FY 2004 BUDGET DATA: Table of Contents

SCIENCE, AERONAUTICS AND EXPLORATION
(INCLUDING TRANSFER OF FUNDS)

For necessary expenses, not otherwise provided for, in the conduct and support of science, aeronautics and exploration research and development activities, including research, development, operations, support and services; maintenance; construction of facilities including repair, rehabilitation, revitalization, and modification of facilities, construction of new facilities and additions to existing facilities, facility planning and design, and acquisition or condemnation of real property, as authorized by law; environmental compliance and restoration; space flight, spacecraft control and communications activities including operations, production, and services; program management; personnel and related costs, including uniforms or allowances therefor, as authorized by 5 U.S.C. 5901–5902; travel expenses; purchase and hire of passenger motor vehicles; not to exceed $24,000 for official reception and representation expenses; and purchase, lease, charter, maintenance and operation of mission and administrative aircraft, $7,660,900 to remain available until September 30, 2005, of which amounts as determined by the Administrator for salaries and benefits; training, travel and awards; facility and related costs; information technology services; science, engineering, fabricating and testing services; and other administrative services may be transferred to "Space flight capabilities" in accordance with section 312(b) of the National Aeronautics and Space Act of 1958, as amended by Public Law 106–377.

SPACE FLIGHT CAPABILITIES
(INCLUDING TRANSFER OF FUNDS)

For necessary expenses, not otherwise provided for, in the conduct and support of Space Flight capabilities research and development activities, including research, development, operations, support and services; maintenance; construction of facilities including repair, rehabilitation, revitalization and modification of facilities, construction of new facilities and additions to existing facilities, facility planning and design, and acquisition or condemnation of real property, as authorized by law; environmental compliance and restoration; space flight, spacecraft control and communications activities including operations, production, and services; program management; personnel and related costs, including uniforms or allowances therefor, as authorized by 5 U.S.C. 5901–5902; travel expenses; purchase and hire of passenger motor vehicles; not to exceed $24,000 for official reception and representation expenses; and purchase, lease, charter, maintenance and operation of mission and administrative aircraft, $7,782,100, to remain available until September 30, 2005, of which amounts as determined by the Administrator for salaries and benefits; training, travel and awards; facility and related costs; information technology services; science, engineering, fabricating and testing services; and other administrative services may be transferred to ''Science, aeronautics and exploration'' in accordance with section 312(b) of the National Aeronautics and Space Act of 1958, as amended by Public Law 106–377.

OFFICE OF INSPECTOR GENERAL

For necessary expenses of the Office of Inspector General in carrying out the Inspector General Act of 1978, as amended, $26,300,000.

ADMINISTRATIVE PROVISIONS

Notwithstanding the limitation on the availability of funds appropriated for "Science, aeronautics and exploration", or "Space Flight capabilities" by this appropriations Act, when any activity has been initiated by the incurrence of obligations for construction of facilities as authorized by law, such amount available for such activity shall remain available until expended. This provision does not apply to the amounts appropriated for institutional minor revitalization and construction of facilities, and institutional facility planning and design.

Notwithstanding the limitation on the availability of funds appropriated for "Science, aeronautics and exploration", or "Space Flight capabilities" by this appropriations Act, the amounts appropriated for construction of facilities shall remain available until September 30, 2006.

From amounts made available in this Act for these activities, the Administration may transfer amounts between aeronautics of the "Science, Aeronautics and Exploration" account and crosscutting technologies of the "Space flight capabilities" account.

Funds for announced prizes otherwise authorized shall remain available, without fiscal year limitation, until the prize is claimed or the offer is withdrawn.

FY 2004 BUDGET DATA: Distribution of Funds by Installation

Millions of Dollars		2003	2004	Center Major Activities by Budget Theme:
Ames Research Center	Direct Personnel	99	101	*Aeronautics Technology:* Airspace Systems Program (Advanced Air Transportation Technologies, Virtual Airspace Modeling and Simulation, Airspace Operation System); Aviation Safety and Security (Safe Systems Technologies). *Mission & Science Measurement Technology:* Computing, Information, and Communication Technology Program (CICT / IT Strategic Research; Intelligent Systems; Communication, Network, Information System project); Engineering for Complex Systems Program (Resilient Systems and Operations; Knowledge Engineering for Safety and Success). *Biological Sciences Research*: ISS Fundamental Space Biology operations, Fundamental Space Biology Research. *Origins*: SOFIA, Kepler. *Earth System Science*: Supercomputing Research.
	Direct Travel	4	4	
	Center G& A	136	129	
	Service Pools	169	173	
	Program CoF	0	0	
	Total	408	407	
	FTEs	1,506	1,444	
Glenn Research Center	Direct Personnel	149	156	*Solar System Exploration:* In-Space Propulsion, Nuclear Power, Jupiter Icy Moons Orbiter. *Physical Sciences Research:* Fluids and Combustion Facility, ISS Physical Sciences operations, Fundamental Microgravity Research. *Aeronautics Technology*: ERAST, Aviation Safety Program, Airspace Systems Program, Vehicle Systems Technology (Quiet Aircraft Technology, 21st Century Aircraft, Ultra-Efficient Engine Technology, Propulsion and Power). *Space & Flight Support:* Plum Brook Decommissioning. *Space Launch Initiative:* Orbital Space Plane, Next Generation Launch Technology. *Fundamental Technology:* CICT, Engineering for Complex Systems, Enabling Concepts & Technology.
	Direct Travel	3	3	
	Center G& A	97	100	
	Service Pools	84	84	
	Program CoF	10	7	
	Total	343	350	
	FTEs	1,924	1,934	
Langley Research Center	Direct Personnel	132	139	*Mars Exploration:* Mars Reconnaissance Orbiter (Aero assist), Mars Exploration Rovers (Entry, Descent, and Landing), Mars 2007 Scouts (Planetary aircraft and EDL). *Earth System Science:* EP/Calipso, EO/GIFTS, EOS Instruments (e.g. SAGE). *Aeronautics Technology:* Aviation Safety/Security Program, Airspace Systems Program (Small Aircraft Transportation System, AATT, VAMS), Vehicle Systems Technology (Quiet Aircraft Technology, 21st Century Aircraft Technology). *Space Launch Initiative:* OSP/NGLT subsystem technologies, X-43C (Hypersonic Flight Demonstration and Follow-ons), Rocket/Turbine-Based Combined-Cycle. *Fundamental Technology:* CICT (IT Strategic Research), ECS (Systems Reasoning for Risk Management, Resilient Systems & Operations, Simulation Based Life Cycle Mgmt. Systems), ECT (Space NRA's, Advanced Systems Concepts, Advanced Spacecraft & Science Components).
	Direct Travel	3	3	
	Center G& A	137	143	
	Service Pools	124	126	
	Program CoF	0	0	
	Total	396	411	
	FTEs	2,365	2,365	
Dryden Flight Research Center	Direct Personnel	34	34	*Space Launch Initiative:* X-37 Approach and Landing Tests; X-43A Third flight; X-43C Flight demonstration for hydrocarbon fuel scramjet. *Aeronautics Technology:* UAV flight in the National Air Space; Energy Systems for Long Duration Flight; Integrated Flight Control Systems; Systems integration on an NF-15 and C-17; Unmanned Combat Air Vehicle; Active Aeroelastic Wing; Western Aeronautical Test Range communications, tracking, data acquisition and mission control. *Earth System Science:* Airborne Science Missions. *Space Shuttle:* Alternate landing site and provides operational and technical support for missions.
	Direct Travel	1	1	
	Center G& A	39	41	
	Service Pools	37	37	
	Program CoF	0	0	
	Total	110	113	
	FTEs	595	566	
Goddard Space Flight Center	Direct Personnel	207	214	*Solar System Exploration*: MESSENGER. *Origins*: HST, and JWST. *Structure & Evolution of the Universe*: GLAST, Swift, GALEX, SPIDR, Astro-E2, Constellation-X, LISA, Technology, Research. *Sun-Earth Connections:* Solar Terrestrial Probes, Living with a Star, STEREO, AIM. *Earth System Science:* EOS, ESSP, Ground Networks, LDCM, GPM, EOSDIS, NPP, Supercomputing Operations.
	Direct Travel	6	6	
	Center G& A	161	171	
	Service Pools	143	147	
	Program CoF	5	0	
	Total	522	538	
	FTEs	3,323	3,329	
Marshall Flight Center	Direct Personnel	196	201	*Physical Sciences Research*: ISS Physical Sciences Research operations, Fundamental Microgravity Research. *Research Partnerships and Flight Support*: ISS Research Multi-User Systems. *Solar System Exploration*: In-Space Propulsion, Nuclear Propulsion. *Structure and Evolution of the Universe*: GP-B, Chandra, Solar-B; *Aeronautics Technology:* Next Generation Launch Technology; *Space Launch Initiative*: Orbital Space Plane Capabilities. *Space Shuttle:* Space Shuttle Service Life Extension. *Space Station*: ISS Development.
	Direct Travel	5	5	
	Center G& A	139	146	
	Service Pools	121	120	
	Program CoF	6	7	
	Total	467	479	
	FTEs	2,761	2,684	

FY 2004 BUDGET DATA: Distribution of Funds by Installation

Millions of Dollars		**2003**	**2004**	**Center Major Activities by Budget Theme**:
Stennis Space Center	Direct Personnel	14	16	*Earth Science Applications*: national applications program, crosscutting solutions. *Aeronautics Technology:* Next Generation Launch Technology. *Space Shuttle*: Shuttle Main engine testing. *Space and Flight Support*: propulsion testing.
	Direct Travel	<1	<1	
	Center G& A	43	39	
	Service Pools	17	17	
	Program CoF	5	2	
	Total	79	74	
	FTEs	301	300	
Johnson Space Center	Direct Personnel	249	254	*Space Shuttle:* Operations, Space Shuttle Service Life Extension. *Space Station*: ISS Development and Operations. *Physical Sciences Research:* ISS Physical Sciences Research operations. *Biological Science Research*: Bioastronautics Research, ISS Bioastronautics Research operations. *Research Partnerships & Flight Support:* ISS Research Multi-User Systems and Support. *Aeronautics Technology:* Next Generation Launch Technology. *Space Launch Initiative*: Orbital Space Plane Capabilities.
	Direct Travel	7	7	
	Center G& A	157	159	
	Service Pools	114	121	
	Program CoF	3	4	
	Total	530	545	
	FTEs	2,975	2,895	
Kennedy Space Center	Direct Personnel	116	112	*Space Shuttle Ground Operations*: Launch & Landing, Space Shuttle Service Life Extension. *Space and Flight Support Operations*: ISS Payload Processing, ELV Launch Processing, Other Payload Processing. *Space Launch Initiative*: Orbital Space Plane Capabilities.
	Direct Travel	3	3	
	Center G& A	166	169	
	Service Pools	109	112	
	Program CoF	9	42	
	Total	403	438	
	FTEs	1,870	1,798	
Jet Propulsion Laboratory	N/A since FFRDC			*Solar System Exploration*: Deep Impact, Dawn, Deep Space Network, Cassini, Jupiter Icy Moon Orbiter, Mission Development, and Operations, Research. *Mars Exploration*: All projects. *Origins*: SIRTF, SIM, TPF. *Structure and Evolution of the Universe*: Herschel, Planck. *Earth System Science*: EOS Instruments, Physical Oceanography Missions, ESSP Missions.

FY 2004 BUDGET DATA: Reimbursable Estimates

Reimbursable Estimates by Appropriation

Budget Authority ($ in millions)	FY 2002	FY 2003 President's Budget, As Amended	FY 2004 President's Budget
Human Space Flight	277.0	345.9	--
Science, Aeronautics and Technology	455.0	641.8	--
Mission Support	4.0	--	
Science, Aeronautics and Exploration	--	--	617.4
Space Flight Capabilities	--	--	327.6
Total	736.0	987.7	945.0

FY 2004 BUDGET DATA: Civil Service Distribution Detail

The civil service workforce is the underpinning for the successful accomplishment of the Nation's civil aeronautics and space programs. These are the people who plan the programs; conduct and oversee the research; select and monitor the contractors; manage the various research, development, and test activities; and oversee all of NASA's operations. A key dimension of the reinvention of NASA has been the restructuring of the civil service workforce to deliver a space and aeronautics program that is balanced, relevant, and at the forefront of technology development.

Primary goals:

- Acquire and maintain a civil service workforce reflecting the cultural diversity of the Nation.

- Provide a workforce sized and skilled consistent with accomplishing NASA's research, development, and operational missions with innovation, excellence, and efficiency.

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Civil Service Distribution Detail

Full Time Equivalents (FTEs)	FY 2002	FY 2003	FY 2004
Johnson Space Center	2,999	2,975	2,895
Kennedy Space Center	1,832	1,870	1,798
Marshall Space Flight Center	2,703	2,761	2,684
Stennis Space Center	298	301	300
Ames Research Center	1,466	1,506	1,444
Dryden Flight Research Center	597	595	566
Langley Research Center	2,332	2,365	2,365
Glenn Research Center	1,923	1,924	1,934
Goddard Space Flight Center	3,273	3,323	3,329
Headquarters	1,048	1,217	1,378
Total	**18,471**	**18,837**	**18,693**

FY 2004 BUDGET DATA: Personnel Salary, Benefits, and Related Costs (Fund Source 41), Travel (Fund Source 42) and Research Operations Support (Fund Source 43)

DETAIL OF BUDGET PLAN BY FUNCTION

A. Research and Program Management (R&PM) program

The Research and Program Management (R&PM) program provides the salaries, other personnel and related costs, travel and the necessary support for all of NASA's administrative functions and other basic services in support of research and development activities at NASA installations.

I. Personnel and Related Costs

a. Compensation and benefits: covers the salaries and benefits of the NASA's full-time permanent and other than full-time permanent positions, reimbursable detailees, overtime, and other compensation.

b. Supporting Costs: provides funding for relocation costs required by law, reimbursements to the Office of Personnel Management for activities such as security investigations of new hires and revalidation of sensitive position clearances, and personnel training.

II. Travel

Provides funding for direction, coordination, and management of program activities including international programs and activities. Also permits employees engaged in research and development to participates in both Government sponsored and non-government sponsored activities. Provides for direction and coordination of general management matters and travel by officials to review the status of programs.

III. Research Operations Support (ROS)

Provides broad range of services, supplies, and equipment in support of each center's institutional activities. These are divided into three major sub-functional areas. Facilities Services, covering the cost of rental of real property, maintaining and repairing institutional facilities and equipment, and the cost of custodial services and administrative utilities; Technical Services, covering the cost of automatic data processing for management activities, and the cost of informational programs and technical shops supporting institutional activities; Management and Operations, covering the cost of Administrative communications, printing, transportation, medical, supply, and related services. Reallocation of Research Operations Support under Full-Cost will begin in FY 04. Does not include personnel and travel funds.

Funding in FY 04 and out is more directly linked to supported programs/projects rather than being lumped in a single budget line. Institutional resources justified based on project requirements (directly or indirectly). Once we transition to full cost, direct traceability back to previous budgets is no longer possible. Previous year budgets cannot be recalculated into full cost. There is not a one to one correlation.

Previous ROS Funding	**FY 04 and Out-Year Funding in Which ROS-like Capabilities Exist**
- Facilities Services	- Corporate General and Administrative Costs (G&A)
- Technical Services	- Service Pools
- Management & Operations	- Center General and Administrative Costs (G&A)

FY 2004 BUDGET DATA: Personnel Salary, Benefits, and Related Costs (Fund Source 41), Travel (Fund Source 42) and Research Operations Support (Fund Source 43)

Detail of Budget Plan by Function ($ in millions)	FY 2002	FY 2003	FY 2004
I. Personnel and Related costs	**$1,885.9**	**$2,013.8**	**$2,107.1**
A. Compensation and benefits	$1,821.9	$1,951.1	$2,037.0
1. Compensation	$1,486.4	$1,596.6	$1,646.1
2. Benefits	$335.5	$354.5	$390.9
B. Supporting costs	$64.0	$62.7	$70.1
1. Transfer of personnel	$7.3	$3.1	$7.5
2. Investigative services	$2.0	$1.9	$0.7
3. Personnel training	$54.3	$57.7	$60.2
4. Other	$0.4	$0.0	$1.7
II. Travel	**$52.6**	**$59.2**	**$63.1**
A. Program Travel	$29.9	$35.2	$33.5
B. Scientific and technical development travel	$7.4	$8.5	$13.5
C. Management and operations travel	$15.3	$15.5	$16.1
III. Research Operations Support	**$645.1**	**$566.4**	**$0.0**
A. Facilities services	$246.8	$182.7	$0.0
B. Technical services	$224.8	$218.2	$0.0
C. Management and operations	$173.5	$165.5	$0.0
Total	**$2,583.6**	**$2,639.4**	**$2,170.2**

* FY2004 budget excludes ROS funding. Funding in FY 04 and the out-years are more directly linked to support programs/projects rather than being included in a single budget line. Institutional resources are justified based on project requirements (directly or indirectly).

DISTRIBUTION OF BUDGET PLAN BY FUNCTION BY INSTALLATION

Total Fund Source 41/42/43 (In Millions of Dollars)	FY 2002	FY 2003	FY 2004
Johnson Space Center	$396.6	$404.7	$365.7
Kennedy Space Center	$305.0	$289.6	$194.3
Marshall Space Flight Center	$93.2	$351.3	$298.4
Stennis Space Center	$289.0	$49.6	$28.7
Ames Research Center	$216.2	$214.5	$186.2
Dryden Flight Research Center	$253.5	$258.6	$250.3
Langley Research Center	$211.2	$223.9	$207.8
Glenn Research Center	$64.2	$67.0	$63.8
Goddard Space Flight Center	$388.1	$395.5	$356.6
Headquarters	$366.6	$384.7	$218.4
Total	**$2,583.6**	**$2,639.4**	**$2,170.2**

* FY2004 budget excludes ROS funding. Funding in FY 04 and the out-years are more directly linked to support programs/projects rather than being included in a single budget line. Institutional resources are justified based on project requirements (directly or indirectly).

FY 2004 BUDGET DATA: Summary of Consulting Services

Consulting Services

NASA uses paid experts and consultants to provide advice and expert input in addition to or beyond that available from its in-house civil service workforce. Management controls are established which assure that before entering into a consultant services arrangement with an individual that there is ample justification presented and the action is approved at top management levels.

NASA also uses experts and consultants to provide expert advice and input on the selection of experiments for future space missions. The use of these experts and consultants, in addition to NASA civil service personnel, provides the agency with an independent view that assures the selection of experiments likely to have the greatest scientific merit. Other individuals are used to provide independent looks at technical and functional problems in order to give top management the widest possible range of views before making major decisions.

Budget Authority ($)	FY 2002 Actuals	FY 2003 Estimates	FY 2004 Budget
Number of Paid Experts and Consultants	35	50	50
Annual FTE Usage	3	3	3
Salaries	290,000	298,990	306,166
Total Salary and Benefit Costs	314,650	324,404	332,190
Travel Costs	532,826	548,811	565,275
Total Costs	847,476	873,215	897,465

FY 2004 BUDGET DATA: Full Funding of Federal Retiree Costs

Full Funding of Federal Retiree Costs

The Administration has proposed legislation (Budgeting and Managing for Results: Full Funding for Federal Retiree Costs Act of 2002 to require agencies, beginning in FY 2004, to pay the full Government share of the accruing cost of retirement for current CSRS, CIA and Foreign Service employees, the Coast Guard, Public Health Service, and NOAA Commissioned Corps. The legislation also requires agencies to pay the full accruing cost of post-retirement health benefits for current civilian employees and the post retirement health costs of all retires (and their dependents/survivors) of the Uniformed Services (DOD, Coast Guard, Public Health Service, and NOAA Commissioned Corps).

Budget Authority ($ in millions)	FY 2002 Actuals	FY 2003 Estimates	FY 2004 Budget
Human Space Flight	39.5	43.6	--
Science, Aeronautics and Technology	71.8	74.8	--
Inspector General	1.2	1.3	1.4
Science, Aeronautics and Exploration	--	--	63.3
Space Flight Capabilities	--	--	62.8
Total	112.5	119.7	127.5

FY 2004 BUDGET DATA: The National Institute of Aerospace (NIA)

The National Institute of Aerospace (NIA)

The National Institute of Aerospace is a research and education institute initiated by NASA Langley Research Center (LaRC) to ensure a national capability to support NASA's mission by expanding collaboration with academia and leveraging expertise inside and outside NASA. A nationwide competitive procurement process resulted in the selection of a consortium that created the non-governmental, non-profit Institute. The consortium members include the American Institute of Aeronautics and Astronautics Foundation, Georgia Institute of Technology, North Carolina Agricultural and Technical State University, North Carolina State University, University of Maryland, University of Virginia, and Virginia Polytechnic Institute and State University.

The Institute will be a strategic partner conducting leading edge research working in collaboration with LaRC. The technical scope of the Institute is research and development of aerospace vehicle technologies, atmospheric sciences, and commercialization of the intellectual property created by the Institute. In synergy with the research programs at LaRC, the Institute will also have a science and engineering graduate education capability provided by the university partners.

One of the unique aspects of the Institute will be the use of information technology to create both a virtual collaborative research environment and a distance-learning educational capability. This is a particularly innovative approach to leveraging the unique facilities and laboratories of LaRC and the partners. The Institute has also established a permanent location in close proximity to LaRC to enhance collaboration with LaRC research personnel and to facilitate access to the extensive world-class experimental facilities located at LaRC. The Institute is housed in commercial rental office space.

NASA will provide up to $5M per year for five years to sponsor a Core Program. The Core Program includes support to establish the initial research and education infrastructure of the Institute and to fund the Distinguished Professor (DP) Program. The DP Program is a resident scholars program that will attract the nation's most gifted researchers to the Institute. After the first five years, the Institute will develop a broader customer base and become self-sufficient, receiving no "core" funding from NASA. The only NASA funds it will receive will be from those specific programs and projects that require the Institute's services. Anticipated funding by NASA to the Institute and University cost-sharing is given below:

Budget Authority ($ in millions)	FY 2002 Actuals	FY 2003 Estimates	FY 2004 Budget
NASA Funding	0.7	3.5	5.0
University Cost-Sharing	--	1.4	1.6
Total Core Program Funding	0.7	4.9	6.6
NASA "service pool" funding from programs/projects*	--	[* 2.4]	[* est. 3.0-7.0]

* - Other potential funding based on usage, may go to the Institute from NASA Programs/Projects using a "service pool" mode.

FY 2004 BUDGET DATA: Construction of Facilities

SUMMARY OF RESOURCES INCLUDED IN BUDGET REQUEST

In Millions of Dollars	FY 2002	FY 2003	FY 2004
Space Flight Capabilities Programs	46.2	18.2	57.4
Science, Aeronautics and Exploration Programs	56.0	41.9	7.0
Institutional Support Programs (included within Center G&A)	177.2*	161.9*	184.0
Total Construction of Facilities	279.4*	222.0*	248.4

The Construction of Facilities (CoF) program ensures that the facilities critical to achieving NASA's space and aeronautics programs are constructed and continue to function effectively, efficiently, and safely, and that NASA installations conform to requirements and initiatives for the protection of the environment and human health. NASA facilities are essential to the Agency and facility revitalization is needed to maintain infrastructure that is safe and capable of supporting NASA's missions. The facilities being revitalized or constructed in this program are expected to remain active in the long term and are consistent with current and anticipated Agency roles and missions.

Funding for construction projects required for specific programs is included in the appropriate budget line item within each Enterprise. Institutional Support Construction of Facilities (CoF) projects are required for components of NASA's basic infrastructure and institutional facilities. Beginning in FY 2004, funding for Institutional Support CoF identified to specific Centers has been included in that Center's G&A rate, and the agency-wide initiatives are included as part of Corporate G&A. Descriptions and cost estimates of both institutional and program direct projects are provided to show a complete picture of NASA's budget requirement for facilities.

The institutional facility projects requested for FY 2004 continue the vital rehabilitation, modification, and repair of facilities to renew and help preserve and enhance the capabilities and usefulness of existing facilities and ensure the safe, economical, and efficient use of the NASA physical plant. They repair and modernize deteriorating and obsolete building and utility systems that have reached or exceeded their normal design life, are no longer operating effectively or efficiently, and cannot be economically maintained. These systems include mechanical, structural, cooling, steam, electrical distribution, sewer, and storm drainage. Some projects replace substandard facilities in cases where it is more economical to demolish and rebuild than it is to restore. In selected cases, additional square footage may be built when there are compelling reasons to support new or specialized technical and/or institutional requirements of a nature that cannot be provided by using existing facilities. Projects with an estimated cost of at least $5.0 million are budgeted as discrete projects, while projects between $0.5 million and $5.0 million are included as Minor Revitalization and Construction projects. Should residual resources become available from these projects, they will be used for urgently needed facility revitalization requirements. Congress will be notified before work is initiated for any such project that is $5.0 million or greater. Funds requested for Facility Planning and Design cover: advance planning and design requirements for potential future projects; preparation of facility project design drawings and bid specifications; master planning; facilities studies; engineering reports and studies; and critical functional leadership activities directed at increasing the rate of return of constrained Agency resources while keeping the facility infrastructure safe, reliable, and available.

** Construction of Facilities previously included the Environmental Compliance and Restoration program, which is now separately identified as a direct program within the Space and Flight Support theme.*

FY 2004 BUDGET DATA: Construction of Facilities

SUMMARY OF FY 2004 PROGRAM DIRECT PROJECTS BY PROGRAM

In Millions of Dollars	FY 2002	FY 2003	FY 2004
SPACE FLIGHT CAPABILITIES COF PROGRAMS	**46.2**	**18.2**	**57.4**
INTERNATIONAL SPACE STATION	4.5	---	---
Modify ISS Software Development Integration Lab (JSC)	4.5	---	---
SPACE SHUTTLE	39.5	15.0	53.9
Repairs to Launch Complex LC-39A (KSC)	---	---	22.4
Replace Roof, Vehicle Assembly Building (KSC)	---	---	16.0
Replace Cell "E" Air Handling Units, Building 110 (MAF)	---	1.7	---
Replace Chilled Water, Steam, and Condensate Systems (110, 114) (MAF)	1.9	2.0	---
Replace Paint Spray Facility, Building 103 (MAF)	---	2.0	---
Repair Crane Hoist Trolley Motor Drive, Rotating Payload Servicing Facility (KSC)	1.6	---	---
Repairs to the Vehicle Assembly Building (KSC)	25.0	---	---
Restore Low Voltage Power System, Pad B (KSC)	2.0	---	---
Repair and Modernize A-Complex (SSC)	3.0	---	---
Minor Revitalization (various locations)	4.5	7.8	13.8
Facility Planning and Design	1.5	1.5	1.7
SPACE AND FLIGHT SUPPORT	2.4	3.2	3.5
Minor Revitalization (various locations)	1.9	3.0	3.0
Facility Planning and Design	0.3	0.2	0.4
SCIENCE, AERONAUTICS & EXPLORATION COF PROGRAMS	**56.0**	**41.9**	**7.0**
SPACE SCIENCE	29.2	21.7	0.0
Construct Flight Projects Center (JPL)	---	16.5	---
Safety Renovations, Buildings 2 and 26 (GSFC)	1.7	---	---
Construct 34-Meter Beam Waveguide Antenna, Spain (JPL)	5.0	---	---
Construct Propulsion Research Laboratory (MSFC)	22.0	---	---
Facility Planning and Design	0.5	5.2	---
BIOLOGICAL AND PHYSICAL RESEARCH	6.8	2.8	0.0
Construct Booster Applications Facility, Brookhaven National Laboratory	6.8	2.8	---
EARTH SCIENCE	0.0	3.4	0.0
Construct Flight Projects Center (JPL)	---	3.4	---
AERONAUTICS*	20.0	14.0	7.0
Modify Cell W-2 for Dual-Spool Turbine Research, ERB (GRC)**	---	10.0	7.0
Construct Rocket-Based Combined Cycle Test Facility (SSC)	8.0	4.0	---
Construct Addition to Main Administration Building (SSC)	3.5	---	---
Construct Propulsion Test Operations Facility (SSC)	1.5	---	---
Upgrade E-Complex Test Capabilities (SSC)	5.0	---	---
Construct Vehicle, Spacecraft & Payload Processing Facility (WFF)	2.0	---	---

**FY02 and FY03 includes the non-aeronautics portion of Aerospace Technology*
***FY03 will be adjusted in future operating plan to reflect rephasing; total projected cost is $12M*

FY 2004 BUDGET DATA: Construction of Facilities

SUMMARY OF FY 2004 INSTITUTIONAL SUPPORT PROJECTS

In Millions of Dollars	FY 2002	FY 2003	FY 2004
INSTITUTIONAL SUPPORT PROJECTS*	**177.2**	**161.9**	**184.0**
Rehabilitate and Upgrade Electrical and Mechanical Systems (24) Phase 1 of 2 (JSC)	---	---	5.0
Consolidation of Business Functions into Building 1194 (LaRC)	---	---	9.2
Construct Replacement Office Building, 4600 Area (MSFC)	---	7.3	15.7
Repair Roofs and Masonry, Various Buildings (GRC)	---	1.8	---
Repair Sanitary Sewer System (GRC)	3.9	1.6	---
Upgrade 150 PSIG Combustion Air System, ERB, (GRC)	---	3.5	---
Realign Soil Conservation Service Road, Greenbelt (GSFC)	---	4.4	---
Repair Site Steam Distribution System (GSFC)	4.0	2.3	---
Relocate and Revitalize High Efficiency Antenna, DSS-65, Madrid Spain (JPL)	---	2.0	---
Construct Operations Support Building II, LC-39 Area (KSC)	12.8	5.6	---
Replace Air Handling Units, Headquarters Building (KSC)	---	2.0	---
Repairs to Air Conditioning Systems, Various Facilities (LaRC)	2.1	3.7	---
Upgrade Hangar Fire Suppression System, B1244 (LaRC)	---	2.8	---
Replace Roof, External Tank Manufacturing Building (MAF)	12.0	11.0	---
Replace Site-Wide High Voltage Oil Switches (MAF)	---	2.8	---
Repairs to Airfield (WFF)	---	2.0	---
Construct Child Care Facility (ARC)	1.1	---	---
Restore Electrical Distribution System (ARC)	8.9	---	---
Rehabilitate and Modify Central Emergency Generator System (DFRC)	3.0	---	---
Restore Parkway Bridge (GSFC)	2.9	---	---
Connect Madrid Deep Space Complex to Commercial Power (JPL)	2.8	---	---
Interior Modifications to Mission Operations Building 264 (JPL)	1.9	---	---
Rehabilitate Aircraft Hangar, Ellington Field (JSC)	3.2	---	---
Construct Operations Support Building, Pad A (KSC)	4.5	---	---
Construct Replacement Air Traffic Control Tower, Shuttle Landing Facility (KSC)	2.2	---	---
Rehabilitate Atmospheric Sciences Building, 1250 (LaRC)	2.4	---	---
Replace Heater, 20-inch Mach 6 CF4 Tunnel (LaRC)	4.7	---	---
Rehabilitate Interior, Office and Laboratory Building (MSFC)	1.8	---	---
Rehabilitate and Modify Productivity Enhancement Complex (MSFC)	3.6	---	---
Rehabilitate Precision Cleaning Facility (MSFC)	2.1	---	---
Repair and Upgrade Substations 31, 32, and 33 (MAF)	2.4	---	---
Renovation of Management Education Center Dormitory (WFF)	2.0	---	---
Minor Revitalization and Construction of Facilities at Various Locations, Less than $0.5M per project		91.9	127.1
Facility Planning and Design	15.7	17.2	17.0
Demolition of Facilities	---	---	10.0

**Beginning in FY 2004, funding for Institutional Support CoF identified to specific Centers has been included in that Center's G&A rate, and agency-wide initiatives are included within Corporate G&A.*

SPACE FLIGHT CAPABILITIES PROGRAMS DISCRETE PROJECTS

Space Shuttle Program

Project Title: Repairs to Launch Complex 39A
Location: Kennedy Space Center, Brevard County, Merritt Island, FL
Enterprise: Human Exploration & Development of Space
FY 04 Estimate: $22.4M

This project provides for the complete repair and refurbishment of Launch Complex 39A (LC-39A). LC-39A consists of the Fixed Service Structure (FSS) tower, which is approximately 300 feet tall and 40 feet square with a central core containing two elevators, and the Rotating Service Structure (RSS) tower, which is approximately 130 feet tall and 52 feet square. The Orbiter Access Arm/White Room (OAA/WR), Orbiter Weather Protection (OWP), Payload Change-out Room (PCR), and Forward Reaction Control System (FRCS) are integral parts of these tower structures. This project removes and replaces corrosion damaged structural members and connections on the FSS and on the RSS at LC-39A. RSS drive truck assemblies and rail systems will be repaired. Existing deteriorated panels on the PCR and the FRCS will be replaced with corrugated stainless steel sandwich insulated panels. All mechanical and electrical wall penetrations will be removed and rerouted through new centralized bulkhead plates. The OAA/WR will be upgraded with stronger structural supports. The walls and floors will be refurbished to withstand the harsh launch environment. Orbiter weather protection will be upgraded to provide explosion proof, hardened enclosures against weather and launch environments. New controls will be installed to operate weather curtains and struts. The project will perform corrosion control and seal the LC-39A structure with inorganic zinc coating. The project also includes modifications to improve safe access for operations, maintenance, future inspections and corrosion protection where practical. All abandoned equipment, structural elements, supports, lines, and associated hardware shall be removed. Mechanical, electrical and control systems will be upgraded. LC-39A concrete surfaces, slopes and concrete structural beams will be repaired, reinforced and sealed. Other associated minor repairs, modifications and upgrades will be accomplished as required.

Project Title: Replace Roof, Vehicle Assembly Building
Location: Kennedy Space Center, Brevard County, Merritt Island, FL
Enterprise: Human Exploration & Development of Space
FY 04 Estimate: $16.0M

This project replaces the roof of the Vehicle Assembly Building (VAB), which is used to perform the final assembly and checkout of the Shuttle and serves as a safe haven for Shuttle components in times of severe weather threats such as hurricanes. The roofing membrane system will be replaced and necessary structural repairs made. The project includes replacing approximately 210,000 square feet (5 acres) of roofing and 6,500 square feet of roof vents, and repairing approximately 15,000 square feet of concrete roof slab. The construction work is complicated by several factors that drive up the project costs. The roof level is 526 feet above grade requiring special material and personnel access elevators, and limiting the flow of materials removed from and delivered to the roof. The existing roofing materials to be removed are 8 inches thick (140,000 cubic feet volume) and require extensive demolition work. Additionally, significant work restrictions due to safety, operational, and security considerations are applied that create inefficiencies to the workflow.

SCIENCE, AERONAUTICS & EXPLORATION PROGRAMS DISCRETE PROJECTS

Aeronautics -- Vehicle Systems Program

Project Title: Modify Cell W-2 for Dual-Spool Turbine Research, ERB
Location: Glenn Research Center, Cleveland, OH
Enterprise: Aerospace Technology
FY 04 Estimate: $7.0M

This project provides for the modifications to Cell W-2 of the Engine Research Building (ERB) No. 23. These modifications will provide a Dual Spool Turbine Facility (DSTF) for continuous flow testing of highly loaded, closely coupled turbine systems. Existing Glenn Central Systems such as the 150 psig Combustion Air System and the Altitude Exhaust System will be modified as part of this project. Combustion Air will be heated to 1000°F using a new non-vitiated air heater system. A custom-designed inlet air manifold will introduce uniform heater air into the inlet of the test section. Custom-designed bearing cartridges will accommodate a wide size and weight range of high-pressure (HP) and low-pressure (LP) turbine rotors. Turbine power absorption will be accomplished using two new synchronous generators controlled by the Variable Frequency System. A new exhaust manifold will be used to collect the primary and cooling air flows from the test section outlet. All exhaust will be ported to the Altitude Exhaust System. Facility health monitoring and control will be accomplished using Programmable Logic Controllers (PLCs) mounted in an existing control room.

FY 2004 BUDGET DATA: Construction of Facilities

SUMMARY OF INSTITUTIONAL SUPPORT COF RESOURCE REQUIREMENTS

In Millions of Dollars	FY 2002	FY 2003	FY 2004
Discrete Projects	84.3	52.8	29.9
Minor Revitalization and Construction	77.2	91.9	127.1
Facility Planning and Design	15.7	17.2	17.0
Demolition	--	--	10.0
Total Institutional Construction of Facilities	177.2	161.9	184.0

INSTITUTIONAL SUPPORT DISCRETE PROJECTS

Project Title: Rehab and Upgrade Electrical and Mechanical Systems (Bldg. 24)
Location: Johnson Space Center, Harris County, Houston, TX
Enterprise: Human Exploration & Development of Space
FY 04 Estimate: $5.0M

This project upgrades the Central Heating and Cooling Plant, Building 24, which provides steam, chilled water, and compressed air to the entire JSC central mall. Scope includes installation of two 2,000-ton steam turbine drive chillers, a new filtration system on the chilled water distribution system, a new 60,000-pound per hour boiler and modifications to the 12 KV power distribution system (including a new pre-cast exposed aggregate facing panel enclosure). This is the first increment of a two-phase project with estimated total construction cost of $11.5 million.

Project Title: Consolidation of Business Functions into Building 1194
Location: Langley Research Center, Hampton, VA
Enterprise: Aerospace Technology
FY 04 Estimate: $9.2M

This project rehabilitates existing space to current standards, including replacement of mechanical and electrical systems, layout reconfiguration, replace finishes, and upgrade fire detection and suppression systems. The facility will also be expanded by 40,000 ft^2 to accommodate the consolidation of several business functions, including the Source Evaluation Boards, Training, and other administrative support functions. The construction will consist of a concrete foundation, structural steel frame, concrete floors, masonry exterior, and flat roof system. The site work includes reconfiguring the access roads, sidewalks, and handicap access ramps; constructing parking lots; and landscaping. The renovation and construction will meet all current national codes and standards including compliance with Americans for Disabilities Act, National Fire Protection Association, National Electric Code and American Society of Heating, Refrigeration, Air-Conditioning Engineers. Upon completion of the project, the Center will dispose of approximately 15 substandard trailers that currently house training and secure source board personnel.

Project Title: Construct Replacement Office Building, 4600 Area
Location: Marshall Space Flight Center, Huntsville, AL
Enterprise: Human Exploration & Development of Space
FY 04 Estimate: $15.7M

This project replaces about 130,000 square feet (SF) of mostly 1940's vintage office buildings scattered throughout the 4600 and 4700 areas with a multi-story office building of approximately 135,000 SF. Existing facilities are in an extreme state of disrepair and cannot be economically rehabilitated. Site utilities will include basic electrical, potable water, sanitary sewer, chilled water, communications, and storm drainage. Utility runs to the site will be sized to facilitate future construction of additional replacement office buildings over the next several years. Mechanical systems will provide climate control, potable water, sanitary sewer, chilled water, and sprinkler systems. Climate controls will be connected to the existing center-wide utility control system. Paved surface parking for the new facility and landscaping are included in the project. The buildings being replaced by this project will be demolished once they are vacated. This is the second and final increment of a two-phase project ($7.3M in FY03/$15.7M in FY04). Estimated total construction cost is $23 million. About $6 million in non-construction funds are being budgeted separately for the activation and outfitting costs associated with this project.

FY 2004 BUDGET DATA: Construction of Facilities

Minor Revitalization & Construction of Facilities less than $5.0M/project

	Institutional Support	Space Flight Capabilities
FY 04 Estimate (Millions of Dollars)	127.1	16.8
Ames Research Center	10.5	
Dryden Flight Research Center	7.0	
Glenn Research Center	18.4	
Goddard Space Flight Center	17.2	
Jet Propulsion Laboratory	14.2	
Johnson Space Center	7.9	3.5
Kennedy Space Center	19.7	3.7
Langley Research Center	14.2	
Marshall Space Flight Center	8.7	7.4
Stennis Space Center	9.3	2.2

This request includes facility revitalization and construction needs greater than $0.5 million but less than $5.0 million per project. Projects $0.5 million and less are normally accomplished by routine day-to-day facility maintenance and repair activities provided for in direct program and Center operating budgets. Proposed FY 2004 Institutional Support projects total $127.1 million for components of the basic infrastructure and institutional facilities, and $16.8 million for specific Space Flight Capabilities projects. These resources provide for revitalization and construction of facilities at NASA field installations and Government-owned industrial plants supporting NASA activities. Revitalization projects provide for the repair, modernization, and/or upgrade of facilities and collateral equipment. Repair and modernization projects restore facilities and components to a condition substantially equivalent to the originally intended and designed capability. Repair and modernization work includes the substantially equivalent replacement of utility systems and collateral equipment necessitated by incipient or actual breakdown. It also includes major preventive measures that are normally accomplished on a cyclic schedule, and those quickly needed out of cycle based on adverse condition information revealed during predictive testing and inspection efforts. Upgrade projects include both restoration of current functional capability, and also enhancement of the condition of a facility so that it can more effectively accomplish its designated purpose or increase its functional capability. Occasionally minor facility construction projects will be required to provide for either the construction of small new facilities or additions to existing facilities.

The projects that comprise this request are of the highest priority based on relative urgency and expected return on investment. The titles of the projects are designed to identify the primary intent of each project and may not always capture the entire scope or description of each project. Also, during the year, some rearrangement of priorities may be necessary which may force a change in some of the items to be accomplished. Any such changes, however, will be accomplished within total the resources available.

Institutional Support Minor Revitalization Programs: $127.1 million

A. Ames Research Center (ARC), $10.5 million for the following:
   1. Fire Exits and Egress Modifications - Various Buildings
   2. Seismic Upgrades - Various Facilities (N201 & 223)
   3. Seismic Upgrades - Various Facilities (N233)
   4. Rehabilitate and Modify 20 MW DC Power Supply, Phase IV
   5. Rehabilitate and Modify HVAC System, N239
   6. Upgrade Underground Communications Ductbank
   7. Repair Roofs, Chillers and Air Handlers (N200 & 201)
   8. Rehabilitate and Modify Fire Suppression Systems, Various Buildings
   9. Repair North and South Steam Vacuum System Plenum Shells
   10. Rehabilitate and Modify Utility Control Panels, N234

B. Dryden Flight Research Center (DFRC), $7.0 million for the following:
1. Rehabilitate and Modify Southeast Wing, B4800
2. Rehabilitate and Modify Data Analysis Facility, B4838
3. Rehabilitate and Modify Institutional Support Facility B4825
4. Repair Paving

C. Glenn Research Center (GRC), $18.4 million for the following:
1. Rehab & Mod Electric Propulsion Research Building Systems and Life Safety (16), Ph 1
2. Repair Roofs & Masonry, Various Buildings
3. Add Turboexpander for Refrigerated Air System, PSL (124)
4. Rehabilitate and Modify Model Fabrication and Instrument Facility (14), Phase 4
5. Modifications to Fire Alarm & Sprinkler Systems, ERB, Phase 2
6. Rehabilitate Special Projects Laboratory (24), Phase 1
7. Repair High Voltage System, Plum Brook
8. Rehabilitate and Modify Shop Area, Microwave Systems Laboratory (7)
9. Rehabilitate EPL Controls (301), Phase 1
10. Restore Vacuum Facility VF-7 (16)
11. Upgrade Test Cell SE-18, (ERB)
12. Rehabilitate of OMPVE Crystal Growth Facility (302)

D. Goddard Space Flight Center (GSFC), $17.2 million for the following:
1. Restore Portions of Data Interpretation Laboratory, B23
2. Construct Consolidated Engineering Facility, WFF
3. Modify Building M-20 for Hazardous Processing Facility, WFF
4. Repair Various Roofs, GRB
5. Upgrade Island Electrical Distribution System, WFF
6. Restore Instrument Construction and Development Laboratory, Building 5, Phase 1
7. Repair Fire Protect & Domestic Water Piping System, GRB
8. Revitalize Low Voltage Electrical Systems, Various Buildings
9. Modify Fire Protection and Detection Systems, WFF
10. Repair of Stormdrain System, Phase
11. Modify E-Complex - Phase 3
12. Modify HVAC Systems, Bldg F-10, WFF
13. Construct Mezzanine in Building 29

E. Jet Propulsion Laboratory (JPL), $14.2 million for the following:
1. Construct Addition to Micro Devices Laboratory, B302
2. Modify Information Systems Development Building (B126)
3. Replace Diesel Generator Sets A-Station, CDSCC
4. Upgrade Thermal Vacuum Control Systems, Environmental Laboratory, B144
5. Rehabilitate Hydrostatic Bearing DSS-43, CDSCC
6. Rehabilitate Radial Bearings DSS-43, CDSCC
7. Upgrade Lighting, Physical Science Building, B183
8. Remodel Cafeteria, Building 190

F. Johnson Space Center (JSC), $7.9 million for the following:
1. Repair Building Foundations and Slabs, Various Locations
2. Install Roof Fall Prevention Systems, Various Locations
3. Replace Roofs, Various Facilities
4. Rehabilitate and Modify HVAC Systems (32)
5. Upgrade Back-Up Power Monitoring (30M, 30S, and 48)
6. Repair Exchange Facilities (3, 11, and 207) Phase 1of 3
7. Construct Health and Fitness Center, WSTF

G. Kennedy Space Center (KSC), $19.7 million for the following:
1. Replace Air Handling Units, Headquarters Building, Phase 2
2. Construct Source Evaluation Board Facility
3. Replace Roof, Building 1385
4. Upgrade Firex Pump Station [M7-1362]
5. Repair Roads and Paved Areas, NASA Parkway West
6. Repair Roads and Paved Areas, Industrial Area
7. Upgrade Bathroom Plumbing and Fixtures, Headquarters Building, Phase 2
8. Revitalize Power Cable and Duct Distribution, Industrial Area, Phase 1
9. Replace Critical Transformers, Industrial Area
10. Replace Critical Transformers, LC-39 Area
11. Install Automatic Fire Sprinkler System, Pad Terminal Connection Rooms, LC-39
12. Replace 15-KV Feeder 606/612, SS-900 To Pad B
13. Upgrade Facilities for Disabled Access, Various Locations
14. Demolish Boxcars and Trailers, Various Locations
15. Construct Multi-Function Propellants/Gases Maintenance Facility
16. Modifications for Internet and Information Technology Applications, Central Information Facility
17. Refurbish Mechanical Equipment, Various Facilities, LC-39 Area
18. Restore Cable Trays, LC-39A

H. Langley Research Center (LaRC), $14.2 million for the following:
1. Rehabilitation of AC Systems, Various Locations
2. ADA Upgrades, Various Facilities
3. Upgrade High Intensity Radiated Fields System & Airframe Emulation Testing and Integration Labs (1220)
4. Spare Fan Blades and Roll Coupling for 14x22-Ft. Tunnel, B1212C
5. Upgrades to Low Speed Anechoic WT, B1221B
6. Upgrade Communication Closets, Various Facilities
7. Construct Addition for Video Production Consolidation, B1145
8. Upgrade Security of LaRC Infrastructure
9. 14x22-Ft. Tunnel Automation System Upgrades, B1212C

I. Marshall Space Flight Center, $8.7 million for the following:
1. Rehabilitate Bridge Cranes, Phase 2
2. Replace Roof, Various Locations
3. Construct Replacement Facility for Shipping and Receiving

J. Stennis Space Center, $9.3 million for the following:
1. Rehabilitation of Institutional Support Building 2204
2. Repairs to Hydrogen Gas Piping Test Complex
3. Replace Cryogenic and High Pressure Components in the Test Complex
4. Repair Site-wide Storm Drainage
5. Repair and Modernize Secondary Power Systems, Phase 5
6. Repair Pavement, Various Locations
7. Upgrade and Modernize EMCS to Include Industrial Programmatic Systems, Phase 2
8. Repair and Modernize Underground Electrical Duct, Phase 2
9. Replacement of Obsolete Chillers, Phase 2
10. Repair and Modernize Area Lighting Systems

Space Flight Capabilities Minor Revitalization Programs: $16.8 million

A. Johnson Space Center (JSC), $3.5 million for the following:
   1. Repair Grounding, Bonding and Shielding Systems, Test Area, White Sands Test Facility (WSTF) (Shuttle)
   2. Repair Concrete Flumes and Catch Basins, Test Area, WSTF (Shuttle)
   3. Repairs to Diffuser and Ejector, Test Stand 401, WSTF (Shuttle)

B. Kennedy Space Center (KSC), $3.7 million for the following:
   1. Upgrade Interior of Hangar AF (Shuttle)
   2. Upgrade Lighting, Mobile Service Tower and Pad, SLC-2, Vandenberg Launch Site (ELV)
   3. Asbestos Abatement, Hangar AE, Cape Canaveral Air Force Station (ELV)
   4. Construct Replacement Housing for Customer Operations, Payload Hazardous Servicing Facility (PLC)
   5. Revitalize Electrical Power Systems, Multi-Operations Support Building [M7-1357] (PLC)

C. Marshall Space Flight Center (MSFC), $7.4 million for the following:
   1. Replace Roof, Building 131, Michoud Assembly Facility (MAF) (Shuttle)
   2. Replace Secondary Power Distribution System, Building 173, MAF (Shuttle)
   3. Replace Air Handlers and Exhaust Fans, Building 318, MAF (Shuttle)
   4. Replace Chiller #5, Building 207, MAF (Shuttle)
   5. Repair Roofs, Buildings 101 and 102, MAF (Shuttle)
   6. Rehab/Mod Building 4649 for Hazardous Operations (Shuttle)

D. Stennis Space Center (SSC), $2.2 million for the following:
   1. Refurbish High Pressure Industrial Water Pumps, Phase 2 (Shuttle)
   2. Replace LOX/LH2 Dock Ramps (Shuttle)

Facility Planning and Design (FP&D)

Cognizant Office: Office of Management Systems
FY 04 Estimate: $17.0M

These funds are required to provide for advance planning and design activities; special engineering studies; facility engineering research; preliminary engineering efforts required to initiate design-build projects; preparation of final designs, construction plans, specifications, and associated cost estimates; and participation in facilities-related professional engineering associations and organizations. These resources provide for project planning and design activities associated with Institutional Support construction projects. Project planning and design activities for construction projects required to conduct specific Space Flight Capabilities or Science, Technology, and Exploration programs or projects are included in the appropriate budget line item. Other activities funded include master planning; value engineering studies; design and construction management studies; facility operation and maintenance studies; facilities utilization analyses; engineering support for facilities management systems; and capital leveraging research activities.

Demolition of Facilities

Cognizant Office: Office of Management Systems
FY 04 Estimate: $10.0M

The amount requested is required to fund major demolition projects Agency-wide. NASA owns over 2,800 buildings, and over 2,600 other structures, totaling almost 44 million square feet with a current replacement value of over $20 billion. About 2 million square feet of these facilities are “mothballed” or “abandoned,” another million square feet are to be closed in the next four years, and possibly will be identified for closure due to an upcoming NASA Real Estate Strategic Review. Closed facilities are a drain on NASA resources, deteriorate into eyesores and possible safety hazards, and should be demolished.

THEME: N/A

DEVELOPMENT: Integrated Financial Management Program (IFMP)

PURPOSE

Objectives		Reference 2003 Strategic Plan	Performance Measures
IS 1.3	Improve and streamline the NASA Financial management system to enhance accuracy, timeliness and acccountability.		See Technical Commitment section

The overarching goal of the Integrated Financial Management Program (IFMP) is to improve the financial, physical, and human resources management processes throughout the Agency. IFMP will reengineer NASA's business infrastructure in the context of industry "best practices" and implement enabling technology to provide the necessary management information to support the Agency's strategic plan implementation.

OVERVIEW

Several active projects are currently being managed by IFMP. The Core Financial Project is in the process of implementing NASA's first fully integrated financial management system. When completed this system will give the Agency timelier, more consistent and reliable information for management decisions. It will also improve accountability to enable full-cost accounting. Core Financial and its use of SAP software will also help NASA achieve efficiencies and operate more effectively, thereby improving its information exchange with customers and stakeholders. The recently completed Resume Management Project introduced a new process and system that has changed how Human Resources offices fulfill their recruiting and staffing responsibilities. NASA Staffing and Recruitment System (STARS) is being actively used at each Center. The Position Description Management Project, completed in September, 2002, enables users to rapidly prepare and classify Position Descriptions (PD's). The Travel Management Project is complete at 8 of 10 Centers, implementing a standardized, integrated travel management system that provides electronic routing, e-mail, and timely travel information. Future projects being pursued, beginning in calendar year 2003, include Human Resources (HR) (including e-Payroll), Asset Management (AM), and Contracts Administration (CA). The budget runout has been modified to focus on the development costs of the program. Deployment of all modules is planned to be completed by FY 2006. As a result, the program funding total is decreased from the current baseline of $644.8M, which included some operations costs beyond deployment, to $497.5M through FY 2006. The difference in funding will be transferred to a systems operating account.

For more information, please link to: http://ifmp.nasa.gov/

PROGRAM MANAGEMENT

IFMP is a multi-project program with management responsibility residing within the Office of the Chief Financial Officer and overall program authority residing in the Office of the Administrator. The Agency Program Management Council (PMC) has IFMP governing responsibility. Program Executive is Patrick Ciganer and Program Director and point of contact is Mike Mann. This program is in full compliance with compliance with NPG7120.

TECHNICAL COMMITMENT

The baseline for this technical commitment was made in February 2002 and is detailed in the IFMP Program Commitment Agreement (PCA).

Technical Specifications	FY04 President's Budget	Performance Measures
1. Provide timely, consistent, and reliable information for management decisions.	1. Provide consistent, timely, and reliable financial data to Agency, Enterprise, Center, Program, Project and functional managers to support decision making; 2. Provide on-line access to program and project data to the Agency, Enterprises and Centers; 3. Implement standardized, reengineered processes across functions and systems throughout the Agency.	*Number of Days between periodic closings and availability of financial data to internal customers. * Number of days lag time between real-time update and online
2. Improve NASA's accountability and enable full cost management.	1. Provide financial data for the purpose of determining the cost of providing specific Agency programs and projects; 2. Improve financial data consistency.	* % of standardization across the Agency consistent with the *Full Cost Initiative Agencywide Implementation Guide*.

THEME:	N/A
DEVELOPMENT:	Integrated Financial Management Program (IFMP)

TECHNICAL COMMITMENT (continued)

Technical Specifications	FY 2004 President's Budget	Performance Measures
3. Achieve efficiencies and operate effectively.	1. Streamline and standardize financial business processes across NASA to operate more effectively; 2. Provide tools to utilize admin and tech work force more effectively; 3. Provide an automated audit trail for financial data.	* Number of Center-unique Core Financial systems.
4. Exchange information with customers and stakeholders.	1. Provide consistent, timely and reliable financial data to NASA's external customers; 2. Improve exchange of financial data among internal customers.	* Number of Center-unique Core Financial systems.
5. Attract and retain a world-class workforce.	1. Provide tools to users that enable them to do their jobs more effectively; 2. Provide increased opportunities for sharing of data, practices and teaming across Centers.	* Number of Reconciliation's required between Core Financial subprocesses within the IFM system.

IFMP benefits a broad range of NASA processes and Programs and is principally aligned with the Manage Strategically crosscutting process defined in the NASA Strategic Plan. Each module project defines its functional drivers, which demonstrate how the Project supports accomplishment of the Agency Business Drivers, or Technical Specifications.

Schedule	FY 2004 President's Budget	Change from Baseline
CF Operational Readiness Review	September 2002	9 months early
CF Roll out to all 10 Centers	June 2003	9 months early
Pos. Description Rollout to 10 Centers	September 2002	new
Travel Manager roll out to all 10 Centers	February 2003	new
Budget Formulation begin Implementation	September 2002	new
Begin formulation of:		
HR, IAM and Contract Admin	January 2003	new

ACQUISITION STRATEGY & PERFORMING ORGANIZATIONS

Data current as of 1/12/2003

Current Acquisitions	Actual *	Selection Method	Actual *	Performer	Actual *
Cooperative Agreements	0%	Full & Open Competition	100%	Industry	100%
Cost Reimbursable	0%	Sole Source	0%	Government	0%
Fixed Price	0%		100%	NASA Intramural	0%
Grants	0%			University	%
Other	100%	Sci Peer Review	n/a %	Non Profit	%
	100%	* as % of FY02 direct procurement			100%

Future Acquisitions - Major	Selection date	Goals
Asset Management	TBD	GSA Schedules
Human Resources	TBD	GSA Schedules
Contract Admin	TBD	GSA Schedules

Multiple contracts are being utilized to support IFMP, all of which are using GSA Schedule contract vehicles. These contracts support IFMP as a whole, as well as the specific module Projects across the various Centers.

Changes since FY 2003 President's Budget: None.

AGREEMENTS

Internal: The program relies on support from each of the ten NASA Centers. Agreements and Commitments are signed with each Center responsible official prior to beginning implementation work at the Center. **Changes since FY03 Pres. Budget:** External: NASA and several other Federal Agencies recently began collaborating to develop a Federalized version of the Human Resources module. NASA is also coordinating with the Department of Interior on the e-Payroll initiative.

THEME:	N/A
DEVELOPMENT:	Integrated Financial Management Program (IFMP)

INDEPENDENT REVIEWS

Types of Review	Performer	Last Review	Next Review	Purpose
Independent Annual Review	IPAO	19-Nov-02	August 2003	To validate performance of Program & Project commitments.
Core Financial Systems Compliance Review	PWC	October 2002	N/A	Validate internal security & controls and satisfy Federal Financial Requirements/JFMIP.
SAP Technical Implementation Review	SAP	July 2002	N/A	To insure the system architecture & configuration is at acceptable performance levels.

BUDGET/LIFE CYCLE COST

Budget Authority ($ in M)	Prior	FY02	FY03	FY04	FY05	FY06	FY07	FY08	BTC	Total	Comments
FY 2004 President's Budget	75.4	72.3	93.5	108.7	87.6	60.0	0.0	0.0	0.0	497.5	Direct procurement only.
Infrastructure	8.5	14.6	25.3	12.9	10.3	9.7				81.4	
Integration Project	24.7	10.2	19.0	24.4	21.3	12.5				112.2	
Core Financial	34.6	41.5	34.2	4.7						115.1	
Resume Management	2.7	0.3	0.5							3.5	
Position Description	1.1	0.1	0.6							1.9	
Travel Management	2.7	2.3	1.4	0.7						7.0	
Budget Formulation	1.0	3.3	8.3	3.5						16.1	
Follow-on projects (AM, HR, CA)			4.2	62.3	56.0	37.8				160.3	
Changes since FY 03 PBS	-1.3	-1.0	8.4	17.5	-3.2	11.8	-67.0	0.0	-112.5	-147.3	**Reason for Change: Development ends in FY 2006**
Infrastructure	-14.3	-0.5	+1.0	-4.4	-2.4	+5.9	-11.3		-21.8	-47.7	Reconcile Prior Years/ rephase schedule.
Integration Project	+10.1	-8.9	+3.1	+6.8	+1.8	-1.0	-10.3		-24.3	-22.6	Reconcile Prior Years/ rephase schedule.
Core Financial	+0.4	+4.3	+4.3	-7.9	-1.2					0.0	Reconcile Prior Years/ rephase schedule.
Resume Management	+0.1	-0.3	-0.1	-0.6						-0.9	Project completed ahead of schedule/under budget.
Position Description	+1.1	+0.1	+0.6							+1.9	Project Plan approved (12/15/01). *
Travel Management	+0.2	+1.4	+0.5	+0.4	-0.4					+2.0	Expanded scope - Gelco S/W to version Web 8.0 and full integration.
Budget Formulation	+1.0	+3.3	+8.3	+3.5						+16.1	Initial Allocation / Approved Project Plan pending Feb 03. *
Integrated Asset Management			+3.1							+3.1	Initial Allocation for Formulation Phase. *
Human Resources			+0.8							+0.8	Initial Allocation for Formulation Phase. *
Contract Administration			+0.3							+0.3	Initial Allocation for Formulation Phase. *
Planning Wedge/Follow-on	0.0	-0.4	-13.5	+19.5	-1.0	+6.9	-45.4	0.0	-66.4	-100.3	* Wedge Updated for follow-on projects (IAM, HR, CA) and Refresh software

(Budget table continues on next page)

Indicates changes since the FY 2003 Presidents Budget Submit.

THEME: N/A

DEVELOPMENT: Integrated Financial Management Program (IFMP)

BUDGET/LIFE CYCLE COST (Continued)

FY 2003 President's Budget (LCC)	76.7	73.3	85.1	91.2	90.8	48.2	67.0	0.0	112.5	644.8
Infrastructure	22.8	15.1	24.3	17.3	12.7	3.8	11.3		21.8	129.1
Integration Project	14.6	19.1	15.9	17.6	19.5	13.5	10.3		24.3	134.8
Core Financial	34.2	37.2	29.9	12.6	1.2					115.1
Resume Management	2.6	0.6	0.6	0.6						4.4
Travel Management	2.5	0.9	0.9	0.3	0.4					5.0
Planning Wedge/Follow-on		0.4	13.5	42.8	57.0	30.9	45.4		66.4	256.4
Initial Baseline (LCC)	63.7	73.3	79.2	78.1	78.2	78.2	0.0	0.0	194.6	645.3
Infrastructure	19.9	16.6	15.9	12.7	13.2	13.5			20.0	111.8
Integration Project	14.6	16.8	14.2	20.3	16.9	14.2			51.4	148.4
Core Financial	23.5	31.0	25.1	4.9	3.1	3.2			38.0	128.8
Planning Wedge/Follow-on	5.7	8.9	24.0	40.2	45.0	47.3			85.2	256.3

Indicates changes since the FY 2003 Presidents Budget Submit.