2024 : Represents the lifetime budget authority, including the 6-year budget authority for FY 2019 through FY 2024.

• **FY 2019 Budget Authority Revisions:** Represents the changes to the budget authority as a result of reprogramming, redirections and rescissions (also reflected in Appendix F) for the current fiscal year.

• 6-Year Budget Authority Through FY 2024 : This is the total 6-year authority for FY 2019 through FY 2024 including changes from the current fiscal year.

• Budget Authority Request Through FY 2025 : Represents the 6-year budget authority for FY 2020 through FY 2025.

• **Increase (Decrease) :** This is the change in 6-year budget requested for FY 2020 - FY 2025 (change in budget authority is shown in Appendix A).

• Estimated Operating Impact: If a project has operating impacts that the agency has quantified, the effects are summarized in the respective year of impact.

• FTE Data (Total budget in FTE Table might differ from actual budget due to rounding): Provides the number for Full-Time Equivalent (FTE) employees approved as eligible to be charged to capital projects by, or on behalf of, the agency. Additionally, it provides the total budget for these employees (Personal Services), the non personnel portion of the budget in the agency's capital plan, and the percentage of the agency CIP budget from either expense category.

• Facility Location Map: For those agencies with facilities projects, a map reflecting projects and their geographic location within the District of Columbia.

### (Dollars in Thousands)

Funding By Pha	ase - Prio	r Funding		ļ	Approved Funding							
Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total	
1,553	289	169	550	545	5,600	0	0	0	0	0	5,600	
200	181	19	0	0	347	0	0	0	0	0	347	
4,962	3,883	345	140	595	234	0	0	0	0	0	234	
994	972	22	0	0	0	0	0	0	0	0	0	
7,709	5,324	555	690	1,140	6,181	0	0	0	0	0	6,181	
	Allotments 1,553 200 4,962 994	Allotments     Spent       1,553     289       200     181       4,962     3,883       994     972	1,553     289     169       200     181     19       4,962     3,883     345       994     972     22	Allotments     Spent     Enc/ID-Adv     Pre-Enc       1,553     289     169     550       200     181     19     0       4,962     3,883     345     140       994     972     22     0	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance       1,553     289     169     550     545       200     181     19     0     0       4,962     3,883     345     140     595       994     972     22     0     0	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020       1,553     289     169     550     545     5,600       200     181     19     0     0     347       4,962     3,883     345     140     595     234       994     972     22     0     0     0	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021       1,553     289     169     550     545     5,600     0       200     181     19     0     0     347     0       4,962     3,883     345     140     595     234     0       994     972     22     0     0     0     0	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021     FY 2022       1,553     289     169     550     545     5,600     0     0       200     181     19     0     0     347     0     0       4,962     3,883     345     140     595     234     0     0       994     972     22     0     0     0     0     0	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021     FY 2022     FY 2023       1,553     289     169     550     545     5,600     0     0     0       200     181     19     0     0     347     0     0     0       4,962     3,883     345     140     595     234     0     0     0       994     972     22     0     0     0     0     0     0	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021     FY 2022     FY 2023     FY 2024       1,553     289     169     550     545     5,600     0     0     0     0       200     181     19     0     0     347     0     0     0     0       4,962     3,883     345     140     595     234     0     0     0     0       994     972     22     0     0     0     0     0     0     0     0	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021     FY 2022     FY 2023     FY 2024     FY 2025       1,553     289     169     550     545     5,600     0     0     0     0     0       200     181     19     0     0     347     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0	

F		Approved Funding										
Source	Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
GO Bonds - New (0300)	1,660	594	345	140	581	427	0	0	0	0	0	427
Pay Go (0301)	890	849	41	0	0	0	0	0	0	0	0	0
Equipment Lease (0302)	1,890	1,890	0	0	0	0	0	0	0	0	0	0
Short-Term Bonds – (0304)	3,268	1,991	169	550	559	5,754	0	0	0	0	0	5,754
TOTALS	7,709	5,324	555	690	1,140	6,181	0	0	0	0	0	6,181

Additional Appropriation Data		Estima
First Appropriation FY	2013	Expendi
Original 6-Year Budget Authority	14,321	No estim
Budget Authority Through FY 2024	12,543	
FY 2019 Budget Authority Changes	0	Full Tin
6-Year Budget Authority Through FY 2024	12,543	
Budget Authority Request Through FY 2025	13,890	Personal
Increase (Decrease)	1 347	Non Dor

### Estimated Operating Impact Summary

S				
0	Full Time Equivalent Data			
3	Object	FTE	FY 2020 Budget	% of Project
0	Personal Services	0.0	0	0.0
7	Non Personal Services	0.0	6,181	100.0

# FR0-DCI19-CAPITAL AND I.T. EQUIPMENT - DFS

Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Implementing Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Project No:	DCI19
Ward:	6
Location:	401 E STREET SW
Facility Name or Identifier:	CONSOLIDATED FORENSIC LABORATORY
Status:	In multiple phases
Useful Life of the Project:	5
Estimated Full Funding Cost:	\$1,558,000

### Description:

In FY19, DFS was allotted \$1.2 million in capital funding to procure new laboratory and IT equipment. New equipment assists the department with meeting accreditation standards, helping scientists solve complex analytical challenges, and provide faster turnaround time of results to our stakeholders.

In FY2020, the department requested continued funding.

### Justification:

The Department of Forensic Sciences, collects, examines, analyzes, and reports on physical samples within the Public Health Laboratory, Forensic Science Laboratory, and the Crime Science Sciences Unit. In order for the department to maintain integrity within its science, the DFS must keep up with industry standards and increased workload demands by employing new technology.

In FY2020, DFS is requesting \$347,036 to purchase the following equipment below.

## **Progress Assessment:**

•Gerstel Multipurpose Sampler Robotic Pro 160cm (2) and Agilent 5977B HES MSD Turbo EI and 7890B GC system (2) (\$557,192.27) – Equipment provides rapid analysis of drug evidence for controlled dangerous substances, such as fentanyl or cocaine. The result of this technique will permit significantly shorter turn-around-times and overall casework output.

Crime Scene Sciences Radios (\$140,399.19) – The District has an executed MOU with the Office of Unified Communications to procure 27 new radios for the department. DFS will equip each crime scene scientist with a radio to ensure the timely and accurate response to crime scenes in the District.
Drying Chamber (\$20,000) – Critical for drying and preserving crime scene samples and evidence.

•Nucleic Acid Extractor and Liquid Handler (\$48,000) – This equipment will automate the extraction of DNA which streamlines the process creating great efficiencies with the Public Health Laboratory.

•Meridian Image Solutions (\$89,851.58) – DFS will procure 11 printers to replace older model printers that are currently out of warranty and require significant service due to malfunction.

## **Related Projects:**

N/A

## (Dollars in Thousands)

Funding By Phase -	<b>Prior Fur</b>	nding			Approved F	unding					
Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
0	0	0	0	0	347	0	0	0	0	0	347
1,211	443	187	140	440	0	0	0	0	0	0	0
1,211	443	187	140	440	347	0	0	0	0	0	347
Funding By Source -	Prior Fu	nding			Approved F	unding					
Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
1,211	443	187	140	440	347	0	0	0	0	0	347
1.211	443	187	140	440	347	0	0	0	0	0	347
	Allotments 0 1,211 1,211 Funding By Source - Allotments 1,211	Allotments     Spent       0     0       1,211     443       1,211     443       Funding By Source - Prior Fu       Allotments     Spent       1,211     443	0 0 0 1,211 443 187 1,211 443 187 Funding By Source - Prior Funding Allotments Spent Enc/ID-Adv 1,211 443 187	Allotments     Spent     Enc/ID-Adv     Pre-Enc       0     0     0     0     0       1,211     443     187     140       1,211     443     187     140       Funding By Source - Prior Funding     Hotments     Spent     Enc/ID-Adv     Pre-Enc       1,211     443     187     140     143     140	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance       0     0     0     0     0     0       1,211     443     187     140     440       1,211     443     187     140     440       1,211     443     187     140     440       Funding By Source - Prior Funding     Allotments     Spent Enc/ID-Adv     Pre-Enc     Balance       1,211     443     187     140     440	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020       0     0     0     0     0     347       1,211     443     187     140     440     0       1,211     443     187     140     440     347       Funding By Source - Prior Funding     Approved F     Approved F     Approved F       Allotments     Spent Enc/ID-Adv     Pre-Enc     Balance     F 2020       1,211     443     187     140     440     347	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021       0     0     0     0     0     347     0       1,211     443     187     140     440     0     0       1,211     443     187     140     440     347     0       Funding By Source - Prior Funding     Approved Funding     Approved Funding     Approved Funding     Pre-Enc     Balance     FY 2020     FY 2021       1,211     443     187     140     440     347     0	Alfotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021     FY 2022       0     0     0     0     0     347     0     0       1,211     443     187     140     440     0     0     0       1,211     443     187     140     440     347     0     0       Funding By Source - Prior Funding     Approved Funding     Approved Funding     Approved Funding     Pre-Enc     Balance     FY 2021     FY 2021     FY 2021     FY 2021     FY 2021     FY 2022     FY 2023     FY 2024     FY 202	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021     FY 2022     FY 2023       0     0     0     0     0     0     347     0     0     0       1,211     443     187     140     440     0     0     0     0       1,211     443     187     140     440     347     0     0     0       Funding By Source - Prior Funding     Allotments     Spent Enc/ID-Adv     Pre-Enc     Balance     FY 2021     FY 2022     FY 2023       1,211     443     187     140     440     347     0     0     0	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021     FY 2022     FY 2023     FY 2024       0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0<	Allotments     Spent     Enc/ID-Adv     Pre-Enc     Balance     FY 2020     FY 2021     FY 2022     FY 2023     FY 2024     FY 2025       0     0     0     0     0     347     0     0     0     0     0       1,211     443     187     140     440     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0

Additional Appropriation Data	
First Appropriation FY	2019
Original 6-Year Budget Authority	1,211
Budget Authority Through FY 2024	1,211
FY 2019 Budget Authority Changes	0
6-Year Budget Authority Through FY 2024	1,211
Budget Authority Request Through FY 2025	1,558
Increase (Decrease)	347

Estimated Operating Impact Summary Expenditure (+) or Cost Reduction (-) FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2025 6 Yr Total No estimated operating impact

Milestone Data	Projected	Actual
Environmental Approvals		
Design Start (FY)		
Design Complete (FY)		
Construction Start (FY)		
Construction Complete (FY)		
Closeout (FY)		

Full Time Equivalent Data			
Object	FTE	FY 2020 Budget	% of Project
Personal Services	0.0	0	0.0
Non Personal Services	0.0	347	100.0

# **FR0-FLE19-CRIME SCENE SPECIALIZATION VEHICLES**

Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Implementing Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Project No:	FLE19
Ward:	
Location:	DISTRICT-WIDE
Facility Name or Identifier:	VEHICLES
Status:	In multiple phases
Useful Life of the Project:	5
Estimated Full Funding Cost:	\$375,000
<b>D</b>	

### **Description:**

In FY20, DFS requested \$154K for the second capital allotment to purchase ten DFS identified Crime Scene (CSS) specialized vehicles. CSS vehicles are utilized 24 hours each day to collect and preserve evidence from crime scenes in the District.

### Justification:

The crime scene specialized vehicle replacement is critical to the effectiveness of our Crime Scene Sciences response to a crime within the District. Originally this responsibility was provided by the Metropolitan Police Department, since then DFS Crime Scene Sciences Division has taken over the role of collecting and transporting evidence from the crime scenes. These vehicles are used to transport evidence and maintain chain of custody from the time it is collected from the crime scene. The goal of DFS is to replace our vehicles at the optimal time to achieve greater productivity and lower costs. The vehicles are utilized up to 24 hours each day, with three different shifts of Crime Scene Sciences daily that can greatly impact the useful life of each vehicle being used. The capital project will meet the District Mayor's "Safer, Stronger DC" plan by strengthening tools and resources needed to investigate crimes in the District.

## **Progress Assessment:**

On-going project

### **Related Projects:**

N/A

### (Dollars in Thousands)

	Funding By Phase	Prior Fu	nding			Approved Fi	unding					
Phase	Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
(05) Equipment	222	0	110	0	111	154	0	0	0	0	0	154
TOTALS	222	0	110	0	111	154	0	0	0	0	0	154
	Funding By Source	- Prior Eu	Inding			Approved Fi	Indina					
	i ununig by Source	- 1 1101 1 0	nang			Approved i t	anonng					
Source	Allotments		Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
				Pre-Enc 0				<b>FY 2022</b> 0	FY 2023 0	<b>FY 2024</b> 0	FY 2025 0	6 Yr Total 154

Additional Appropriation Data	1
First Appropriation FY	2019
Original 6-Year Budget Authority	375
Budget Authority Through FY 2024	375
FY 2019 Budget Authority Changes	0
6-Year Budget Authority Through FY 2024	375
Budget Authority Request Through FY 2025	375
Increase (Decrease)	0

### Estimated Operating Impact Summary

Milestone Data	Projected	Actual
Environmental Approvals		
Design Start (FY)		
Design Complete (FY)		
Construction Start (FY)		
Construction Complete (FY)		
Closeout (FY)		

Full Time Equivalent Data			
Object	FTE	FY 2020 Budget	% of Project
Personal Services	0.0	0	0.0
Non Personal Services	0.0	154	100.0

# FR0-LIM20-DFS LABORATORY INFORMATION MANAGEMENT

SYSIEM	
Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Implementing Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Project No:	LIM20
Ward:	
Location:	401 E STREET SW
Facility Name or Identifier:	CONSOLIDATED FORENSIC LABORATORY
Status:	In multiple phases
Useful Life of the Project:	10
Estimated Full Funding Cost:	\$4,500,000

## **Description:**

DFS aims to replace its main LIMS system, because the current system (JusticeTrax) has not received support upgrades for several years due to difficulties at the supplying company, and needs to be replaced. DFS also aims to consolidate its LIMS systems. JusticeTrax is used by Forensic Science Laboratory and Crime Scene Sciences. Other systems to be integrated into seamless correspondence with the new system include the Public Health Laboratory (Horizon), the Forensic Biology Unit (STaCSDNA), and MPD's system (File on Q).

## Justification:

DFS is very focused on the Mayor's priority for a "Safer, Stronger" DC. DFS was given \$1m in FY13 to implement JusticeTrax LIMS. It was subsequently successfully implemented using the best available system at that time. Unfortunately, JusticeTrax and File on Q are not integrated and DFS employees must maintain both systems in order to track evidence from collection through examination to final MPD storage. DFS has made significant improvements to its testing capability in recent years including next generation sequencing in DNA analysis, and Mideo for image management and examination in latent fingerprints and firearms testing. Additional funding is needed to move to a next generation LIMS that is capable of meeting the testing needs of the DFS and reduce redundancy as it delivers to the Mayor's priorities.

The four DFS systems (named above) are independent to each other, require specialists in-house for each system, and do not connect with the MPD evidence management system (Evidence on Q) requiring all evidence items to be transferred manually between the systems as they enter and leave DFS possession. It is well established that manual processes can lead to transcription errors. These can have a critical impact on court proceedings through the loss of integrity of evidence through broken chain of custody. This project will identify and implement a comprehensive modern LIMS for DFS.

### **Progress Assessment:**

Currently, the Department of Forensic Sciences has an allotment of \$4.5m in FY19-FY20 capital funding for a new LIMS.

• In FY18, a consultant was engaged to gain an overview of DFS' LIMS needs and to scan the market for potential candidate suppliers. A report was provided in FY18 and will inform the project plan for FY19 and FY20.

## **Related Projects:**

N/A

### (Dollars in Thousands)

	Funding By Phase -	Prior Func	ling		A	pproved Fi	unding					
Phase	Allotments	Spent E	nc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
(03) Project Management	500	122	58	300	19	3,600	0	0	0	0	0	3,600
TOTALS	500	122	58	300	19	3,600	0	0	0	0	0	3,600
	Funding By Source -	Prior Fun	ding		A	pproved Fu	unding					
Source	Funding By Source - Allotments		ding nc/ID-Adv	Pre-Enc	A Balance	pproved Fu FY 2020	Inding FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
				<b>Pre-Enc</b> 300				<b>FY 2022</b> 0	<b>FY 2023</b> 0	<b>FY 2024</b> 0	<b>FY 2025</b> 0	6 Yr Total 3,600

Additional Appropriation Data	
First Appropriation FY	2019
Original 6-Year Budget Authority	4,500
Budget Authority Through FY 2024	4,500
FY 2019 Budget Authority Changes	0
6-Year Budget Authority Through FY 2024	4,500
Budget Authority Request Through FY 2025	4,100
Increase (Decrease)	-400

Estimated	Operating	Impact	Summ

increase (Decrease)		-400	
Milestone Data	Projected	Actual	F
Environmental Approvals			
Design Start (FY)			Pe
Design Complete (FY)			No
Construction Start (FY)			
Construction Complete (FY)			
Closeout (FY)			

Full Time Equivalent Data			
Object	FTE	FY 2020 Budget	% of Project
Personal Services	0.0	0	0.0
Non Personal Services	0.0	3,600	100.0

# FR0-DIG19-FORENSIC EVIDENCE DIGITAL STORAGE

Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Implementing Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Project No:	DIG19
Ward:	
Location:	401 E STREET SW
Facility Name or Identifier:	CONSOLIDATED FORENSIC LABORATORY
Status:	In multiple phases
Useful Life of the Project:	7
Estimated Full Funding Cost:	\$2,803,000

### **Description:**

In FY19, DFS was allotted \$803K in capital funding to acquire a fast, high capacity online storage solution. DFS will use the FY19 funding to close out the Forensic Digital Storage Project.

DFS is requested \$2 million in FY20, to meet the continually expanding needs of DFS data storage.

### Justification:

Due to the unique nature of the services provided to the government of the District of Columbia and federal agencies, the DFS generates a large amount of digital information. This information needs to be stored, cataloged, and managed locally within DFS to ensure and demonstrate accountable chain of custody, limit and demonstrate access control, and to limit the number of persons potentially called to appear in court. Additional, this information needs to be stored locally since it might need to be accessed and processed by local systems, due to its sensitive nature (eg child exploitation, MPD internal affairs etc), or immediate accessed as required by the scientists and/or systems of DFS. The seized data under examination by DEU is also received in various forms and is likely to have significant amounts of malware that is required to be processed by DFS systems. This information can be required to be retained for up to 65 years.

The new storage capacity will need to be compatible with DFS' current storage systems (for DFS and for DEU). Specific functional systems have been employed for each of these capabilities to ensure the security of the housed data. In FY17, DEU's caseload increased by over 800% over its previous year. In FY18, it increased again by almost 100% over FY17. This need for larger data storage also meets the need to provide stakeholders with critical information in shorter timeframes.

DFS is highly focused on the Mayor's priority for a "Safer, Stronger" DC. DFS was given \$802,629 in FY19 to purchase and install additional storage. DFS has made significant improvements to its testing capability in recent years including next generation sequencing in DNA analysis, and Mideo for image management and examination in latent fingerprints and firearms testing. Additional funding is needed to ensure that DFS is capable of meeting the data storage, management, and access needs as it delivers to the Mayor's priorities.

## **Progress Assessment:**

In FY18, DFS procured and implemented its Forensic Digital Storage System. This system is to support storage of analytical data, clinical data, and digital evidence for the Forensic Science Laboratory, Public Health Laboratory, and Crime Scene Sciences Division. We expect exponential growth in data storage needs of 1 to 3 Terabytes of data a day due to the implementation of several advanced scientific and information technology systems. DFS must continue work begun in FY17 including developing requirements and designing a scalable storage solution and then procuring and beginning the implementation of a storage solution. The agency is in the process of working with the Office of Contracting and Procurement to finalize the procurement strategy the next phase in FY 2019. DFS is also working with DC Net to upgrade the network in CFL server room in anticipation of the new storage solution.

### **Related Projects:**

As new technologies have been recently introduced, such as next generation sequencing in forensic DNA analysis, Mideo for the management and examination of images in latent fingerprint and firearms examination, and the continually improving resolution of images captured as evidence, such as at crime scenes, latent fingerprints etc, the amount of data captured grows exponentially. These developments in technology have led to the current trend growth in case related, forensic evidence data of 2-4 terabytes per day. This solution will address the storage needs generated from these systems.

(Dollars in Thousands)

Fundin	ng By Phas	e - Prior Fu	nding		ļ	Approved Fi	unding						
Phase	Allotments	s Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 20	24 FY	2025	6 Yr To
(03) Project Management	803	3 124	0	250	428	2,000	0	0	0		0	0	2,0
TOTALS	803	3 124	0	250	428	2,000	0	0	0		0	0	2,0
Fundin	g By Sourd	e - Prior Fu	unding		ŀ	Approved Fu	unding						
Source	Allotments		Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 20	24 FY	2025	6 Yr To
Short-Term Bonds – (0304)	803	3 124	0	250	428	2,000	0	0	0		0	0	2,0
TOTALS	803	3 124	0	250	428	2,000	0	0	0		0	0	2,0
Additional Appropriation Data			Estimated (	Operating	Impact Sun								
First Appropriation FY		2019	Expenditure (	+) or Cost R	eduction (-)	FY 2	020 FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr	Total
Driginal 6-Year Budget Authority		803	No estimated of	perating imp	act								
Budget Authority Through FY 2024		803											
FY 2019 Budget Authority Changes		0											
6-Year Budget Authority Through FY 2024		803											
Budget Authority Request Through FY 20	25	2,803											
Increase (Decrease)		2,000											
Milestone Data Proj	ected	Actual	Full Time E	guivalent l	Data								
Environmental Approvals				Object		FT	FY 202	) Budget	% of	Project			
Design Start (FY)			Personal Servi	ces		0	0.0	0		0.0			
Design Complete (FY)			Non Personal	Services		0	0.0	2,000		100.0			
Construction Start (FY)													
Construction Complete (FY)													
Closeout (FY)													

# FR0-HDW02-LABORATORY & HOSPITAL EQUIPMENT - DFS

Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Implementing Agency:	DEPARTMENT OF FORENSIC SCIENCES (FR0)
Project No:	HDW02
Ward:	6
Location:	401 E STREET SW
Facility Name or Identifier:	CONSOLIDATED FORENSIC LABORATORY
Status:	In multiple phases
Useful Life of the Project:	10
Estimated Full Funding Cost:	\$820,000

### **Description:**

DFS requested capital funding allotments in FY20 – FY25 capital funding to replace outdated or aged equipment, according to the schedule established by the Capital Asset Replacement Scheduling System (CARSS).

## Justification:

This project is needed to fund the replacement of mission-critical specialized laboratory and information technology that has become obsolete or is in disrepair.

## **Progress Assessment:**

The Department of Forensic Sciences is in the process of procuring the following items in FY 2019. DFS is also working to connect the OCFO's Capital Asset Replacement Scheduling System (CARSS) to inFlow, the department's internal laboratory management system. CARSS identifies which laboratory and I.T. equipment has reached its useful life. While division directors and unit managers identify outdated equipment based on federal and accreditation standards.

• BioTek Microplate Washer (\$17,000) – Equipment washes reagents in between steps and helps with accuracy of antibody test results in immunology and in the bioterrorism program.

• MagNA Pure 24 Extraction (\$50,000) - Automatically extracts nuclei acids, such as DNA and RNA, for specimen testing.

• Tecan NGS Upgrade (\$29,877.144) - Robotic automation of liquid handling for preparation of samples for Next Generation Sequencing/Whole Genome Sequencing.

### **Related Projects:**

N/A

### (Dollars in Thousands)

	Funding By Phas	e - Prior Fu	nding		Α	pproved F	unding					
Phase	Allotments	Spent	Enc/ID-Adv	Pre-Enc	Balance	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
(05) Equipment	140	50	47	0	43	80	0	0	0	0	0	80
TOTALS	140	50	47	0	43	80	0	0	0	0	0	80
	Funding By Source	e - Prior Fu	unding		A	pproved F	unding					
Source	Funding By Source Allotments		Inding Enc/ID-Adv	Pre-Enc	A Balance	pproved F	unding FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	6 Yr Total
Source GO Bonds - New (0300)		Spent		Pre-Enc				<b>FY 2022</b> 0	<b>FY 2023</b> 0	<b>FY 2024</b> 0	<b>FY 2025</b>	<b>6 Yr Total</b> 80

Additional Appropriation Data	
First Appropriation FY	2019
Original 6-Year Budget Authority	820
Budget Authority Through FY 2024	820
FY 2019 Budget Authority Changes	0
6-Year Budget Authority Through FY 2024	820
Budget Authority Request Through FY 2025	220
Increase (Decrease)	-600

### Estimated Operating Impact Summary

Milestone Data	Projected	Actual
Environmental Approvals		
Design Start (FY)		
Design Complete (FY)		
Construction Start (FY)		
Construction Complete (FY)		
Closeout (FY)		

Full Time Equivalent Data			
Object	FTE	FY 2020 Budget	% of Project
Personal Services	0.0	0	0.0
Non Personal Services	0.0	80	100.0