

Buildings and Facilities

CONGRESSIONAL JUSTIFICATION
FY 2024

Department of Health and Human Services
National Institutes of Health

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

Buildings and Facilities (B&F)

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Director's Overview

America's continuing leadership in biomedical research requires infrastructure and facilities capable of housing safe, reproducible research in compliance with all laws and regulations and conducive to cutting-edge research and research support. The National Institutes of Health (NIH) strives to ensure that its facilities enable scientists to discover new diagnostics, therapies, and cures. NIH continuously evaluates its property inventory to ensure that the buildings and infrastructure on its campuses are safe and reliable and to ensure that these real property assets evolve in support of science. These buildings include the Clinical Research Center (CRC), which includes 240 inpatient beds and 82 day-hospital stations, Biosafety Level 3 and 4 high containment facilities, biomedical research laboratories, a world-class Central Utility Plant (CUP), and buildings housing research support activities. The full replacement value of NIH buildings and related infrastructure was estimated at \$14.1 billion as of the end of FY 2022.

The Building and Facilities (B&F) program is essential to conducting safe, reproducible science for the Intramural Research Program (IRP). It is critical to ensuring patient safety in the NIH Clinical Center and the conduct of specialty research functions, such as infectious disease research, genomic sequencing, cellular therapy, and unique imaging capabilities. Today's biomedical research requires facilities capable of providing the proper mechanical, electrical, plumbing, fire protection, and architectural environment in which science can flourish. A major component of the B&F program is the Repair & Improvement (R&I) program, which enables NIH to maintain and improve the performance of existing facilities throughout their life cycle. As the responsible steward of its approximately 275 facilities, a key aspect of NIH's strategy is to sustain the condition of existing facilities to prevent premature deterioration and the curtailment of research. These investments help reduce the likelihood and consequences of building emergencies associated with NIH's Backlog of Maintenance and Repairs (BMAR), estimated at approximately \$3.8 billion across all campuses as of the end of FY 2022. NIH requests \$350.0 million for the B&F program in FY 2024.

As directed by Congress in the Consolidated Appropriations Act of 2017, NIH entered a contract with the National Academies of Science, Engineering, and Medicine (NASEM) to assess the condition of the facilities on the Bethesda Campus. An ad hoc committee comprised of medical, architectural, engineering, planning, and maintenance experts was established to conduct the analysis. On August 26, 2019, the committee's report was made public.¹ The report found that "The buildings and facilities at the NIH Bethesda Campus are in need of significant improvement and upgrading to sustain their current mission and ongoing functionality." The report highlights pressing campus-wide infrastructure needs and recommends improvements to NIH's capital planning and funding processes, including updating the B&F prioritization model and developing an annual budget request for BMAR reduction. It also suggests that NIH strengthen internal governance process by assigning and empowering a senior leader to manage capital planning. NIH is taking steps to address all 14 recommendations of the NASEM report. Two were related to increased resources for NIH and 12 dealt with procedural and governance improvements. NIH is moving forward with implementation of the 12 procedural and

¹ nap.edu/read/25483/chapter/1

governance recommendations. Recognizing the criticality of providing a plan to Department of Health and Human Services, Office of Management and Budget, and Congress to further improve upon capital planning and governance, including reduction in BMAR, NIH contracted with Deloitte to assist NIH. This effort identified six initiatives for strategic improvements:

1. Improve Project Prioritization
2. Develop Improved BMAR Reduction Strategies
3. Improve Planning and Cost Control
4. Training and Documentation Improvements
5. Improve Master Plan Communications; and
6. Improve Data Driven Decision Making

Also as directed by Congress, NIH has been providing quarterly briefings to the staff of the House and Senate Appropriations Committees regarding the backlog of facilities projects, project prioritization, and overall facilities governance. It should be noted that the NASEM recommendations were limited to the Bethesda backlog and did not address the backlog at other NIH sites in Maryland, Montana, and North Carolina.

In FY 2024, NIH requests \$350.0 million for the B&F account, the same level as in FY 2023 Enacted appropriations. In addition, the request continues to propose a general provision that would allow NIH to transfer and merge up to one percent of other NIH appropriations to the B&F account. This authority would provide increased flexibility for NIH Institutes and Centers to contribute toward facilities projects that sustain the research infrastructure necessary to carry out their mission, subject to a central prioritization and governance process. New authority to transfer and merge appropriations is necessary because appropriations for Institutes and Centers generally have a one-year period of availability, which is not sufficient for construction projects, and existing HHS transfer authorities do not change the period of availability.

While such a transfer authority is not common, it has been provided to other Federal agencies in the past to address significant resource needs. In 2009 the Department of Housing and Urban Development (HUD) had serious deficiencies in its information technology systems (*see* “Information Technology: HUD Needs to Strengthen Its Capacity to Manage and Modernize Its Environment,” GAO-09-675). As a result, the FY 2010 President’s Budget proposed a Transformation Initiative to improve HUD information technology through a transfer of 1 percent of HUD’s total budget, or approximately \$434 million. This transfer authority was approved by Congress; notably, the Transportation, Housing and Urban Development, and Related Agencies subcommittee was chaired by Senator Murray at the time.

“The conference agreement provides \$20,000,000 for combating mortgage fraud through the Transformation Initiative (TI), as proposed by the House and Senate, as well as the authority to transfer up to 1 percent of funds from specified accounts within the Department, similar to language proposed by the House and Senate. The Secretary is required to submit a plan to the House and Senate Committees on Appropriations for approval detailing how the funding will be allocated among the various activities authorized under this initiative.

Of the funds transferred for the TI, not less than \$80,000,000 and not more than \$180,000,000 is for the modernization of the Department's legacy information technology systems. The conference agreement directs HUD to submit an information technology spending plan, and for GAO to evaluate HUD's modernization plan and monitor the Department's progress in meeting its goals."

Conference Report accompanying the Consolidated Appropriations Act, 2010, H. Rept. 111-366, at 452.

Combined, sustaining the increased level for the B&F account at \$350.0 million and adding the requested transfer authority would enable NIH to dramatically improve the condition of its facilities and curtail the growth of the BMAR. The COVID-19 pandemic has made biomedical research and the facilities that support it more important than ever. Research facilities will play an important role in NIH's ability to respond to national and global health threats. This budget aims to adapt NIH buildings and infrastructure to a changing biomedical research landscape, while maintaining the safety and reliability of its buildings and infrastructure.

NIH capital facilities planning leverages a scoring and prioritization model to ensure the application of budgetary resources are provided to the most meritorious projects. The NIH scoring and prioritization model ties to the NIH's capital planning process through a governance framework which relies on engagement with the Research Facility Advisory Committee (RFAC) for scoring projects which are then prioritized based upon their score. The criteria scored, in priority order, consists of mission criticality, facility condition and project executability. Mission criticality (dependency) and facility condition (condition index) each comprise more than one third of a project's score, aligning with recommendation 5.1 from the NASEM report. Furthermore, the NIH capital planning process engages subject matter expertise in facility conditions, stewardship, and development to provide consultation and make recommendations for the RFAC's consideration prior to implementing any project above \$3.5 million. The highest scoring projects are then selected for funding in priority order with only limited exceptions, such as a project not being affordable within the current year budget.

NIH leverages this governance framework for both program projects, HHS Federal Project Approval Agreement projects, and large Repair & Improvement (R&I) projects that exceed the \$3.5 million threshold. NIH's capital project planning and management program is tracked and reported on the NIH Facilities Dashboard where projects exceeding the threshold are catalogued. Funded projects are reported with budgets and schedules, and projects competing for funding are reported with the additional attributes, scores and priorities. The Dashboard is used to track original scores, budgets and schedules, and variances with current scores, budgets and schedules. The NIH Facilities Dashboard and variances are reported to staff of the Congressional Appropriations subcommittees on a quarterly basis as a part of briefings presented in accordance with prior and current year appropriation laws. This ongoing reporting effort is supported by NIH's frequent engagement with RFAC for updating scores and adding emergent projects for scoring and prioritization. This gives NIH the ability to plan projects while maintaining enough flexibility to respond to emergent conditions and allows transparency with the Appropriations staff.

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Buildings and Facilities (B&F) Program

OVERVIEW

The B&F program is essential to conducting safe, reproducible science for the Intramural Research Program (IRP). It is critical to ensuring patient safety in the NIH Clinical Center and the conduct of specialty research functions, such as infectious disease research, genomic sequencing, cellular therapy, and unique imaging capabilities.

NIH continuously evaluates its property inventory to ensure that the buildings and infrastructure on its campuses are safe and reliable and to ensure that these real property assets evolve in support of science. These buildings include:

- The Clinical Research Center (CRC), which houses 240 inpatient beds and 82 day-hospital stations
- Biosafety level 3 and 4 containment facilities
- Biomedical research laboratories
- A world-class central utilities plant
- Buildings that house research support activities



FUTURE PROJECTS

BETHESDA CENTRAL UTILITY PLANT AND CRITICAL UTILITY INFRASTRUCTURE REPAIRS:

Replace Cooling Towers 18, 19, and Chillers 17, 18, 19

- This project will replace Chillers 17, 18 and 19, their associated cooling towers, electrical equipment, and generators.
- Chemical manufacturers are no longer able to produce or import R-22 refrigerant in accordance with the Clean Air Act. The building 11 Chillers 17, 18, and 19 use R-22 Refrigerant and need replacement to ensure system reliability.
- The existing Cooling Towers 18 and 19 that align with the Chillers are beyond their service life and do not have the capacity to meet the campus.

Upgrade Existing Site Electrical Distribution System

- Upgrade antiquated electrical distribution system in order to increase reliability, autonomy, and resiliency of power system on Bethesda Campus.
- This project interconnects three major substations and two satellite substations allowing the major substations to back up any other campus substation and provide redundant source of power to the two satellite substations.

Generator for Campus Emergency Chilled Water Service, Bldg 105, North Electrical Plant, Research Triangle Park (RTP)

- Buildings and facilities on the RTP campus require continuous chilled water flow.
- This project will construct a medium voltage emergency power generating system in the North Electrical Plant Building 105 to provide reliable and redundant power source for the campus chilled water service.

Demolition Building 9, Bethesda Campus

- Building 9 was converted to a permanent facility in 1955 to house research laboratories and office functions.
- Currently this Building is functionally obsolete and cannot economically be maintained as a modern biomedical laboratory facility.
- The current NIH Master Plan calls for the demolition of Building 9 as part of the plan to clear the Southeast portion of the site closest to Building 10 for its use as a new Research Facility.

Center for Pediatric and Adult Disease Research (CPAD)

- This project will support new research initiatives for the NIH intramural research program to continue as one of the nation's leading research institutions. The CPAD vision is to focus on cutting edge translational research on human disease.

STATUS OF BUILDINGS AND FACILITIES

At the end of FY 2022, the estimated Backlog of Maintenance and Repairs (BMAR) was \$3.8 billion. In 2019, the National Academies of Science, Engineering, and Medicine (NASEM) published a consensus study on the facilities needs at the NIH campus in Bethesda, MD. The report found that “The buildings and facilities at the NIH Bethesda

Campus are in need of significant improvement and upgrading to sustain their current mission and ongoing functionality.” The report also contained 14 recommendations, 2 of which are focused on increased appropriations to the NIH Buildings and Facilities Program. NIH is working to implement the other 12 recommendations, which were largely procedural in scope. NIH’s facilities play an important role in NIH’s ability to respond to national and global health threats, and continued investment into the B&F program is essential to sustain the integrity of NIH’s research.

**NATIONAL INSTITUTES OF HEALTH
BUILDINGS AND FACILITIES**

For the study of, construction of, demolition of, renovation of, and acquisition of equipment for, facilities of or used by NIH, including the acquisition of real property, \$350,000,000, to remain available through September 30, [2027] 2028.

GENERAL PROVISIONS

SEC. 216. Not to exceed [\$100,000,000] 1 percent of funds appropriated by this Act to the offices, institutes, and centers of the National Institutes of Health may be [used for alteration, repair, or improvement of facilities, as necessary for the proper and efficient conduct of the activities authorized herein, at not to exceed \$5,000,000 per project] transferred to and merged with funds appropriated under the heading "National Institutes of Health-Buildings and Facilities": Provided, That the use of such transferred funds shall be subject to a centralized prioritization and governance process: Provided further, That the Director of the National Institutes of Health shall notify the Committees on Appropriations of the House of Representatives and the Senate at least 15 days in advance of any such transfer: Provided further, That this transfer authority is in addition to any other transfer authority provided by law.

SUMMARY OF CHANGES

NATIONAL INSTITUTES OF HEALTH
Buildings & Facilities

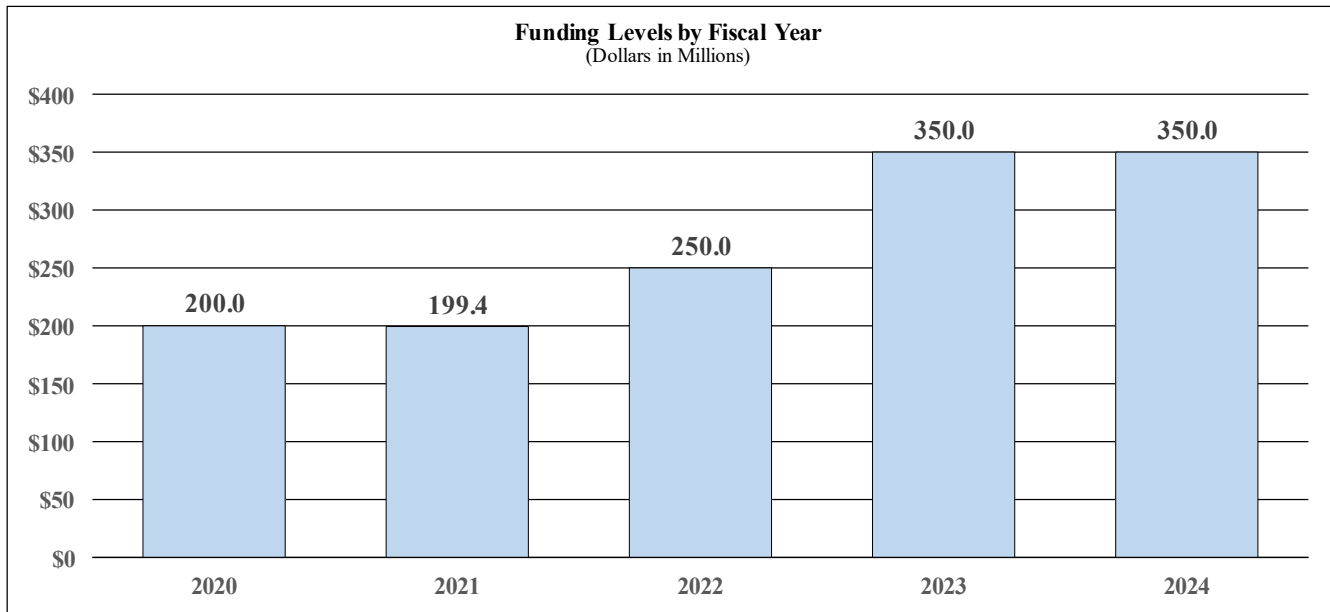
Summary of Changes

(Dollars in Thousands)

FY 2023	\$350,000
FY 2024	\$350,000
Net change	\$0

	FY 2023	FY 2024	FY 2023 +/- FY 2024
<u>Increases</u>			
<u>A. Program:</u>			
Demolition of Bldg 29/29A (CPAD Enabling Task 2)	\$7,500	\$19,915	\$12,415
Surgery, Radiology and Lab Medicine Building (SRLM)	\$30,000	\$43,930	\$13,930
Bldg 38 Install Exhaust Equipment Bldg 38 Mechanical Rooms	\$0	\$7,600	\$7,600
Building 101 (Rall) Elevator Repairs for Modules A-E, RTP	\$0	\$5,510	\$5,510
Bldg. 8A Replace AHUs 5 & 6	\$0	\$8,706	\$8,706
Bldg 4 Rooms 326-341, Laboratory Renovation	\$0	\$6,714	\$6,714
Electrical Underground Distribution Repairs, RTP	\$0	\$6,747	\$6,747
Replace Steam and Condensate Lines from Manhole 26 to Manhole 84	\$0	\$4,865	\$4,865
Bldg 31A HVAC Replacement	\$0	\$7,580	\$7,580
Replace Switchgear and Electrical Panels, Bldg 49	\$0	\$6,500	\$6,500
Center for Pediatrics and Adult Disease Research (CPAD) (Formerly CDR)	\$10,000	\$50,000	\$40,000
NIHAC - Convert Building 102 A and B Wings, Poolesville	\$10,000	\$47,000	\$37,000
Replace Clinical Center Patient and Visitor Parking (MLP-12)	\$0	\$50,577	\$50,577
Repair Parking Garages, Bethesda	\$5,000	\$10,563	\$5,563
Total Increases	\$62,500	\$276,207	\$213,707
<u>Decreases</u>			
<u>A. Program:</u>			
Repairs & Improvements	\$98,402	\$62,993	-\$35,409
Building 57 Replace Switchgear	\$12,000	\$0	-\$12,000
Electrical Switching Station & Emergency Generators 59/59A	\$12,000	\$0	-\$12,000
Bldg. 10 CC Radiopharmacy & Biologics Radiolabeling Facility	\$24,609	\$0	-\$24,609
Building 37 Intravital Microscopy Facility CCR	\$9,126	\$0	-\$9,126
Bldg. 35 Roof Replacement	\$5,028	\$0	-\$5,028
Building 41 Replace Building Reheat Water Piping Systems	\$7,500	\$3,950	-\$3,550
NLM Bldg 38: First Floor Phase 2:	\$5,000	\$0	-\$5,000
Replace Building Reheat Water Piping Systems, Building 49	\$10,195	\$0	-\$10,195
Boiler Controls Upgrade 2 and Balance of Plant, Building 11	\$4,612	\$0	-\$4,612
Clinical Center E Wing Renovation	\$38,590	\$0	-\$38,590
NIAID RML Comparative Medicine Center (RCMC), MT (CARES Act project), Building B	\$4,500	\$1,000	-\$3,500
Bulk Fuel Oil Underground Storage Tank	\$13,403	\$0	-\$13,403
Cooling Tower VFDs and Fan Motor Replacement Bldg. 11	\$9,279	\$0	-\$9,279
NIAID VRC Lab Expansion Bldg 40A North, Bethesda	\$18,860	\$5,850	-\$13,010
Replace R22 Refrigerant Chillers	\$6,445	\$0	-\$6,445
Quarters 15 B1+B2 Renovations for TCI	\$7,951	\$0	-\$7,951
Total Decreases	\$287,500	\$73,793	-\$213,707

BUDGET GRAPH



BUDGET AUTHORITY BY ACTIVITY

**NATIONAL INSTITUTES OF HEALTH
Buildings & Facilities**

Budget Authority by Activity
(Dollars in Thousands)

FPAA Number	Priority Number	Project	FY 2022 Final	FY 2023 Enacted	FY 2024 President's Budget	FY 2024 +/- FY 2023 Enacted
N-22-003	1	Demolition of Bldg 29/29A (CPAD Enabling Task 2)	\$0	\$7,500	\$19,915	\$12,415
N-25-003	29	Bldg 38 Install Exhaust Equipment Bldg 38 Mechanical Rooms	\$0	\$0	\$7,600	\$7,600
N-24-013	27	Building 101 (Rall) Elevator Repairs for Modules A-E, RTP	\$0	\$0	\$5,510	\$5,510
N-24-012	25	Bldg. 8A Replace AHUs 5 & 6	\$0	\$0	\$8,706	\$8,706
N-23-008	22	Bldg 4 Rooms 326-341, Laboratory Renovation	\$0	\$0	\$6,714	\$6,714
N-23-006	18	Electrical Underground Distribution Repairs, RTP	\$0	\$0	\$6,747	\$6,747
N-23-007	21	Replace Steam and Condensate Lines from Manhole 26 to Manhole 84	\$0	\$0	\$4,865	\$4,865
N-24-010	20	Bldg 31A HVAC Replacement	\$0	\$0	\$7,580	\$7,580
N-22-007	17	Replace Switchgear and Electrical Panels, Bldg 49	\$0	\$0	\$6,500	\$6,500
N-22-016	11	Replace Building Reheat Water Piping Systems, Building 49	\$0	\$10,195	\$0	-\$10,195
N-15-008	2	Center for Pediatrics and Adult Disease Research (CPAD) (Formerly CDR)	\$0	\$10,000	\$50,000	\$40,000
N-22-012	9	Boiler Controls Upgrade 2 and Balance of Plant, Building 11	\$0	\$4,612	\$0	-\$4,612
N-19-014	8	NIHAC - Convert Building 102 A and B Wings, Poolesville	\$0	\$10,000	\$47,000	\$37,000
N-17-001	13	Replace Clinical Center Patient and Visitor Parking (MLP-12)	\$1,950	\$0	\$50,577	\$50,577
N-11-003	NA	Clinical Center E Wing Renovation	\$2,000	\$38,590	\$0	-\$38,590
N-20-008	14	Repair Parking Garages, Bethesda	\$0	\$5,000	\$10,563	\$5,563
N-15-009	NA	Surgery, Radiology and Lab Medicine Building (SRLM)	\$87,000	\$30,000	\$43,930	\$13,930
N-17-003	NA	NIAID RML Comparative Medicine Center (RCMC), MT (CARES Act project), Building B	\$3,300	\$4,500	\$1,000	-\$3,500
N-20-006	6	Bulk Fuel Oil Underground Storage Tank	\$0	\$13,403	\$0	-\$13,403
N-22-013	NA	Cooling Tower VFDs and Fan Motor Replacement Bldg. 11	\$0	\$9,279	\$0	-\$9,279
N-17-005	NA	NIAID VRC Lab Expansion Bldg 40A North, Bethesda	\$4,000	\$18,860	\$5,850	-\$13,010
N-15-007	NA	Replace R22 Refrigerant Chillers	\$0	\$6,445	\$0	-\$6,445
N-21-003	NA	Quarters 15 B1+B2 Renovations for TCI	\$0	\$7,951	\$0	-\$7,951
N-21-002	3	Building 57 Replace Switchgear	\$0	\$12,000	\$0	-\$12,000
N-18-004	NA	Electrical Switching Station & Emergency Generators 59/59A	\$62,000	\$12,000	\$0	-\$12,000
N-19-008	NA	Bldg. 10 CC Radiopharmacy & Biologics Radiolabeling Facility	\$0	\$24,609	\$0	-\$24,609
N -21-004	5	Building 37 Intravital Microscopy Facility CCR	\$0	\$9,126	\$0	-\$9,126
N-24-009	12	Bldg. 35 Roof Replacement	\$0	\$5,028	\$0	-\$5,028
N-20-007	NA	NLM Bldg 38: First Floor Phase 2:	\$0	\$5,000	\$0	-\$5,000
N-23-005	7	Building 41 Replace Building Reheat Water Piping Systems	\$0	\$7,500	\$3,950	-\$3,550
		Repairs & Improvements	\$89,750	\$98,402	\$62,993	-\$35,409
TOTAL			\$250,000	\$350,000	\$350,000	\$0

BUILDING AND FACILITIES

Authorizing Legislation: Section 301 and Title IV of the Public Health Services Act, as amended.

Budget Authority (BA):

	FY 2022 Final	FY 2023 Enacted	FY 2024 President's Budget	FY 2024 +/- FY 2023
BA	\$250,000,000	\$350,000,000	\$350,000,000	\$0
Obligations	376,452,443	366,781,806	350,000,000	-16,781,806

Program Descriptions

N-22-003 Demolition of Buildings 29 and 29A: Buildings 29 and 29A are currently listed in the NIH real property inventory portfolio as outdated, BMAR-intensive, and energy-intensive buildings. Demolition of Buildings 29 and 29A will reduce BMAR by approximately \$70 million. Second, demolishing these buildings will eliminate costs to the Government to maintain and operate these unoccupied buildings (about \$200,000 annually for Building 29 and \$471,000 for Building 29A). Third, demolition of these buildings will render the land available for construction of the new translational research building referred to as the Center for Pediatric and Adult Disease (CPAD), Project N-15-008, described below.

N-18-008 Center for Pediatric and Adult Disease Research (CPAD): The Center for Pediatric and Adult Disease Research (CPAD) is a 413,298-occupied gross square foot (GSF) multi-story building. This new facility would comprise distinct research sections on pediatric and adult chronic diseases, anchored by a mutually accessible complex for supporting biocomputational and advanced cell-line/animal modeling units. The CPAD would address the needs for integrative, translational research practices currently lacking on the NIH campus, namely traditional bench laboratory space integrated with advanced biocomputational and cell-line/animal space to advance the development of therapeutics most effectively. The focus would be on pediatric diseases, which in part include cancer and genetic (inborn) conditions, and adult chronic diseases, which include cardiovascular disease, diabetes, chronic pain, multiple sclerosis, and diseases associated with aging. The CPAD would catalyze the type of multi-disciplinary research necessary to develop cures through state-of-the-art laboratory design and integrated cores of expertise. Examples include advanced live imaging and phenotyping cores to better examine how the human meta-organism — our cells and the myriad microbes we host — conspire to enable proper immune function and nutrition, now recognized as integral to treating autoimmune diseases. Similarly, the CPAD would house cryo-EM for near-atomic-level imaging and mass cytometry, or CyTOF, to determine cell properties — expensive technologies to be located centrally for maximum use and efficiency. Additionally, the facility would enable NIH to

modernize its lab animal program and reduce costs by breeding fewer and better disease-specific animals and developing "tissue-on-a-chip" technology. The CPAD will replace 10 outdated, BMAR-intensive, energy-intensive buildings and an animal area in Building 10 with an energy-efficient facility. NIH anticipates a 50 percent reduction in operating costs and a \$49.5 million reduction in BMAR.

N-17-001 Replace Clinical Center Patient and Visitor Parking (MLP-12): The proposed multilevel parking garage 12 (MLP-12) would have a capacity of 1,400 parking spaces. It will be constructed on the site of an existing surface lot (Lot 42), which has a capacity of 249 parking spaces. When combined with the previously constructed MLP-14, MLP-12 will enable NIH to solve its parking issues by removing underground parking from the Ambulatory Care Research Facility (ACRF) and several surface parking lots in the center of the campus. It will not increase the parking capacity on campus.

The existing three-level substructure ACRF parking garage is the primary parking facility for the Clinical Center Complex (CCC), providing 1,335 parking spaces for patients, visitors, and staff. Despite on-going maintenance, the ACRF garage has severe structural deficiencies due to the concrete's degradation and the corrosion of the underlying (exposed) rebar. Repairs to the garage are expensive due to patient occupancy on floors above. This condition poses a safety threat to garage users and a liability threat to the government due to the potential for falling pieces of concrete. The garage is located beneath an occupied building, requiring all vehicles to be inspected for Improvised Explosive Devices (IED). Vehicle screening operations are labor-intensive and expensive. While the vehicle screening process serves as a deterrent and reduces the risks of vehicle-borne explosives, the risk still exists, as does the risk of vehicle fires.

Surface parking lots are another risk that NIH is managing; Lots 10H, 1B, 4A, and 5A all provide parking in the center of campus and are problematic for several reasons. The first issue is the pedestrian safety risk. The parking lots attract a significant volume of vehicular traffic toward the campus interior, increasing the likelihood of a pedestrian/vehicle conflict. This was tragically exposed when Lot 10H was the scene of a pedestrian fatality on January 24, 2018. In recognition of the criticality of pedestrian safety, the Bethesda Campus Master Plan calls for shifting parking from the interior of the campus to the perimeter. The second risk regards stormwater management and climate change. Currently, stormwater enters the NIH Clinical Center during intense downpours as the stormwater overloads the campus and regional stormwater infrastructure. The Bethesda Campus Master Plan calls for converting the surface parking lots (which are currently impervious asphalt) to a permeable green space with stormwater storage underneath it. Parking lots 10H, 1B, 4A, and 5A have a capacity of 601 parking spaces.

The closure of the ACRF parking garage and surface lots, combined with the construction of MLP-12 and MLP-14, are part of the "NIH Bethesda Campus Parking Ratio Reduction Plan" that was submitted to the National Capital Planning Commission (NCPC) as part of the 2020 Amendment to the Bethesda Campus Comprehensive Master Plan. In summary, the construction of MLP-12 will improve pedestrian safety, improve security by avoiding parking under occupied structures, and reduce stormwater-related risks by transitioning from surface parking to structured parking.

N-19-014 NIH Animal Center (NIHAC) – Convert Building 102 A and B Wings, Poolesville: To meet current research demands and keep pace with future projections, additional animal housing is needed for the NIH intramural research program (IRP) that is both suitable for nonhuman primates and flexible enough to be adapted to other species as needed. Changes to current research directions at the NIH IRP have diminished the need for canine and other animal models housed in kennels. Offsetting these decreases have been increases in the need for nonhuman primate and multi-species housing across the NIH, especially in relation to infectious disease research. The new facility can accommodate an increase in demand and provide swing space in the event of short or long-term building closures on the Bethesda campus. This project will demolish the existing, underutilized A and B wings (originally used for housing canines) of Building 102 at the NIHAC in Poolesville, Maryland and construct a new facility on the existing footprint (approximately 40,000 gross square feet, or GSF) to include animal holding, cage wash, procedure, lab, administrative functions, support spaces, and mechanical rooms. Additionally, 3,700 net assignable square feet (NASF) of Division of Police (DP) support space will be located on the second/penthouse level of the facility. The spaces include administrative offices, classroom, fitness testing, locker/toilet rooms, and storage. A separate lobby and elevator will provide access to this second level and is independent of the vivarium functions of the facility. These spaces will support the Division of Police during their training activities while on the campus.

The following projects are not new starts. Rather, they have already been funded for construction. They are mentioned because funds in this appropriation may be needed to address any unforeseen conditions that might arise during construction.

N-17-003 National Institute of Allergy and Infectious Disease (NIAID) Rocky Mountain Lab (RML) Comparative Medicine Center (RCMC), Montana, Building B: The animal holding space at RML, located in Missoula, Montana, is currently operating at full capacity; therefore, there is insufficient holding space for nonhuman primates and no holding space for new non-traditional research animals, such as bats and certain rodent species, which are crucial to RML's research on emerging infectious diseases. A lack of animal holding space delays the RML response to ongoing research and outbreaks as they occur. In addition, the space limitation forces shortened acclimation periods for incoming animals. Longer acclimation periods would allow animals time to stabilize in a new environment and promote both animal welfare and more consistent research subjects. The lack of sufficient holding space for nontraditional research species such as bats, which are an important reservoir host for several emerging infectious diseases including Ebola virus, has negatively impacted RML's critical research mission. RML scientists currently have a research program in Africa on bats as vectors of disease but cannot start a vigorous program at RML without new animal holding space. Without adequate holding space, RML's research response to outbreaks such as Ebola, Lassa, or Zika will be significantly compromised or delayed. RML is also seriously limited on the amount of storage space available for the Rocky Mountain Veterinary Branch (RMVB) and the RCMC would include adequate storage for RMVB's caging, bedding, and feeding requirements.

There are no animal research facilities that can be leased or contracted operations for these types of animals near Hamilton or nearby Missoula, Montana. There are no other facilities available and the proximal need for animal housing on the RML campus is paramount to continuing the mission of research on infectious diseases. While the initial contract award of a construction contract was funded with the Coronavirus Aid, Relief, and Economic Security (CARES) Act and prior year B&F funds, this request is associated with construction contingency needs to address issues such as potential unforeseen conditions.

N-17-005 NIAID VRC Lab Expansion Building 40A North, Bethesda: The NIAID Vaccine Research Center (VRC) is in the forefront of developing vaccines for infectious disease threats, including coronaviruses (SARS-CoV-2, MERS-CoV, SARS-CoV), influenza, HIV-AIDS, and Ebola. The VRC is frequently called upon to address biodefense threats and global pandemic emerging infectious disease threats.

The current VRC Building 40 research space is not sufficient to support the surge in research aimed at protecting against global health threats. Building use is currently 35 percent to 45 percent over designed capacity. Its space allocation of approximately 130 Net Assignable Square Feet (NASF) per person is well below the NIH intramural utilization metric of 200 NASF per person, stressing personnel workflow and VRC infrastructure, potentially compromising laboratory safety, and constricting the VRC's ability to recruit and retain mission-critical expertise to create new programs. Additional space is urgently needed to alleviate overcrowding and to help accelerate development, manufacturing, and clinical study of vaccines and biologics against pandemic health threats. Additionally, the added space would allow NIAID to move costly off-campus research space located in contract facilities back to federally owned facilities on the Bethesda campus. While the initial contract award of a construction contract was funded with CARES Act and prior year B&F funds, this request is associated with construction contingency needs to address issues such as potential unforeseen conditions.

N-15-009 Surgery, Radiology, and Laboratory Medicine Building (SRLM): The Ambulatory Care Research Facility (ACRF), a major component of the Clinical Center Complex (CCC), opened in 1982 and houses the Departments of Perioperative Medicine, Interventional Radiology, Radiology & Imaging Sciences, and Laboratory Medicine. These Departments utilize advanced and technology-dependent cutting-edge programs supporting NIH's translational research initiatives to improve the nation's health.

The project will construct an 8-story, 527,000 gross square feet (GSF) addition, as well as repurpose and renovate two floors (103,000 GSF) of the west laboratory wing of the CRC. The new SRLM Building will include the Clinical Center's (CC) Surgical (Department of Perioperative Medicine and Interventional Radiology – DPM/IR), Radiology (Radiology and Imaging Sciences – RADIS) and Laboratory Medicine (Department of Laboratory Medicine - DLM) departments now located in the ACRF's S and T wings and the National Cancer Institute's research laboratories located on floors 1W and 3W of the CRC West laboratory wing. These departments are involved in some of the most advanced programs supporting NIH's Translational Research initiatives, which is the cornerstone of the ability for the NIH to perform its fundamental mission of clinical research. The addition will also house the National Heart, Lung, and Blood Institute's Catheterization Laboratory.

Recent reports have determined a high degree of risk to patient safety based on deteriorating infrastructure conditions of the 1982-era ACRF. This project will mitigate several major deficiencies, such as undersized and unreliable infrastructure systems (normal and emergency power, communication systems, heating, cooling, and ventilation), as well as inefficient routes of circulation and limitation restricting the flexibility and adaptability to address growth and change. This project will also address structural problems that have caused unacceptable vibration levels in various areas of the building and functional space inadequacies and inefficiencies. While the initial contract award of a design-build contract in March 2022 was funded with prior year Nonrecurring Expenses Fund and prior year B&F funds, the FY 2024 request is associated with construction contingency needs to address issues such as potential unforeseen conditions.

N-20-008 Repair Parking Garages, Bethesda: The NIH Bethesda Campus hosts 27 ICs, employs more than 10,000 employees, and houses more than 20,000 patients and visitors every day. To meet the parking needs of the NIH community, parking surface lots, parking garages, and metered spaces are offered across the Bethesda campus. As part of this parking system, there are several multi-level parking (MLP) garages; all at full capacity and experiencing high traffic volume, especially during weekday working hours between 8:00 a.m. and 5:00 p.m.

The MLP structures on the Bethesda campus were constructed at different times, so their condition and service life vary. However, all have common issues -- the structures are deteriorating at an alarming rate. Several engineering inspections and condition assessments have been performed in the parking structures, dating back to 2012. Assessment results have identified deficiencies and critical issues that are causing failing conditions that make it difficult to maintain and service the garages. Notably, adding to major deterioration problems, recently discovered pieces of falling delaminated concrete from the underside of garage deck slabs are posing serious safety risks to garage users, including visitors, patients, and NIH staff and contractors. To correct and mitigate garage deterioration and safety issues, NIH is proposing a garage repair/restoration program that will provide for a complete remediation of the parking structures (including stair towers) to include concrete and drainage repairs, as well as any other repairs necessary to ensure the safety and structure integrity of the parking garage system.

Repairs & Improvements (R&I): The Repairs & Improvements (R&I) program will address the physical plant, building structures, utility systems, roads, and grounds at all NIH sites. These projects will help sustain efficient and effective performance of NIH's real property assets to meet ongoing and projected research requirements and to offset the deterioration and obsolescence caused by age and use.

Facilities infrastructure improvements are necessary to meet shifting research priorities and to meet NIH and HHS goals for improving the condition of NIH buildings. Such efforts include upgrading building systems, extending utility infrastructure, and implementing other capital repairs to buildings and infrastructure to extend their useful life.

These projects support the continued repair and upgrade of deteriorated infrastructure, including steam and chilled water distribution systems; structural repairs to older buildings that NIH may

continue using effectively; upgrading plumbing systems; repairing elevators; upgrading heating, ventilating, and air conditioning systems; replacing deteriorated fan coil units in multiple facilities; and addressing evolving research requirements.

Additionally, this program supports a comprehensive series of repairs and improvements to ensure NIH retains accreditation by the Joint Commission (for its healthcare facilities) and by the Association for the Assessment and Accreditation of Laboratory Animal Care (for its animal research facilities).

The FY 2024 request for B&F is critical to NIH's long-term effort to provide the necessary funding for stewardship of NIH facilities. The conduct of safe, reproducible science depends heavily on the provision of safe, reliable buildings. The requested increase will enable NIH to provide its scientists with the facilities and infrastructure that they need to preserve and enhance the NIH's position as the world's premier biomedical research organization.

Status of the National Academies of Sciences, Engineering, and Medicine (NASEM) Report

The FY 2017 Labor, Health and Human Services, and Education, and Related Appropriations Bill directed NIH to enter into a contract with the NASEM to study the capital needs of NIH's Bethesda Campus. It is important to note that while the NASEM Consensus Study was limited to the Bethesda Campus of NIH, the B&F appropriation must satisfy the facilities requirements for all of NIH's sites, not just Bethesda. These other sites are Poolesville, MD; Frederick, MD; Research Triangle Park, NC, and Rocky Mountain Labs, MT. The 185-page NASEM report was made public on August 26, 2019, and is available on-line.² The report contains 14 recommendations. Two of the recommendations, 4.1 and 4.2, focus on the need for increases to the B&F appropriation. This Congressional Justification includes an increase that is consistent with the NASEM recommendations. The remaining 12 recommendations relate to project prioritization, governance, networking with other large facility owners, and leveraging best practices. Following is a more detailed summary of the 12 procedural recommendations:

- 4.3: NIH should implement a Deferred Maintenance and Repair Program that will reduce Backlog of Maintenance and Repair (BMAR) and meet building Condition Index (CI) targets. *Status: NIH has developed a strategy to deploy an Integrated Workplace Management System (IWMS) that will assist with the achievement of this goal. Second, NIH entered into a contract with SmithGroup, an international architectural, engineering, and planning firm, to advise NIH as to how to reduce the BMAR and achieve CI targets. Third, NIH awarded a contract for deployment of the IWMS, which is in progress. Fourth, NIH has been developing a new BMAR reduction framework to group individual BMAR items into multidisciplinary projects using a pilot optimization model. While all four of these efforts will enhance NIH's ability to best target available resources, there will also be a need to increase facilities investments as mentioned in recommendations 4.1 and 4.2.*

² www.nap.edu/read/25483/chapter/1

- 5.1: NIH should revise its Building and Facilities (B&F) prioritization model so no less than one-third of the total points are assigned to Condition Index and Mission Dependency. *Status: Complete and in use. The new model is in use and 80 percent of the total points are assigned to Condition Index and Mission Dependency. The Research Facilities Advisory Committee (RFAC) utilizes this model to prioritize all projects with a construction value of \$3.5 million or greater. The results of this prioritization model are shared with the Appropriations Committees on a quarterly basis.*
- 5.2: NIH should move forward as quickly as possible with the following projects: Replace Building 12; Replace Building 14/28 complex; Renovate or replace portions of Building 10 complex. *Status: NIH continues to work with the Department of Health and Human Services and the Office of Management and Budget to investigate feasibility of funding these projects. The most critical is the Surgery, Radiology, and Laboratory Medicine (SRLM) project, one of NIH's highest priority projects. The design-build contract award for the SRLM took place in March 2022, and construction is now underway. A site for the replacement of the Building 14/28 site has been identified, but it is encumbered by Buildings 29 and 29A, which are beyond economical repair and need to be demolished. This Congressional Justification includes funding for the demolition of Buildings 29 and 29A and design for the Center for Pediatric and Adult Disease Research (CPAD), which will enable NIH to demolish the Building 14 Complex and two facilities located in the building 10 complex.*
- 5.3: NIH should seek out other federal agencies and private sector advisors to determine best practices in administering the NIH Capital Asset Management Program. Consider quarterly reviews with these peer advisors. *Status: NIH has established an agreement with the Federal Facilities Council (FFC), which was established in 1953, to share with NIH best practices across the federal sector. Additional outreach is underway.*
- 6.1: NIH should integrate its research strategic plan with its capital facility asset management plans, with explicit prioritization aimed at relating the long-term research strategy to the long-term campus Master Plan. These plans should undergo annual review, at the highest levels of NIH. *Status: The recently issued NIH-Wide Strategic Plan for Fiscal Years 2021-2025 includes important guidance regarding facilities, a topic that was not addressed in the previous strategic plan.*³
- 6.2: NIH should establish a formal external interdisciplinary peer review panel to provide ongoing review of NIH capital assets, the annual project plan, the 5-year plan, the master plan, and the integrated research strategic plan and master plan. *Status: The Federal Facilities Council (FFC) has agreed to review the NIH capital assets, annual project plan, 5-year plan, master plan, and the integrated*

³ The NIH-Wide Strategic Plan is available at www.nih.gov/about-nih/nih-wide-strategic-plan.

research strategic plan and master plan. This formal, external, interdisciplinary approach will provide objective perspectives to identify opportunities that might not be apparent to NIH staff. NIH has FFC membership, and FFC outreach is ongoing.

- 6.3: NIH should establish processes and a system that ensure third-party, expert peer review of all adopted Office of Research Facilities (ORF) preplanning programs of requirements (PORs) and total project capital cost models. *Status: NIH concurs and has engaged an external consultant to provide a pilot financial peer review of selected NIH programs of requirements (POR) and total project capital cost models and schedules.*
- 7.1: NIH should study non-NIH federal research programs and adopt functionally similar assessment, prioritization, and funding strategies to better meet facilities and infrastructure investment needs. *Status: NIH concurs and continues to share best practices and lessons learned with the Federal Facilities Council as well as eight federal organizations: the Centers for Disease Control and Prevention (CDC), the Environmental Protection Agency, the U.S Food and Drug Administration, the National Aeronautics and Space Administration, the National Institute of Standards and Technology, the Naval Research Laboratory, Smithsonian, and the United States Department of Agriculture. These resources were shared with NIH's consultant and included as part of their review and recommendations described in the Director's Overview above.*
- 7.2: NIH should implement a capital facilities planning governance structure, facilitating an integrated, transparent, and inclusive capital asset planning decision making process that tracks progress toward strategic and programmatic objectives. *Status: On September 6, 2019, the NIH Director enhanced the existing governance structure, referred to as the Facilities Working Group (FWG). These improvements include added the Director of the Office of Research Support and Compliance, increased number of Scientific/Clinical Directors from two to three, and improved diversity in the composition of the governance body.*
- 7.3: NIH should convene an annual capital facilities planning workshop or similar forum with other federal agencies and academic research institutions to assess NIH capital asset management program processes and identify improvements. *Status: The first annual capital facilities planning workshop occurred on October 22, 2020. The second occurred on November 4, 2021, and involved presentations by the Smithsonian Institution regarding Capital Project Risk Management and by the University of Wisconsin regarding Asset Management. The third occurred on November 3, 2022 and involved presentations about critical facilities (biosafety level three & four labs, current Good Manufacturing Practices [cGMP] facilities for pharmaceuticals, health care facilities).*
- 7.4: NIH should align its organizational structure with scientific research and capital assets management strategies and plans. In doing so, NIH should consider

assigning a senior organizational leader with such responsibilities and empowering that person with commensurate authority. *Status: On January 31, 2020, the NIH Director appointed, in writing, the Deputy Director for Management as the NIH Senior Real Property Officer.*

- 8.1: NIH should prioritize and synchronize the NIH-wide Strategic (Research) Plan and the 2013 Bethesda Campus Master Plan enhancing interactions and collaboration among research personnel with shared space and facilities, and flexible and adaptable facilities that accommodate collaboration. *Status: This is an ongoing effort and will not have a discrete completion date.*

**NATIONAL INSTITUTES OF HEALTH
Buildings & Facilities**

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2015	\$128,663,000			\$128,863,000
Rescission				\$0
2016	\$128,863,000	\$132,640,000	\$128,863,000	
Rescission				\$0
2017	\$128,863,000			\$128,863,000
Rescission				\$0
2018	\$98,615,000	\$128,863,000	\$128,863,000	\$128,863,000
Rescission				\$0
2019	\$200,000,000	\$200,000,000	\$200,000,000	\$200,000,000
Rescission				\$0
2020	\$200,000,000	\$200,000,000	\$300,000,000	\$200,000,000
Rescission				\$0
2021	\$300,000,000	\$200,000,000	\$200,000,000	\$200,000,000
Rescission				\$0
2022	\$250,000,000	\$250,000,000	\$275,000,000	\$250,000,000
Rescission				\$0
2023	\$300,000,000	\$300,000,000	\$350,000,000	\$350,000,000
Rescission				\$0
2024	\$350,000,000			

AUTHORIZING LEGISLATION

**NATIONAL INSTITUTES OF HEALTH
Buildings & Facilities**

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2023 Amount Authorized	FY 2023 Enacted	2024 Amount Authorized	FY 2024 President's Budget
Research and Investigation	Section 301	42§241	Indefinite	\$350,000,000	Indefinite	\$350,000,000
Buildings & Facilities	Section 401(a)	42§281	Indefinite		Indefinite	
Total, Budget Authority				\$350,000,000		\$350,000,000

AMOUNTS AVAILABLE FOR OBLIGATION

NATIONAL INSTITUTES OF HEALTH
Buildings & Facilities

Amounts Available for Obligation ¹
(Dollars in Thousands)

Source of Funding	FY 2022 Final	FY 2023 Enacted	FY 2024 President's Budget
Appropriation	\$250,000	\$350,000	\$350,000
Rescission	\$0	\$0	\$0
Sequestration	\$0	\$0	\$0
Supplemental	\$0	\$0	\$0
Subtotal, adjusted appropriation	\$250,000	\$350,000	\$350,000
Secretary's Transfer	\$0	\$0	\$0
Recovery for prior year obligations	\$10,167	\$0	\$0
Unobligated balance, start of year	\$134,323	\$16,782	\$0
Subtotal, adjusted budget authority	\$144,489	\$16,782	\$0
Subtotal	\$394,489	\$366,782	\$350,000
Unobligated balance, end of year (carryover)	\$16,782	\$0	\$0
Unobligated balance lapsing	\$1,255	\$0	\$0
Total obligations	\$376,452	\$366,782	\$350,000

¹ Excludes the following amounts (in thousands) for reimbursable activities carried out by this account:
FY 2022 - \$0 FY 2023 - \$0 FY 2024 - \$0

BUDGET AUTHORITY BY OBJECT CLASS

**NATIONAL INSTITUTES OF HEALTH
Buildings & Facilities**

Budget Authority by Object Class¹
(Dollars in Thousands)

	FY 2023 Enacted	FY 2024 President's Budget	FY 2024 +/- FY 2023
Total compensable workyears:			
Full-time equivalent	0	0	0
Full-time equivalent of overtime and holiday hours	0	0	0
Average ES salary	\$0	\$0	\$0
Average GM/GS grade	0.0	0.0	0.0
Average GM/GS salary	\$0	\$0	\$0
Average salary, Commissioned Corps (42 U.S.C. 207)	\$0	\$0	\$0
Average salary of ungraded positions	\$0	\$0	\$0
OBJECT CLASSES	FY 2023 Enacted	FY 2024 President's Budget	FY 2024 +/- FY 2023
Personnel Compensation			
11.1 Full-Time Permanent	\$0	\$0	\$0
11.3 Other Than Full-Time Permanent	\$0	\$0	\$0
11.5 Other Personnel Compensation	\$0	\$0	\$0
11.7 Military Personnel	\$0	\$0	\$0
11.8 Special Personnel Services Payments	\$0	\$0	\$0
11.9 Subtotal Personnel Compensation	\$0	\$0	\$0
12.1 Civilian Personnel Benefits	\$0	\$0	\$0
12.2 Military Personnel Benefits	\$0	\$0	\$0
13.0 Benefits to Former Personnel	\$0	\$0	\$0
Subtotal Pay Costs	\$0	\$0	\$0
21.0 Travel & Transportation of Persons	\$0	\$0	\$0
22.0 Transportation of Things	\$0	\$0	\$0
23.1 Rental Payments to GSA	\$0	\$0	\$0
23.2 Rental Payments to Others	\$0	\$0	\$0
23.3 Communications, Utilities & Misc. Charges	\$0	\$0	\$0
24.0 Printing & Reproduction	\$0	\$0	\$0
25.1 Consulting Services	\$0	\$0	\$0
25.2 Other Services	\$0	\$0	\$0
25.3 Purchase of Goods and Services from Government Accounts	\$0	\$0	\$0
25.4 Operation & Maintenance of Facilities	\$0	\$0	\$0
25.5 R&D Contracts	\$0	\$0	\$0
25.6 Medical Care	\$0	\$0	\$0
25.7 Operation & Maintenance of Equipment	\$0	\$0	\$0
25.8 Subsistence & Support of Persons	\$0	\$0	\$0
25.0 Subtotal Other Contractual Services	\$0	\$0	\$0
26.0 Supplies & Materials	\$0	\$0	\$0
31.0 Equipment	\$0	\$0	\$0
32.0 Land and Structures	\$350,000	\$350,000	\$0
33.0 Investments & Loans	\$0	\$0	\$0
41.0 Grants, Subsidies & Contributions	\$0	\$0	\$0
42.0 Insurance Claims & Indemnities	\$0	\$0	\$0
43.0 Interest & Dividends	\$0	\$0	\$0
44.0 Refunds	\$0	\$0	\$0
Subtotal Non-Pay Costs	\$350,000	\$350,000	\$0
Total Budget Authority by Object Class	\$350,000	\$350,000	\$0

¹ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.