



National Institutes of Health
The Nation's Medical Research Agency

NIH Facilities Development Manual



Office of Research Facilities, Division of Technical Resources
Standards and Policy Branch

PREFACE

The NIH Facilities Development Manual sets forth overall general Office of Research Facilities Development and Operations (ORF) policy and guidance to ORF personnel who are responsible for directing and managing ORF facility development activities. The intent of this manual is to promote excellence in the management and good stewardship of NIH facilities from facilities budget formulation to occupancy.

The NIH Facilities Development Manual consolidates all ORF facility development policies including Volume I of the Department of Health and Human Services (HHS) Facilities Program and the NIH and succeeds the NIH Quality Systems Manual (QSM) that was last updated in early 2005. Since the last QSM update there have been numerous changes in the way the HHS and ORF procures, plans, designs, and constructs its facilities, particularly with the development of Volume I of HHS Facilities Program Manual.

Federal facilities are major assets and facilities management is no longer an afterthought at the highest levels in the Federal Government. On February 4, 2004, The President Bush signed Executive Order 13327 entitled “Federal Real Property Asset Management” requiring executive branch departments and agencies to recognize the importance of real property resources through increased management attention, the establishment of clear goals and objectives, improved policies and levels of accountability, and other appropriate action. Furthermore, Congress passed and President Obama signed into law the American Recovery and Reinvestment Act, which provides unique challenges and opportunities for ORF’s facilities development activities. In this regard, developing the NIH Facilities Development Manual is one of the initial steps the ORF has taken to respond to the American Recovery and Reinvestment Act.

The NIH Facilities Development Manual is intended to assist ORF facilities personnel in understanding and better managing the fiscal and capital assets entrusted to them by the American taxpayer. It emphasizes early planning and the importance of project definition. This volume addresses major Federal initiatives and concerns such as: protecting the environment; sustainable design; historic preservation; accessibility for persons with disabilities; and value engineering.

The NIH Facilities Development Manual aligns the NIH facilities program with the NIH mission, the steward of medical and behavioral research for the Nation. Its mission is science in pursuit of fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability. This manual also aligns ORF with a national imperative to be a good steward of America’s real property assets. I extend my sincerest thanks to all of the people who helped to make the NIH Facility Development Manual a reality.

Daniel G. Wheeland, PE
Director, Office of Research Facilities Development and Operations.

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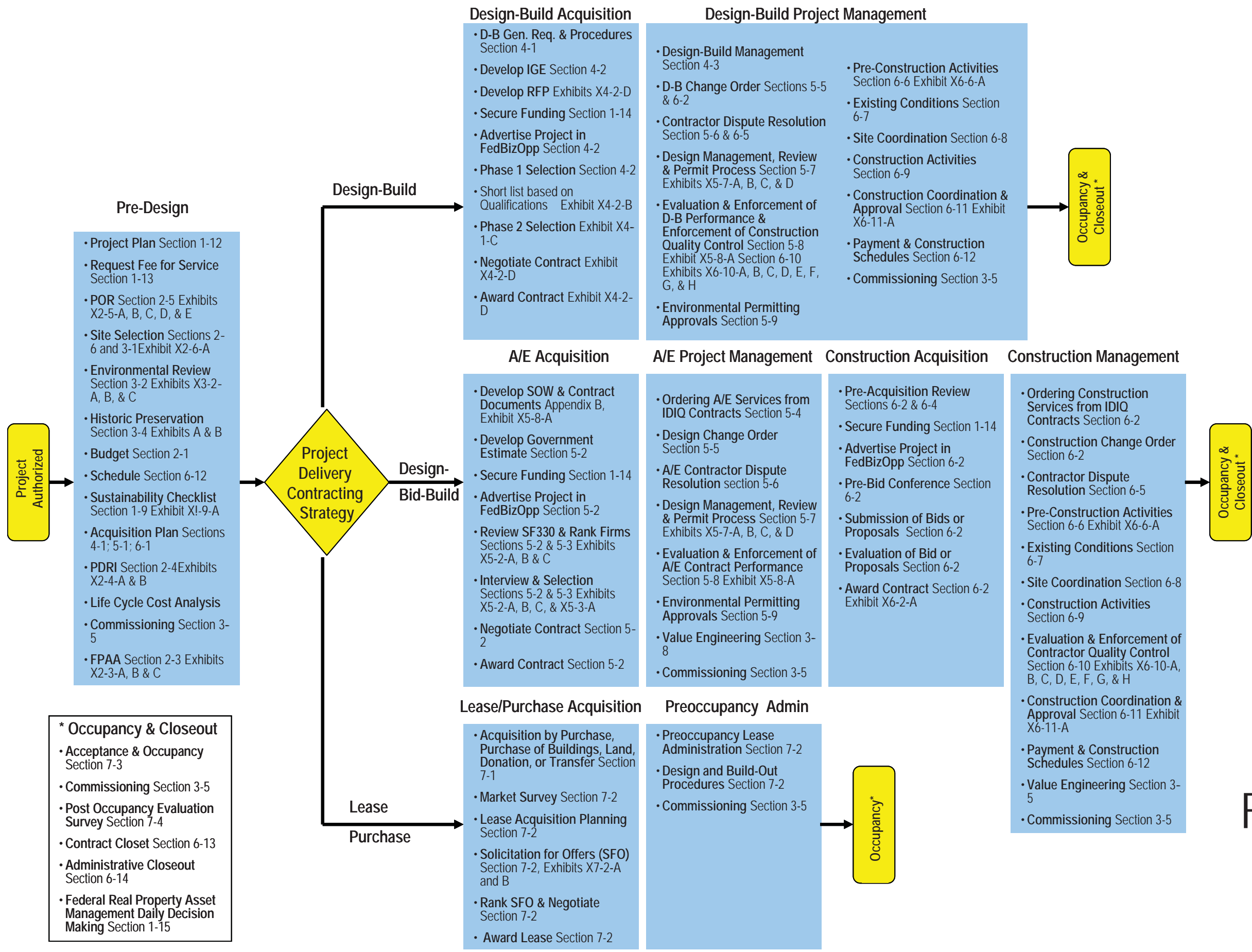
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Special Thanks for Technical and Administrative Support:

Michael Shaw – Program Specialist

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SECTION 1-1: PLAN OF THE MANUAL

1-1-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

1-1-00 POLICY

This section describes organization, maintenance, distribution, applicability and guiding principles of the [NIH Facilities Development Manual](#).

A. ORGANIZATION

1. The [NIH Development Manual](#) consists of chapters, which represent major subject categories. The chapters are further broken down into sections, each of which shall set forth HHS policies and procedures with respect to [NIH](#) facilities-related subjects. Exhibits/Appendices are included in the manual as necessary to disseminate forms, examples, and additional detailed information.
2. The numbering system for manual chapters shall be in accordance with the recommended guidelines in the HHS General Administrative Manual (GAM) dated Oct 31, 1995.

Example:

Chapter	1
Section	1-2
Sub-Section	1-2-10
Paragraph	A
Subparagraph	A.1
Exhibit	X1-2-A
Exhibit	X1-2-B

The sections are generally organized in sub-sections as follows: Policy, 1-1-00; Procedures, 1-1-10; Guidance and Information, 1-1-20; and Reporting Requirements, 1-1-30.

3. Exhibits to sections of this manual are numbered by placing an "X" before the section number and placing the exhibit letter immediately after the section number. As an example, Exhibit B to Section 1-2 would be numbered Exhibit X1-2-B.

B. MAINTENANCE

1. The Standards and Policy Branch (SPB), Division of Technical Resources (DTR)/Office of research Facilities (ORF) is responsible for the maintenance of this manual.
2. Changes to the [NIH Facilities Manual](#) will be issued by the SPB.
3. Users of this manual are encouraged to submit proposed corrections, updates, and improvements to SPB for consideration.
4. It is SPB's standard practice to solicit input on proposed changes from affected parties prior to publishing a change to the manual.



C. DISTRIBUTION

1. The [NIH Facilities Manual](#) will be distributed to each ORF Division (OPDIV) and responsible for the budget formulation, planning, design, construction, leasing, operation, maintenance, remediation and disposal of HHS facilities. Compliance with NIH policy guidelines and requirements outlined in the manual is the responsibility of each ORF Division. Appropriate distribution within each ORF Division shall be assured at the division level. Recipients should include those responsible for operations and maintenance requirements throughout the real property life cycle.
2. The manual will also be updated and posted on the DTR Web site for the Standards and Policy Branch.

D. EFFECTIVE DATE

This manual is effective _____. Changes to the manual will be forwarded with an SPB Issuance Notice. The date of the SPB Issuance Notice shown at the top of each page of each chapter/section shall be the effective date of the change.

1-1-10 PROCEDURES

[APPLICATION OF THE NIH FACILITIES DEVELOPMENT MANUAL](#)

The NIH Facilities Development Manual applies to the planning, programming, budgeting, approval, acquisition, development, improvement and delivery of NIH facilities. The guidance contained herein is applicable to all ORF organizations responsible for management of leased or owned real property assets. Unless noted otherwise in each section, this Manual applies to all leased, owned, or otherwise managed real property assets. The NIH Facilities Management Manual will cover facility management, operations, maintenance, and disposal of NIH real property.

The policies in this Manual shall apply, unless provided otherwise by law or regulation. The Manual shall not be construed to alter any law, executive order, rule, regulation, treat or international agreement. However, noncompliance with this Manual shall not be interpreted to create a substantive or procedural basis for a non-Federal party to challenger agency action or inaction.

1-1-20 GUIDANCE AND INFORMATION

[GUIDING PRINCIPLES OF THE HHS FACILITIES PROGRAM MANUAL AND THE NIH FACILITIES DEVELOPMENT MANUAL](#)

Investment decisions with regard to agency real property assets need to be integrated with and supportive of core mission activities to effectively manage and optimize real property assets. To facilitate integrating real property asset management decisions with the agency mission requires two elements – a clear understanding of the agency’s mission that drives the allocation and use of all available resources (human capital, physical capital, financial capital and technology/information capital) and an effective decision-making framework. HHS/NIH facilities shall be planned and delivered to best meet the functional, safety, and environmental needs of the programs and missions they house.

- **Environmental and Functional Needs:** HHS/NIH buildings shall provide an environment in which occupants can perform their work with maximum efficiency at the optimum level of comfort. Real property management decision-making will support agency missions and strategic goals. Appropriate levels of investment will be made in real property assets to advance customer satisfaction.



- **Safety, Health and Security:** HHS/NIH buildings shall provide an environment that is safe and healthy for occupants, and that, to the greatest extent possible, offers them maximum protection during emergencies or disasters.
- **Economy:** HHS/NIH facilities shall be planned and delivered at the most reasonable cost in terms of combined initial and long-term expenditures, without compromising other mission requirements. HHS will accurately inventory and describe all of its assets in order that full and appropriate utilization of space can be promoted. Life-cycle cost-benefit analysis shall be employed to explore alternatives for satisfying new requirements. HHS/NIH will dispose of unneeded assets.
- **Conservation and Resources:** Energy and water conservation shall be given prime consideration in the planning and delivery of HHS/NIH facilities. Products, materials, and systems shall be selected with a view toward minimizing the use of nonrenewable resources.
- **Preservation of historic and cultural resources** shall be given full consideration in planning and delivery of HHS/NIH controlled real property assets and federally assisted undertakings.
- **Sustainable Design:** The planning, acquiring, siting, designing, building, operating and maintaining of HHS/NIH facilities shall take into consideration sustainable design principles including integrated design, energy performance, water conservation, indoor environmental quality and materials.



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SECTION 1-2 FORMAL ADOPTION OF HHS FACILITY PROGRAM MANUALS

1-2-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

1-2-00 POLICY

ORF formally adopts Volumes I and II of the HHS Facilities Program Manual as the official NIH Facilities Program Manual. ORF internal facilities management policy not covered under the HHS Facilities Program Manual will be a NIH supplement to the HHS Facilities Program Manual.

1-2-10 PROCEDURES

A typical section in the HHS Manual is divided into four parts as follows: Policy, Procedures, guidance and information, and reporting requirements. Policy is HHS Departmental wide policy and only HHS can waive or change HHS policy. NIH supplements to the HHS Facility Program Manual may be waived or changed though the Policy Branch, Division of Policy and Program Assessment.

1-2-20 GUIDANCE AND INFORMATION

The Office of Management and Budget requires HHS to use the Federal Real Property Council's performance measures in everyday decision making. Adoption of the HHS Facilities Program Manual will help assure compliance with the Federal Real Property Council's performance measures as well as other "President's Management Agenda" initiative in every day decision making.

1-2-30 REPORTING REQUIREMENTS

Request for waivers and variances of the HHS Facilities Program Manual and NIH Supplements to the HHS Facilities shall be coordinated through the Principal Responsible for Policy.



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SECTION 1-3 POLICY and STANDARDS APPROVAL

1-3-00	Policy
10	Procedures
20	Guidance
30	Reporting Requirements

1-3-00 POLICY

The Director of the Office of Research Facilities Development and Operations (ORF) shall with the concurrence of the Director of the Division of Technical Resources (DTR), Chief of the Standards and Policy Branch, and appropriate ORF Division Director(s) approve all policies within the Office of Research Facilities Development and Operations.

This policy applies only to ORF internal policies. Facilities policies that are to be implemented by the Institutes or Centers or other NIH organizations external to ORF are to be placed in the NIH Manual in accordance with NIH Manual Chapter 1710. This policy recognizes that acquisition policies, as they relate to NIH facilities are under the authority of the Division of Acquisition Policy and Evaluation in the Office of Acquisition; therefore they will not be approved by the Director ORF.

NIH facilities policies shall conform with HHS facilities policies and Federal laws, regulations and policies as they relate to Federal facilities.

1-3-10 PROCEDURES

Upon request for or an identified need for a new policy or standard the Policy Branch will review current NIH and HHS policies, Federal regulations and laws to determine if the current policies, regulations and laws are adequate to meet ORF's needs. Policies formulated by the Standards and Policy Branch within the Division of Technical Resources will be reviewed and commented on by other divisions within ORF that will be affected by the proposed policy or standard. The Standards Policy Branch will determine which divisions within ORF are affected by the proposed policy or standard and invite those division directors to participate in the review process.

Policies or standards will be submitted to the divisions in a final draft and the divisions will have between 10 and 30 calendar days for review and comment. Failure to review and comment on the policies in the time allotted forecloses the division's opportunity for comment.

1. The Standards and Policy Branch will package the policy and the disposition of comments and transmit them to the appropriate ORF division directors for concurrence or no concurrence. Should there be a no concurrence: the division director shall state reasons for no concurrence for the record. ORF Division Directors have 5 business days to concur or not concur. Failure to concur or not concur on the policies in the allotted time assumes concurrence.



2. The Chief of the Standards and Policy Branch will package the policy and the disposition of comments and concurrences, and transmit them to the Director of DTR for concurrence.
3. The Director DTR will transmit the policy package to the Director of ORF for approval.

1-3-20 GUIDANCE AND INFORMATION

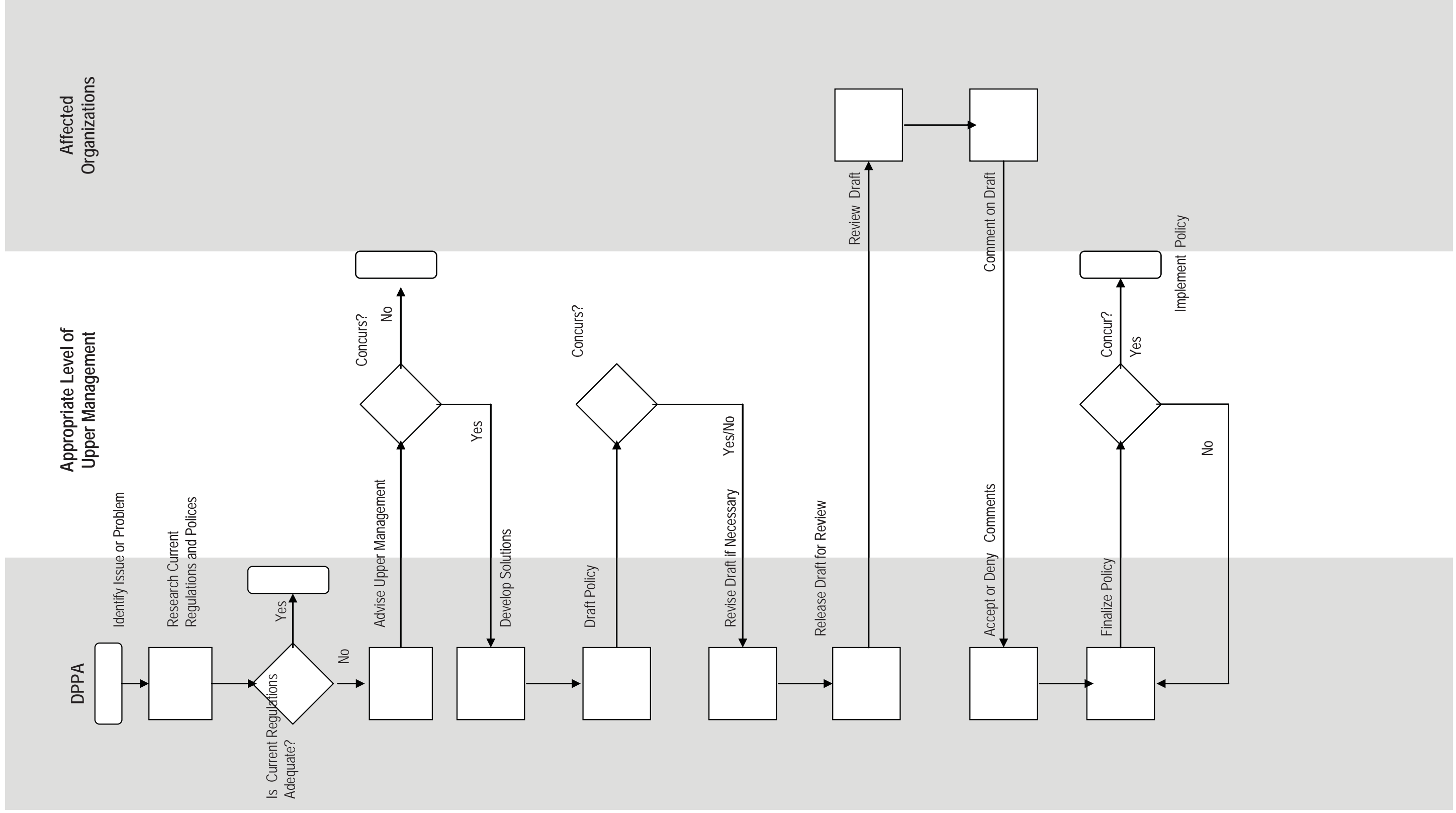
Policies will be grouped into four ORF internal policy management systems.

- NIH Facilities Development Manual
- NIH Facilities Management Manual
- NIH Design Requirements Manual
- ORFDO Safety Manual

NIH facilities policies that are associated with the development of NIH facilities will be a supplement to Volume I of the HHS Facilities Program Manual. NIH facilities policies that are associated with the operations of NIH facilities will be a supplement to Volume II of the HHS Facilities Program Manual. NIH facilities policies that are associated with workplace safety will be in ORFDO Safety Manual. NIH facilities policies associated with NIH facility design standards and guidelines will be a supplement of the NIH Design Requirements Manual.

1-3-30 REPORTING REQUIREMENTS

The Chief of the Standards and Policy Branch through the Director of Technical Resources will advise all ORF Division Directors that a new policy is approved and implemented by the Director ORF.







SECTION 1-4: DEFINITIONS

1-4-00	Policy
10	(Reserved)
20	(Reserved)
30	(Reserved)

1-4-00 POLICY

This section establishes definitions of terms used in this manual and HHS facilities programs. This chapter will assist users of the manual in understanding and properly applying certain terminology to the facilities development process. These definitions and all other definitions in this Manual must be read consistently with all other similar relevant definitions set forth in any other potentially relevant and applicable laws, regulations and similar government-wide requirements.

The following terms are defined as they relate to the HHS/NIH facilities construction program.

Acquisition Planning (as defined by FAR) – The process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost. It includes developing the overall strategy for managing the acquisition.

Acquisition Strategy - A business and technical management approach designed to achieve program objectives within the resource constraints imposed. It is the framework for planning, directing, contracting for, and managing a program. It provides a master schedule for all activities essential for program success. The acquisition strategy is the basis for formulating functional plans and strategies including the Acquisition Plan (AP).

Agency - In very general terms, an administrative unit of government. A Department Operating Division (OPDIV) is any of the agencies under the Department of Health and Human Services, which is responsible for the conception, planning, programming, budgeting, and/or execution of a program(s) and any associated operating functions. [NIH is an Operating Division of HHS.](#)

Agency Capital Plan - The Agency Capital Plan (ACP) is the product of programming, planning and budgeting for capital assets. The ACP is the result of an executive investment review process of an agency's capital asset portfolio. The ACP includes a statement of agency strategic plans, an analysis of the portfolio of assets currently owned and in procurement, the gap between planned and actual performance, justifications for new acquisitions proposed for funding, and related information.

Alterations – Improvements that consist of any betterment or change to an existing property to allow its use for a different purpose or function. See also the definition of “Improvements”.

Architect-Engineer Services (as defined in 40 USC 1102 and the FAR) -

- A. Professional services of an architectural or engineering nature, as defined by State law, which are required to be performed or approved by a person licensed, registered, or certified to provide such services;



- B. Professional services of an architectural or engineering nature performed by contract that are associated with research, planning, development, design, construction, alteration, or repair of real property; and
- C. Such other professional services of an architectural or engineering nature, or incidental services, which members of the architectural and engineering professions (and individuals in their employ) may logically or justifiably perform, including studies, investigations, surveying and mapping, tests, evaluations, consultations, comprehensive planning, program management, conceptual designs, plans and specifications, value engineering, construction phase services, soils engineering, drawing reviews, preparation of operating and maintenance manuals, and other related services.

As-Built Drawings – Electronic copy of Construction drawings revised to show changes made during the construction process, based on record drawings (marked-up prints, drawings and other data) furnished by the Contractor to the Government. The electronic copy of these as-built drawings shall include in the Title Block “As-Built and shall be in Autodesk Software Format for BIM projects, it shall be Revit As-Built File, for non BIM project, if any, it shall be the latest version of AutoCAD software

Basic Services: The services performed by an architect-engineer during the following five phases of a project: schematic design; design development; construction documents; bidding or negotiation; and contract administration.

Beneficial Occupancy - Beneficial occupancy takes place on the date when part or all of the work involved in a construction project is substantially complete and the Government takes possession of the designated space or spaces to use for the purpose intended. Beneficial occupancy also initiates the warranty period and any additional environmental mitigation measures identified in the environmental documents to be taken after construction. (The use of a project or portion thereof for the purpose intended.)

Benefit-Cost/Cost Effectiveness Analysis - Mechanism to determine the best solution to satisfy facility requirements by exploring and comparing the economics of alternatives such as: leasing, constructing a new facility, and renovating an existing structure or an addition/alteration option.

Best Value - The expected outcome of an acquisition in the Government’s estimation that provides the greatest overall benefit in response to the requirement. Best Value procurement is a method of acquisition in which proposals contain both price and qualitative components, and award is based upon a combination of price and qualitative considerations. Qualitative can be further subdivided as to technical design and/or management plan.

Bid Bond - Form of bid security executed by the bidder as Principal and by a Surety to guarantee that the bidder will not withdraw a bid within the period specified for acceptance and will execute a written contract and furnish required bonds, including any necessary coinsurance or reinsurance agreements, within the time specified in the bid.

Buildings and Facilities Funding – An application within the HHS budget request to support Line Item Projects (construction, improvements, or repairs) or Lump Sum amounts such as Repair and Improvements (R&I), Maintenance and Improvements (M&I), etc.

Budget Submission – Documentation submitted in the annual budget implementation process to support the real property asset management programs of an OPDIV including Facility Project Approval



Agreements, Annual Facilities Plan (Five-Year Plans), program narratives and performance outcomes. Draft documents are required to support the initial budget submission to the Department in June. Final documents, approved as applicable, are required to support the final budget submission to OMB in September.

Capital Asset - Capital assets are land, structures, equipment, and intellectual property used by the Federal Government with an estimated useful life of two years or more.

Change Order (as defined by FAR) - means a written order, signed by the Contracting Officer, directing the contractor to make a change that the Changes clause authorizes the Contracting Officer order a change without the contractor's consent.

Concepts - Drawings, sketches and/or graphics showing alternatives used to define a project's scope during the programmatic phase of the project. Concept drawing shall provide in Narrative format a complete picture of all Building elements and systems, it shall be generic enough such that an A/E firm can use creativity in design for an optimum energy efficient building, and detail enough to specify the class of building in terms of level of quality of material and work. Concept shall always accompany a construction cost estimate.

Congressional Reprogramming – Reprogramming is the shifting of funds from one object to another within an appropriation. An appropriation for construction is required by 41 U.S.C. 12, so any reprogramming action for construction purposes would be within the B&F appropriation. Funds may not properly be reprogrammed from a non-B&F appropriation to fund construction. Reprogramming actions do not represent requests for additional funds from the Congress, rather, the reapplication of resources already available. A transfer of funds between appropriations requires specific statutory authority; and is not included in the definition of reprogramming.

Constructed Asset – A constructed asset is received as equipment, materials, services, and supplies and built to its final, functioning form that is not available "off the shelf" but is built or constructed to unique specifications. The acquisition cost of a constructed asset is the total of all costs (equipment, materials, services, supplies, freight, salaries, benefits, overhead, etc.) incurred in the process of designing and building the asset.

Construction – The erection of a building, structure or facility, including the installation of equipment, site preparation, landscaping, associated roads, parking, environmental mitigation and utilities, which provides space not previously available. It includes freestanding structures, additional wings or floors, enclosed courtyards or entryways, and any other means to provide usable program space that did not previously exist (excluding temporary facilities). Construction projects are capitalized in accordance with the accounting principles of the Federal Accounting Standards Advisory Board (FASAB). See Section 2-1 for additional information.

Construction Codes – Any set of standards set forth in regulations, ordinances or statutory requirements of a local, state, or federal governmental unit relating to building construction and occupancy, adopted and administered enforced for the protection of the public health, safety and welfare, and the environment.

Construction Documents Phase – The third phase of the architect - engineer's basic services. In this phase the architect-engineer prepares from the approved design development documents, for approval by the Government, the working drawings and specifications and the necessary bidding in-



formation. In this phase the architect-engineer also assists the Government in the preparation of bidding forms, etc.

Construction Management – **Construction management** is a version of the design-bid-build project delivery system that uses a construction manager to facilitate the design and construction of a project by organizing and directing personnel, materials, and equipment to accomplish the purpose of the designer. A professional service that applies effective management techniques to the planning, design, and construction of a project from inception to completion for the purpose of controlling time, cost and quality, as defined by the Construction Management Association of America (CMAA).

Construction Manager – **A construction manager** is an **individual**, firm or business organization with the expertise and resources, who has the responsibilities under contract to the Government for coordination and accomplishment of overall project planning, design and construction.

Contract (as defined by FAR) – a mutually binding legal relationship obligating the seller to furnish the supplies or services (including construction) and the buyer to pay for them. It includes all types of commitments that obligate the Government to an expenditure of appropriated funds and that, except as otherwise authorized (by the FAR), are in writing. In addition to bilateral instruments, contracts include (but are not limited to) awards and notices of awards; job orders or task letters issued under basic ordering agreements; letter contracts; orders, such as purchase orders, under which the contract becomes effective by written acceptance or performance; and bilateral contract modifications.

Contract Award - The official instrument and notification from the Contracting Officer that the Government has accepted a contractor's bid or offer.

Contract Documents - Those documents that comprise a contract, e.g., in a construction contract, the government contractor agreement (Standard Form 252, General Provisions and Clauses, Special Contract Requirements, other provisions in the Uniform Contract Format, specifications, plans and/or drawing, all addenda, modifications, and changes thereto, together with any other items stipulated as being specifically included.)

Contract Modification (as defined by FAR) - Means any written change in the terms of a contract (see FAR 43.103).

Contracting Officer - The individual with authority to execute contracts on behalf of the Government. This individual is the sole authorized agent in dealing with the contractor. The Contracting Officer has authority to negotiate and execute contracts on behalf of the Government and to make changes, amendments, approve payments, terminate contracts, and close out contracts upon satisfactory completion.

Contracting Officer's Technical Representative (COTR) - The Project Officer or other authorized representative that is designated by the Contracting Officer.

Contractor - The person, firm, or corporation with whom the Government has executed a contract, that is responsible for performing the work.



Cost-Benefit/Cost Effectiveness Analysis – Mechanism to determine the best solution to satisfy facility requirements by exploring and comparing the economics of alternatives such as leasing, constructing a new facility, renovating an existing structure or an addition/alteration option.

Decontamination - The complete removal or destruction by flashing of explosive powders; the neutralizing and cleaning-out of acid and corrosive materials; the removal, destruction, or neutralizing of toxic, hazardous or infectious substances; and the complete removal and destruction by burning or detonation of live ammunition from contaminated areas and buildings.

Defective Work - Work not in conformance with the contract documents. Materials and equipment furnished under the contract are not of specified quality and new unless otherwise required or permitted by the contract documents.

Deficiency (as defined by FAR) - A material failure of a proposal to meet a Government requirement or a combination of significant weaknesses in a proposal that increases the risk of unsuccessful contract performance to an unacceptable level.

Delegation of Authority - The specific, formal deputation, assignment, or commitment of a legal power or right to take certain actions and to make certain decisions having legal significance. Such delegations must be stated in writing by the official authorized to delegate the authority.

Deliverables (in the context of design) - All of the drawings, specifications, models, etc., prepared by the offeror in response to an awarded contract. (In the context of construction) - The complete project including all of the record drawings, conformed specifications, operations and maintenance manuals delivered by the contractor required for beneficial occupancy.

Design - The process of defining the construction requirement (including the functional relationships and technical systems to be used, such as architectural, environmental, structural, electrical, mechanical, and fire protection), producing the technical specifications and drawings, and preparing the construction cost estimate.

Design Development Phase - The second phase of the architect-engineer's basic services. In this phase the architect prepares from (from the approved schematic design studies, for approval by the Government) the design development documents consisting of drawings and other documents to fix and describe the size and character of the entire project as to structural, mechanical and electrical systems and such other essentials as may be appropriate; the architect-engineer also submits to the Government a further statement to probable construction cost.

Design Professional - An individual who is licensed to practice architecture and/or engineering.

Design Proposal - A portion of a design-build proposal that contains design factors, usually including function, layout, materials, aesthetics and specifications. Design proposal falls under the general category of qualitative evaluation factors.

Design-Bid-Build - The traditional delivery method where design and construction are sequential and contracted for separately with two contracts and two contractors.

Design-Build - Combines design and construction in a single contract with one contractor.



Develop-Design-Build (Turnkey), Design-Build-Lease, Lease Purchase - Financing methods in which the Government retains an entity which has single-point responsibility for developing a project: in addition to design and construction, the entity is responsible for providing one or more other project development functions, such as selecting a site, financing and even owning or operating the facility which is leased to the Government (with or without the option to purchase).

Earned Value - Earned value is a management technique that relates resource planning to schedules and to technical cost and schedule requirements. All work is planned, budgeted, and scheduled in time-phased "planned value" increments constituting a cost and schedule measurement baseline. There are two major objectives of an earned value system: to encourage contractors to use effective internal cost and schedule management control systems; and to permit the customer to be able to rely on timely data produced by those systems for determining product-oriented contract status. For example: As work is performed, it is "earned" on the same basis as it was planned, in dollars or other quantifiable units such as labor hours and materials. Planned value compared with earned value measures the dollar volume of work planned vs. the equivalent dollar volume of work accomplished. Earned value compared with the actual cost incurred (from contractor accounting systems) for the work performed provides an objective measure of planned and actual cost. For firm fixed price, the intent is to compare the original contractor planned milestones, their start/finish date, planned monthly progress and value to the actual dates and actual percentage completion for the same.

Easement - An interest in land granted for a specified purpose, such as a highway, utility line, etc.

Environmental Checklist - The checklist is used to determine if an environmental assessment is required for a particular project. If the project affects historic property, it should be noted on the checklist that the evaluation of historic property is under 36 CFR 800, Section 106.

Equipment - See Section 2-1 for additional information.

- a. Fixed Equipment – Fixed, built-in, attached, and installed equipment normally included as part of the construction contract and capitalized as facility cost.
- b. Moveable Equipment – Equipment that does not require attachment to the building or utility service, other than that provided by an electrical plug or disconnect fittings.
- c. Special Purpose Equipment – Technical, medical, or scientific equipment that is needed to operate a laboratory, a hospital, a clinic, a clinical research patient care unit, an animal care facility, or is specific to a single purpose and not generally suitable for other purposes. Special purposed equipment may be classified as either fixed or moveable equipment.

Equipment Funding - See Section 2-1 for appropriate funding sources for equipment.

Excess Real Property - Any real property under the control of a Federal agency that is not required for the needs and discharge of its responsibilities.

Executive - A Government employee with management responsibilities as designated by the employing agency head.

Executive Agency (as defined by FMR) – Any executive department or independent establishment in the executive branch of the Government, including any wholly owned Government corporation.



Facility - A building or group of buildings, a structure, utility system, the site and/or environs associated with the above.

Facility Project Budget – A summary of all anticipated project costs necessary for a construction, improvement or repair project to complete planning, design, construction, and activation including equipment and result in a fully operational facility . The source(s) of funding shall be identified in the project’s budget. The facility project budget is documented on the HHS Form 300, Facility Project Approval Agreement.

Facility Project Approval Agreement (FPAA - HHS Form 300) - a written agreement between designated OPDIV officials (i.e., Project Manager, Project Director and OPDIV Board Member) and the Department evidencing the OPDIV’s commitment to execute a particular project. A FPAA is required for all facility construction and improvement projects exceeding \$1 million and all repair projects exceeding \$3 million. The FPAA documents the project’s scope and description, basis of need, funding source(s), and total cost from all sources. It identifies project schedule milestones, including completion of design, construction, activation and operational phases.

Fast Track Construction - A scheduling process in which design and construction activities overlap. Design documents and equipment and trade subcontracts are released incrementally or in phases.

Feasibility Study - A detailed investigation and analysis conducted to determine the financial, economic, technical, environmental and other advisability of a proposed project.

Federal Acquisition Regulation (FAR) – The basic policy governing federal agency acquisitions. The FAR contains legal requirements, regulations, and policies that bear on contracting. The FAR is available electronically via the internet at <http://www.acquisition.gov/comp/far/index.html> or <http://farsite.hill.af.mil/vffara.htm>. There are many other useful websites available for FAR research that also includes agency specific supplements to the FAR.

Federal Agency (as defined by FMR) – Any executive agency or any establishment in the legislative or judicial branch of the Government (except the Senate, the House of Representatives, and the Architect of the Capitol and any activities under that person’s direction).

Federal Agency Buildings Manager - Building manager employed by GSA or a federal agency that has been delegated real property management and operation authority from GSA.

Federal Government Real Property Services Provider - any federal government entity operating under, or subject to, the authorities of the Administrator of General Services, that provides real property services to federal agencies. This definition also includes private sector firms under contract with federal agencies that deliver real property services to federal agencies. This definition excludes any entity operating under, or subject to, authorities other than those of the Administrator of General Services.

Federal Management Regulations (FMR) - The FMR prescribes policies concerning property management and related administrative activities. GSA issues the FMR to carry out the Administrator of General Services’ functional responsibilities, as established by statutes, Executive orders, Presidential memoranda, Circulars and bulletins issued by the Office of Management and Budget (OMB), and other policy directives.



Fee Proposal for Design Services - A proposal for architectural-engineering services to be rendered by the selected A/E in response to a RFP. The fee proposal will be the basis of negotiating a design contract in design-bid-build delivery.

Final Inspection - Final review of the project by the Government to verify satisfactory completion of all contract elements, prior to issuance of the final payment.

Full Funding - Appropriations (regular or advanced) as enacted that are sufficient to complete a capital project before any obligations may be incurred. Requests for acquisition of capital assets must propose full funding to cover the full costs of the project or a complete and usable segment of the project, consistent with the policy stated in section 300.6(b) of OMB Circular A11.

Full Scope Authorization – Use of a single contract or related contracts, which collectively include the full scope of the project as authorized by language in an appropriations bill. Full scope authority may be employed for development and construction of the project provided that the project will be subject to the availability of funds. The solicitations and contract(s) shall contain the clause “Availability of Funds” found at 48 CFR (FAR) 52.232-18.

General Contractor - The prime contractor who is responsible for all of the work at the construction site defined within the contract, including that performed by all subcontractors.

General Provisions – The standard clauses that are used by Government agencies in various types of contracts. Most of these clauses are set forth in FAR 52, and guidance for their use is set forth in the Provision and Clause Matrix in FAR Part 52.301. The term also includes clauses specified in FAR Supplement for agency wide use. FAR 52.102-1 provides that general provisions will be incorporated by reference to the regulations “to the maximum practical extent” rather than by placing the full text of clauses in the contract document.

General Services Administration (GSA) - Acting by or through the Administrator of General Services, or a designated official to whom functions under this part have been delegated by the Administrator of General Services.

Gross Area - The total square footage/square meters in a building for all floors from the outside face of exterior walls, disregarding such architectural projections as cornices, buttresses, and roof overhangs. Gross area includes all research and administrative space, retail space, and other areas such as vending machine space and storage. Gross area also includes major vertical penetrations such as shafts, elevators, stairs, or atrium space. This figure is used in defining construction costs for facilities. See Section 2-7 for additional information.

Historic Properties - Properties listed on the National Register of Historic Places or determined by the Federal Preservation Officer (in consultation with the cognizant SHPO or THPO) to be eligible for listing on the National Register of Historic Places based on National Register Criteria.

Holding Agency - The executive agency that has accountability for the property involved.

Hospital - Buildings used primarily for furnishing in-patient diagnosis and treatment under physician supervision and having 24-hour-a-day registered graduate nursing services. This category also includes medical laboratories used for routine testing. This category excludes buildings used directly in basic or applied medical research. (IHS is the only HHS OPDIV with hospitals that fit this definition.)



Improvements (Renovations/Alterations) - Any betterment or change to an existing property to allow its continued or more efficient use within its designated purpose (Renovation), or for use for a different purpose or function (Alteration). Building improvements also include improvements to or upgrading of primary mechanical, electrical, or other building systems, and site improvements not associated with construction projects. Improvements typically increase the useful life of a facility and are capitalized against the existing property in accordance with the accounting principles of the FASAB. See Section 2-1 for additional information.

Incremental (Partial) Funding - Incremental funding or partial funding is dollars provided in the appropriations process that are not enough to cover the full cost of the project or a complete and usable segment of the project.

Installation - A separately located and defined area of real property in which HHS exercises a real property interest. The term also applies to portions of installations, facilities, or buildings not owned by HHS but which have been acquired for exclusive use through lease, permit, or other written agreement.

Integrated Project Team - Multi-disciplinary team established to manage and analyze performance and capability of a project or portfolio of projects in meeting program requirements.

Laboratory - Buildings used directly in basic or applied research in the sciences (including medicine) and in engineering, such as medical laboratories, meteorological research laboratories; and buildings used in designing, developing and testing prototypes and processes for chemistry and physics. This category excludes medical and industrial laboratories used for routine testing.

Landholding Agency - The federal agency that has accountability for the property involved. For the purposes of this definition, accountability means that the federal agency reports the real property on its financial statements and inventory records

Land Purchases - Specifically designated funding in an OPDIV's budget and/or appropriation for the acquisition of land. All acquisitions of land require specific statutory authority, 41 U.S.C. 14. All land acquisitions must be submitted to and approved by the HHS Capital Investment Review Board.

Lease - Specific rights to real property that have been assigned to the Federal Government for a defined period of time. A federal lease is both a conveyance and contract to possess and use real property for a pre-determined period of time.

Life Cycle Cost - The total cost of owning, operating, and maintaining a building over its useful life, including its fuel and energy costs, determined on the basis of a systematic evaluation and comparison of alternative building systems; except that in the case of leased buildings, the life cycle cost shall be calculated over the effective remaining term of the lease.

Liquidated Damages - Liquidated damages usually are specified as a fixed sum per calendar day that the contractor must pay to the government for failure to complete the work within the time specified in the contract. Liquidated damages must be set at a level consistent with a reasonable forecast of actual harm to the Government.



Load Factor – In a lease, the load factor is the multiplier to a tenant's useable space that accounts for the tenant's proportionate share of common areas (restrooms, elevator lobby, mechanical rooms, etc.). The load factor is usually expressed as a percentage and ranges from a low of 5% for a full tenant to as high as 15% for a multi-tenant floor. Subtracting one (1) from the quotient of the rentable area divided by the useable area yields the Load Factor.

Lowest Responsive Bid - The lowest bid which is responsive to and complies with the requirements of the Bidding or Contract Documents.

Maintenance - Work to keep a property, facility, and/or building system or component in a continuously usable state or condition. Maintenance may include inspection, cleaning, calibration and adjustment, lubrication and replacement of constituent parts, materials and/or sub-assemblies worn, broken, damaged or otherwise comprised. Maintenance includes routine recurring work, which is incidental to everyday operations, as well as preventive work, which is programmed at scheduled intervals, and predictive work, which is indicated by analysis. See Section 2-1 for additional information.

Management Proposal - That portion of a design-build proposal that contains the management plan including project approach, personnel, organization, schedule, affirmative action plan, etc. The management plan falls under the category of qualitative evaluation factors.

Master Plan - A master plan is a set of physical development plans for a specific site. An OPDIV Agency-wide Master Plan (AMP) must include all sites containing facilities in their inventory. Master plans analyze and document overall multiple building designs, their interrelationships and site requirements, including but not limited to:

- a. Land use
- b. Site development and utility infrastructure
- c. Future expansion
- d. Landscaping
- e. Grading and drainage
- f. Pedestrian and vehicular circulation and parking
- g. Support services
- h. Off-site improvements
- i. Environmental impacts

Metrics - Standard performance measurements.

Minor Renovations – Renovations that are directly related to the installation of special-purpose equipment, as well as related design and inspection services. These renovations may include extending utility services, providing suitable safety and environmental conditions for proper operations, and making structural changes such as cutting walls and floors, and new partitions, provided such improvements are proximately incident to the installation, operation, and use of special purpose equipment and necessary to conduct the functions of the program(s). Minor renovation projects do not change the value of the underlying asset or increase the useful life of the facility. See Section 2-1 for additional information.

Model Building Codes - Regional building codes adopted as law by local jurisdictions.



Nationally Recognized Standards - Encompasses any standard or modification thereof which:

Has been adopted and promulgated by a nationally recognized standards-producing organization under procedures whereby those interested and affected by it have reached substantial agreement on its adoption, or was formulated through consultation by appropriate federal agencies in a manner, which afforded an opportunity for diverse views to be considered.

Net Area/Net Space - Net Area or Net Space, refers to those portions of the facility available to use for program operations and for supply storage, building maintenance/operation, and other necessary support functions. Net Area is measured from the inside of the permanent exterior wall to the near side of permanent walls separating the area from stairwells, elevators, mechanical rooms, permanent corridors, or other portions of the building not categorized as Net Space Area in the program of requirements document. In calculating net area, no deduction is made for columns and projections that are necessary to the building. However, deductions shall be made for large duct and elevator shafts passing through it. See Section 2-7 for additional information.

Net Assignable Square Footage - The area of a floor or office suite that is suitable for occupancy including secondary corridors. It excludes common or shared space that cannot be reasonably assigned for program purposes such as main egress corridors, hazardous waste marshaling areas on the loading dock, and other non-programmable space.

Offer (as defined by FAR) - A response to a solicitation that, if accepted, would bind the offeror to perform the resultant contract. Responses to invitations for bids (sealed bidding) are offers called "bids" or "sealed bids"; responses to requests for proposals (negotiation) are offers called "proposals"; however, responses to requests for quotations (simplified acquisition) are "quotations," not offers.

Office - Buildings primarily used for office space.

OPDIV Facilities Manager - The person in each HHS Operating Division, responsible for managing the OPDIV's facilities program. *At the NIH the OPDIV Facilities Manager is the Director of the Office of Research Facilities.*

Owned – The Federal Government has fee simple interest in the real property.

Partial Occupancy - Occupancy by the Government of a portion of a project prior to final completion.

Pass Back - Federal mechanism by which, HHS is formally advised of, the Office of Management and Budget's (OMB) recommendation to the President regarding the Department's budget request.

Payment Bond - (Labor and Material Payment Bond) - A contractor's bond in which, a surety guarantees to the owner that the contractor will pay for labor and materials used in the performance of the contract. The claimants under the bond are defined as those having direct contracts with the contractor or any subcontractor.

Performance Bond - A bond of the Contractor in which a surety guarantees to the owner that the work will be performed in accordance with the Contract Documents. Except where prohibited by statute, the Performance Bond is frequently combined with the Labor and Material Payment Bond.



Performance Specifications - A specification expressed in terms of an expected outcome or acceptable performance standard.

Plans and specifications - means drawings, specifications, and other data for and preliminary to the construction.

Post-Occupancy Evaluation (POE) Survey - The process of inspecting and analyzing recently completed and occupied facilities with a primary objective of determining both positive and negative lessons learned. The lessons learned are to be disseminated and used to promote long-term program improvements.

Pre-Project Planning - Process for developing sufficient strategic information through which HHS land-holding OPDIVs can address risk and determine required resources for successful construction projects.

Prequalification - The process in which the Government requests preliminary technical proposals and/or qualification submissions, from which it selects a certain number as the most qualified; those offerors compete for the final selection.

Prescriptive Specification - The traditional method of specifying materials or techniques found in design-bid-build projects. The range of acceptable product, manufacturers, and techniques, etc, is stipulated in detail to be followed by the builder.

Program Justification Document (PJD) - One of the planning and programming documents that the OPDIV may develop for obtaining approval for the project and its scope, for identifying potential environmental impacts, and for developing a cost estimate for inclusion in the HHS budget. Generally, the PJD includes an Introduction, General Overview, Space and Occupancy Summary, Staffing Summary, and an Executive Summary. To form a Program of Requirements (POR), technical requirements are attached to the PJD.

Program of Requirements (POR) - One of the planning and programming documents that the OPDIV may develop that describes the proposed facility. It includes estimates of design and construction costs, space requirements, environmental requirements, and other program information. Although normally developed by the program OPDIV, resource availability and time constraints may dictate that the POR be developed by a private A/E firm. Additional requirements for the POR are found in Chapter 2.

Project Definition Rating Index (PDRI) - A pre-project planning tool developed by the Construction Industry Institute (CII) that measures how complete the project scope has been defined. The PDRI score is required as part of the submission of OPDIV Facility Project Approval Agreements (HHS-300).

Project Officer - The government representative legally designated by the Contracting Officer as the authorized technical representative for administering A/E, construction and/or service contracts on behalf of the Contracting Officer, exclusive of contractual matters. The Project Officer is not authorized to issue any instructions or directions which effect any increases or decreases in the scope of work or which would result in the increase or decrease of the cost of the contract or a change in performance period of the contract.



Public Area - Any area of a building, which is ordinarily open to members of the public, including lobbies, courtyards, auditoriums, meeting rooms, and other such areas not assigned to a lessee or occupant agency.

Public Body - Any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, or any political subdivision, agency, or instrumentality of the foregoing.

Public Building (as defined in 40 U.S.C. 3301)-

(1) Any building, whether for single or multi-tenant occupancy, and its grounds, approaches, and appurtenances, which is generally suitable for use as office or storage space or both by one or more federal agencies or mixed ownership Government corporations, including federal office buildings, post offices, customhouses, courthouses, appraisers stores, border inspection facilities, warehouses, record centers, relocation facilities, telecommuting centers, similar federal facilities and any other buildings or construction projects the inclusion of which the President considers to be justified in the public interest. It also includes buildings of this sort that are acquired by the Federal Government under the Administrator's installment-purchase, lease-purchase, and purchase-contract authorities. HHS buildings are considered "Public Buildings" except as noted in paragraph (2) below.

(2) "Public building" does not include buildings or construction projects:

- (a) On the public domain (including that reserved for national forests and other purposes);
- (b) On the property of the Government in foreign countries;
- (c) On American Indians and Alaska Native properties held in trust by the United States;
- (d) On lands used in connection with federal programs for agricultural, recreational, and conservation purposes, including research in connection with the programs;
- (e) On or used in connection with river, harbor, flood control, reclamation or power projects, or for chemical manufacturing or development projects, or for nuclear production, research, or development projects;
- (f) On or used in connection with housing and residential projects;
- (g) On military installations Including any fort, camp, post, naval training station, airfield, proving ground, military supply depot, military school, or any similar facility of the Department of Defense;
- (h) On Department of Veterans Affairs installations used for hospital or domiciliary purposes.
- (i) Exclusion of which the President considers to be justified in the public interest.

Punch List - A list of unsatisfactory or incomplete work items that are identified by government representatives during an inspection of the work after the contractor has notified the Contracting Officer that work is substantially complete. The contractor must complete all punch list work items satisfactorily before the final acceptance of contract work.

Qualification Based Selection - A form of selection based upon qualifications of the offeror for the project followed by negotiations to determine the contract cost.

Qualification Statement - A written [statement of qualifications](#) by interested architect/engineer respondents on SF 330, more generic and limited than a proposal, used by an owner for pre-qualification and short listing, i.e., selecting the teams that are most qualified.



Qualitative Factors (in the context of design-build) - The subjective and non-cost factors that characterize and qualify an offeror. Such factors would include both factors that characterize the design-build entity and the proposal they submit. Examples include the experience and management plan of the design-builder and the aesthetic, functional and other aspects of a design that are not directly convertible to cost.

Real Property - Any interest in land (together with the improvements, structures, and fixtures located thereon) under control of any federal agency, except the public domain, or lands reserved or dedicated for national forest or national park purposes.

Record drawings – the drawings submitted by a contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract.

Renovation – Improvements that consist of any betterments or changes to an existing property to allow its continued or more efficient use within its designated purpose. See also the definition of “Improvements.”

Rentable Area – The (square footage) for which rent can be charged. Generally it is the gross area of the full floor less the area of all vertical penetrations (elevator shafts, stairwells, mechanical shafts etc.) Rentable area can be measured in many ways, but the most common measurement for office buildings is according to BOMA standards.

Repair - The restoration of a failed or failing primary building system or real property facility component to a condition that restores its effective use for its designated purpose. A repair does not increase the underlying value of an existing facility and is typically not capitalized. An example of a primary building system would be the structural foundation and frame, domestic waste system, or building HVAC; a real property component would be a piece of the primary building system such as a roofing system, central chiller/boiler, generator, or elevators. A failed or failing primary building system or real property component may be the result of action of the elements, fire, explosion, storm and/or other disasters, and by use near to or beyond its expected useful life or technical obsolescence. See Section 2-1 for additional information.

Repair-by-Replacement – The replacement of an existing building with significant deficiencies when it is more advantageous to replace the building than use the funds to renovate the building. A building may be replaced under Repair-by-Replacement if the cost of the documented eligible repairs is 75% of the cost to replace that building with a new equivalent building meeting current code and design standards. See Section 2-1 for additional information.

Request for Proposals (RFP) - The document that completely describes the procurement process, forms the basis for proposals, and ultimately becomes a potential element in the contract.

Schematic Phase - The first phase of the architect-engineer’s basic services. In this phase, the architect-engineer prepares schematics consisting of drawings and other documents illustrating the scale and relationship of project components for approval by the Government. The architect-engineer also submits to the Government a statement of probable construction cost.

Scope of Work (sometimes, referred to as ‘Scope’) – The narrative description of a project including the physical size and characteristics, functions, and special features.



Section Eight (a) – Section 8(a) of the Small Business Act is a program for minority disadvantaged contractors, where contractors are certified and contracted with the Small Business Administration (SBA). HHS in turn contracts with SBA for services.

Specifications - A part of the contract documents. A written document describing in detail the scope of work, materials to be used, method of installation, quality of workmanship for parcel of work to be placed under contract; usually utilized in conjunction with working drawings in building construction. Under the uniform system the specifications are comprised of 16 divisions. Specifications can be described as proprietary, performance, prescriptive, or reference specifications.

Stakeholders - Individuals and organizations who are involved in or may be affected by the undertaking.

Standards – Something considered by an authority or by general consent as a basis of comparison; an approved model. Standards tell the user how something is commonly done and are usually regarded only as recommendations that do not have the force of law. Nationally recognized standards are frequently collected as reference information when codes are being prepared. In many instances, entire sections of the standards are adopted into the regulated codes by reference, and then become legally enforceable.

Statement of Work - The Statement of Work is a document in the acquisition process that describes the work to be performed or the services to be rendered, defines the respective responsibilities of the Government and the contractor, and provides an objective measure so that both government and the contractor will know when the work is complete and payment is justified. Common elements of the Statement of Work are Background, Project Objectives, Scope of Work, Detailed Technical Requirements, Deliverables, Reporting, Schedule, Special Considerations, and References.

Subcontractor - A person or entity that has a direct contract with the Contractor to perform any of the work at the site.

Submittal - Plans and associated information comprising shop drawings, catalog submittals, etc.

Surplus Real Property - Any related real property and related personal property reported as excess which has been screened by GSA for needs of the federal agencies or waived from such screening by GSA and has not been designated by GSA for utilization by another federal agency.

Temporary Construction – Construction to provide a building, structure, or facility needed for a limited period of time to meet an urgent and compelling agency need. Such facilities should be of a clearly temporary nature to meet a temporary need. The temporary need is demonstrated by a facility requirement for less than 5 years or the long-term need has been programmed in the OPDIV Facilities Plan, but may not have been funded. See Section 2-1 for additional information.

Termination - The unilateral cancellation of a contract by the Government for either: (a) convenience (in the best interest of the Government) or (b) default (failure of a contractor to perform as required).

Turnkey - A variation of design-build project delivery in which one entity is responsible to the owner for design, construction plus designated real estate services that may include project financing and site selection/purchase.



Two-Phase Design-Build Selection Procedures - A selection method in which a limited number of offerors (normally five or fewer) are selected during Phase 1 to submit detailed proposals for Phase Two (see FAR Subpart 36.3).

Usable Square footage – (Also referred to as “office area”.) The secured area (square footage) occupied exclusively by tenant within a tenant's leased space. The useable area times the load factor for common area results in rentable area on which rent is charged. Useable area can be measured in many ways, but the most common measurement for office buildings is according to BOMA standards. It does not include restrooms, elevator shafts, fire escapes, stairwells, electrical and mechanical rooms, janitorial rooms, elevator lobbies, or public corridors (for example, a corridor leading from the elevator lobby to the entrance of a tenant's office).

Warehouse - Buildings used for storage, such as ammunition storage, covered sheds, and buildings used primarily for storage of vehicles or materials. Also included are underground or earth-covered ammunition storage bunkers and magazines. This category excludes water reservoirs and POL storage tanks, which are storage structures. (Note that HHS warehouses are not used for storing some of the materials described in the FRPC definition. Some typical uses for HHS warehouses include storage of personal property; furniture fixtures and equipment; vehicles and mail distribution. All of the HHS warehouses are included within the broader FRPC definition.)

Weakness (as defined by FAR) - A flaw in the proposal that increases the risk of unsuccessful contract performance. A "significant weakness" in the proposal is a flaw that considerably increases the risk of unsuccessful contract performance.



SECTION 1-5: ABBREVIATIONS AND ACRONYMS

1-500	(Reserved)
10	(Reserved)
20	Guidance and Information
30	(Reserved)

1-5-20 GUIDANCE AND INFORMATION

The following list of abbreviations and acronyms is provided for the benefit of the reader.

ABBREVIATIONS AND ACRONYMS

A/E	Architectural/Engineering
AAALAC	American Association for Accreditation of Laboratory Animal Care
ABA	Architectural Barriers Act
ACHP	Advisory Council for Historic Preservation
ACP	Agency Capital Plan
ADA	Americans with Disabilities Act
ADPL	Average Daily Patient Load
ADR	Alternative Dispute Resolution
AIA	American Institute of Architects
AMP	Agency Master Plan
ANSI	American National Standards Institute
AP	Acquisition Plan
ASAM	Assistant Secretary for Administration and Management
ASBTF	Assistant Secretary for Budget, Technology, and Finance
ATBCB	Architectural Transportation Barriers Compliance Board
B & F	Building and Facilities
BIM	Building Information Modeling
BMAR	Backlog of Maintenance and Repair
BMP	Best Management Practice
BOMA	Building Owners and Managers Association
CBD	Central Business District
C & D	Construction and Demolition
CDC	Centers for Disease Control & Prevention
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations



CICA	Competition in Contracting Act
CII	Construction Industry Institute
CIP	Capital Improvements Plan
CIRB	Capital Investment Review Board
CO	Contracting Officer
COR	Contracting Officer's Representative
COTR	Contracting Officer's Technical Representative
CRE	Corporate Real Estate
CRV	Current Replacement Value
D & F	Determinations and Findings
DAS	Deputy Assistant Secretary
DCIS	Department Contracts Information System
DOD	Department of Defense
DOL	Department of Labor
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
EPP	Environmentally Preferable Purchasing
EVMS	Earned Value Management System
FAR	Federal Acquisition Regulations
FASAB	Federal Accounting Standards Advisory Board
FCI	Facility Condition Index
FCIP	Federal Capital Improvements Program
FDA	Food and Drug Administration
FEMP	Federal Energy Management Program
FF&E	Furniture, Fixtures, and Equipment
FMR	Federal Management Regulation
FONSI	Finding of No Significant Impact
FPAA	Facility Project Approval Agreement
FPDS	Federal Procurement Data System
FPMR	Federal Property Management Regulations
FRPC	Federal Real Property Council
FY	Fiscal Year
GAM	General Administration Manual
GSA	General Services Administration



GSAR	General Services Administration Acquisition Regulations
HCA	Head of the Contracting Activity
HHS	U. S. Department of Health and Human Services
HHSAR	Health and Human Services Acquisition Regulations
HQ	Headquarters
HR	Human Resources
HRSA	Health Resources and Services Administration
HUD	Housing and Urban Development
HVAC	Heating, Ventilation, and Air-Conditioning
IAQ	Indoor Air Quality
IDC	Indefinite Delivery Contract
IDIQ	Indefinite Delivery, Indefinite Quantity
IFB	Invitation for Bids
IHS	Indian Health Service
IRIS	Integrated Recourses and Infrastructure Solutions
ISC	Interagency Security Committee
IT	Information Technology
JC	The Joint Commission
JOC	Job Order Contract
LCC	Life Cycle Cost
M ²	Square Meter
M & I	Maintenance and Improvement
M & M	Medicare/Medicaid
MEP	Mechanical, Electrical, and Plumbing
MPW	Medical Pathological Waste
NCPC	National Capital Planning Commission
NCR	National Capital Region
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NIH	National Institutes of Health
NPS	National Park Service
NRHP	National Register of Historic Places
NTTAA	National Technology Transfer and Advancement Act
OASH	Office of the Assistant Secretary for Health
OCR	Office of Civil Rights



OFCCP	Office of Federal Contract Compliance Programs
OFMP	Office for Facilities Management and Policy
OMB	Office of Management and Budget
OPDIV	Operating Division
OPV	Outpatient Visits
OS	Office of the Secretary
PAR	Pre-Acquisition Review
PDR	Project Definition Rating Index
PDS	Project Definition Statement
PHS	Public Health Service
PJD	Program Justification Document
PL	Public Law
PO	Project Officer
POE	Post Occupancy Evaluation
POR	Program of Requirements
PPD	Planning and Programming Documents
PRB	Permit Review Board
PS&D	Planning, Studies and Design
PW	Present Worth
R & I	Repair and Improvement
RFP	Request for Proposals
RSF	Rentable Square Footage
SADBUS	Small and Disadvantaged Business Utilization Specialists
SAVE	Society of American Value Engineers
SBA	Small Business Administration
SF	Square Foot.
SFO	Solicitation for Offers
SHPO	State Historic Preservation Officer
SLA	Supplemental Lease Agreement
STAFFDIV	Staff Division
THPO	Tribal Historic Preservation Officer
UFAS	Uniform Federal Accessibility Standards
USC	United States Code
USF	Usable Square Footage
VE	Value Engineering
VEC	Value Engineering Coordinator



VECP Value Engineering Change Proposal
VEP Value Engineering Proposal



NIH Institutes and Centers

CIT	Center for Information Technology
CC	NIH Clinical Center
CSR	Center for Scientific Review
FIC	John E. Fogarty International Center for Advanced Study in the Health Sciences
NCI	National Cancer Institute
NCCAM	National Center for Complimentary and Alternative Medicine
NCMHD	National Center on Minority Health and Health Disparities
NCRR	National Center for Research Resources
NEI	National Eye Institutes
NHLBI	National Heart, Lung, and Blood Institute
NHGRI	National Human Genome Research Institute
NIA	National Institute on Aging
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NIAMD	National Institute of Allergy and Infectious Diseases
NIAMS	National Institute of Arthritis and Musculoskeletal and Skin Diseases
NIBIB	National Institute of Biomedical Imaging and Bioengineering
NICHD	Eunice Kennedy Shriver National Institute of Child Health and Human Development
NIDCD	National Institute of Deafness and Other Communication Disorders
NIDCR	National Institute of Dental and Craniofacial Research
NIDDK	National Institute of Diabetes and Digestive and Kidney Diseases
NIDA	National Institute on Drug Abuse
NIHES	National Institute of Environmental Health Sciences
NIGMS	National Institute of General Medical Sciences
NIMH	National Institutes of Mental Health
NINDS	National Institute of Neurological Disorders and Stroke
NINR	National Institute of Nursing Research
NLM	National Library of Medicine



SECTION 1-6: FACILITY ACQUISITION, PLANNING, AND DEVELOPMENT REPORTING REQUIREMENTS

1-6-00	Policy
10	(Reserved)
20	(Reserved)
30	(Reserved)

1-6-00 POLICY

The purpose of this section is to emphasize some of the reporting requirements applicable to HHS/NIH facilities management programs. This section is not all-inclusive.

A. DETERMINATION OF EFFECT ON HISTORIC PROPERTY

When a federal agency proposes an undertaking, i.e. new construction, the NIH Federal Preservation Coordinator is required to make a determination of effect in accordance with 36CFR800. The NIH Federal Preservation Coordinator must consult the State Historic Preservation Officer or Tribal Historic Preservation Officer if the Department of the Interior has determined that a specific Tribe may assume the function of the SHPO. If there is an effect on historic property the NIH Federal Preservation Coordinator must follow the consultation process set forth in the National Historic Preservation Act, 16 USC 470 et seq. and its implementing regulations, etc. Refer to Chapter 3 for additional related information.

B. FEDERAL CAPITAL IMPROVEMENTS PROGRAM

The National Capital Planning Commission (NCPC) is a federal agency located in the Washington, D.C. metropolitan area. It is authorized to plan the orderly development of the federal establishment in the National Capital Region (NCR). One process the NCPC uses to help guide its planning is the annual preparation of what is referred to as the Federal Capital Improvements Program (FCIP). As required in Section 7(a) of the National Capital Planning Act of 1952, as amended, the Commission reviews federal public works projects for inclusion within a six-year FCIP. Once adopted by the Commission, the FCIP's recommendations are transmitted to the Office of Management and Budget (OMB) and other federal departments and agencies, as well as local and state jurisdictions. The FCIP helps coordinate future development activities in the NCR and assists OMB in making budgetary decisions about proposed capital projects in the Washington, D.C. area. The National Capital Region includes the District of Columbia; Prince George's and Montgomery Counties in Maryland; and Arlington, Fairfax, Loudoun, and Prince William Counties in Virginia, including the cities and towns located within the geographic area bounded by these counties.

C. NATIONAL CAPITAL PLANNING COMMISSION REVIEW OF HHS PROJECTS

The National Capital Planning Act of 1952 requires each federal agency in the National Capital Region (NCR), prior to preparing construction plans for proposed development projects or land acquisitions which affect the plan and development of the National Capital, to consult with the National Capital Planning Commission. The Commission has determined that an approved Master Plan is a prerequisite for review of individual installation's project plans in the NCR. The HHS Board must approve the Master Plan before it is submitted to the Commission.



D. CONTRACT COMPLIANCE

FAR 22.804-2(c) requires Contracting Officers to give written notice to the U.S. Department of Labor, Office of Federal Contract Compliance Programs (OFCCP) regional office within 10 working days of award of a construction contract that are subject to affirmative action requirements. The notification shall include the name, address, and telephone number of the contractor; employer identification number; dollar amount of the contract; estimated starting and completion dates of the contract; the contract number; and the geographical area in which the contract is to be performed. When requested by the OFCCP regional office, the Contracting Officer shall arrange a conference among contractor, contracting activity, and compliance personnel to discuss the contractor's compliance responsibilities.

E. FEDERAL PROCUREMENT DATA SYSTEM

HHSAR 304.602 requires HHS to implement a Federal Procurement Data System (FPDS). The Departmental Contracts Information System (DCIS) represents the Department's implementation of the FPDS. All departmental contracting activities are required to participate in the DCIS and follow the procedures stated in the Enhanced Departmental Contracts Information System Manual and amendments to it. The Head of the Contracting Activity (HCA) (not delegable) shall ensure that all required contract information is collected, submitted, and received into the DCIS on or before the 15th of each month for all appropriate contract and contract modifications awarded in the prior months.

F. CONGRESSIONAL NOTIFICATION

HHSAR 305.303 requires HHS to make a public announcement concerning contract actions as follows: Any contract, contract modification, or delivery order in the amount of \$3 million or more shall be reported by the Contracting Officer to the Office of the Deputy Assistant Secretary for Legislation (Congressional Liaison), Room 406G, Hubert H. Humphrey Building. Notification shall be accomplished by providing a copy of the contract or award document face page to the referenced office prior to the day of award, or in sufficient time to allow an announcement to be made by 5 p.m. Washington, DC time on the day of award.



SECTION 1-7: ROLES AND RESPONSIBILITIES

1-7-00	(Reserved)
10	(Reserved)
20	Guidance and Information
30	(Reserved)

1-7-20 GUIDANCE AND INFORMATION

HHS and [NIH](#) facilities program roles and responsibilities are as follows:

A. UNITED STATES DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Department of Health and Human Services is the United States government's principal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves.

B. THE OFFICE FOR FACILITIES MANAGEMENT AND POLICY

The Office for Facilities Management and Policy (OFMP) provides Department-wide leadership and direction in master planning; facilities planning and design, construction, leasing, operations and maintenance, and space utilization; and management programs (environmental management, historic preservation, energy management, and occupational safety and health). OFMP provides technical assistance to HHS Operating Divisions (OPDIVs) in evaluating the effectiveness of their facilities programs and policies and fosters creativity and innovation in the administration of these functions and the Capital Investment Review Board. OFMP serves as HHS representative to other federal and non-federal agencies and is the focal point reporting to OMB and the Federal Real Property Council (FRPC) on facilities activities and performance.

C. SENIOR REAL PROPERTY OFFICER

The Deputy Assistant Secretary, Office for Facilities Management and Policy is designated as the Senior Real Property Officer for HHS. Established by Executive Order 13327, the Senior Real Property Officer is designated among the senior management officials within each agency. This Senior Real Property Officer serves as the senior manager tasked with developing and implementing an agency asset management plan. Specifically, the Officer is responsible for:

- identifying and categorizing all real property owned, leased, or otherwise managed by the agency,
- prioritizing actions to be taken to improve the operational and financial management of the agency's real property inventory;
- making life-cycle cost estimations associated with the prioritized actions;
- identifying legislative authorities that are required to address these priorities;
- identifying and pursuing goals, with appropriate deadlines, consistent with and supportive of the agency's asset management plan and measure progress against such goals;
- incorporating planning and management requirements for historic property under Executive Order 13287 of March 3, 2003, and for environmental management under Executive Order 13148 of April 21, 2000; and
- identifying any other information and pursue any other actions necessary to the appropriate development and implementation of the agency asset management plan.



D. FEDERAL REAL PROPERTY COUNCIL

Established by Executive Order 13327, the Federal Real Property Council serves as a working group to facilitate the success of the agency's asset management plans. The Council is composed of all agency Senior Real Property Officers, the Comptroller of the Office of Management and Budget, and the Administrator of General Services. The Deputy Director for Management of the Office of Management and Budget is a member and serves as the chair of the Council. The Council establishes appropriate performance measurements for evaluating the costs and benefits involved with acquiring, repairing, maintaining, operating, managing, and disposing of federal real properties at particular agencies. The Council also serves as a clearinghouse for best practices in evaluating actual progress in the implementation of real property enhancements.

E. HHS ORGANIZATIONS WITH REAL PROPERTY MANAGEMENT RESPONSIBILITY

HHS organizations with real property management responsibility perform day-to-day execution of the facilities management program including master planning; facilities design, construction, leasing, operations and maintenance, space utilization; and management programs (environmental management, historic preservation, energy management, and occupational safety and health). These organizations develop and implement internal procedures necessary to comply with departmental policy and guidance including all statutory and regulatory requirements.

E1. NATIONAL INSTITUTES OF HEALTH

The National Institutes of Health is one of several HHS organizations with real property management responsibility. NIH is comprised of the Office of the Director (OD) and 27 Institutes and Centers. The NIH is the steward of the medical and behavioral research for the Nation. Its mission is science in pursuit of fundamental knowledge about the nation and the behavior of living systems. The NIH analyzes the application of knowledge as it applies to life, health, and the reduction of the burdens of illness and disability.

1. OFFICE OF THE DIRECTOR (OD)

The OD is responsible for setting policy for NIH and for planning, managing, and coordinating the programs and activities of all the NIH components.

2. OFFICE OF RESEARCH SERVICES (ORS)

The ORS plans and directs service programs for public safety and security operations. ORS directs scientific and regulatory support programs and employee services. The ORS advises the NIH Deputy Director for Management and other NIH senior staff on the management and delivery of technical and administrative services in support of the NIH research mission.

3. OFFICE OF RESEARCH FACILITIES DEVELOPMENT AND OPERATIONS (ORFDO OR OR)

The ORF is responsible for all NIH facility activities. ORF plans, develops, and manages NIH owned and leased facilities. This office assists the NIH Director with the formulation and execution of the building and facility appropriations. This office is responsible for the development and maintenance of policies and standards governing the development and use of real property. ORF is responsible for the planning and development of all facility related services.



The ORF is comprised of the Office of the Director and five functional divisions. These divisions are:

a. DIVISION OF FACILITIES PLANNING (DFP)

The DFP coordinates and manages all planning related to NIH owned and leased facilities on all campuses. DFP manages master planning, and space allocation planning for NIH facilities. This office provides real property and census data systems services. Agency, community, and site planning coordination activities are conducted and managed by the DFP.

b. DIVISION OF ENVIRONMENTAL PROTECTION (DEP)

The DEP works to protect and enhance the NIH environment. DEP manages the environmental protection, pollution control, waste management, resource conservation and environmental assessments functions.

c. DIVISION OF PROPERTY MANAGEMENT (DPM)

The DPM is responsible for the management of NIH leased and owned real property. DPM oversees the operations, maintenance, repair and renovation of all of NIH facilities and utility systems. This office prepares and manages a comprehensive facility management program and develops maintenance and construction programs.

d. OFFICE OF ACQUISITION (OA)

This Office is a central service reporting to the head of NIH Contracting. It is located within ORF to support all contracting NIH contracting needs for architecture and engineering, construction, real estate, leasing, and facilities. OA prepares the real property purchases, small purchases, dispositions and leasing contracts.

e. DIVISION OF TECHNICAL RESOURCES (DTR)

DTR is the central repository for ORF technical and professional knowledge and best practices. DTR takes the lead in coordinating and developing ORF policies and standards for biomedical research facilities and is a key participant in the development of national and international standards for biomedical and health care facilities; DTR is the primary source for design review and construction oversight for an expanding portfolio of intramural and extramural construction projects; and DTR has an increasingly expanding role as the ORF coordinator of HHS performance management requirements. DTR also represents ORF in the technical design and construction oversight of extramural and international bio-containment and health care facility programs and conducts ground breaking bio-environmental research and complex technical analysis.



F. HHS CAPITAL INVESTMENT REVIEW BOARD

1. Purpose of the Board: The HHS Facility Capital Investment Review Board (hereafter referred to as the Board) was established on June 9, 2003 to make recommendations for strategic management of HHS real property assets and to advise the Assistant Secretary for Administration and Management (ASAM) and the Secretary on major facility capital investment issues. The Board also advises, assists, consults with, and makes recommendations to the ASAM, the Secretary, and when appropriate the Assistant Secretary for Budget Technology and Finance (ASBTF), regarding the broad range of responsibilities.
2. Authority of the Board: The ASAM has delegated oversight authority and provides direction to all HHS Operating Divisions (OPDIVs) with facility acquisition and operation responsibilities and land acquisition authority. Part 7 of OMB Circular A-11 states that “A cross-functional executive review committee acting for or with the Agency Head must be responsible for managing the agency’s entire capital asset portfolio, making decisions on the best allocation of assets to achieve strategic goals and objectives within budget limits.” This Board will implement the responsibilities assigned the “cross functional executive review committee” In addition, Part 8 of A-11 requires that agencies have a physical asset management process that “adequately tracks real property assets through their respective life cycles.”
3. Board Functions: The Board provides advice and makes recommendations to the Secretary, the ASAM and the ASBTF on a range of issues to include: 1) the development of facility capital investment guidelines; 2) the development of guidelines to implement an investment review process that provides strategic planning for and oversight and guidance of facility investments; and 3) regular monitoring and proper management of these investments, once funded. One of the outputs of the investment review process is a regular update of HHS’ investment portfolio or plan that supports HHS strategic objectives.

Matters reviewed by the Board include but are not limited to:

- OPDIV investments that are more than \$10Mil;
 - Department-wide investments that affect multiple organizations;
 - Investments that have a significant impact on a single OPDIV;
 - OPDIV investments that the Office of the Secretary determines to have significant risks; high development, operating or maintenance costs; or have high public visibility;
 - Major repair and improvement (alteration and renovation) projects more than \$10Mil.
4. Board Structure: The Board will consist of all OPDIVs Heads with facility acquisition and operation responsibilities and land acquisition authority, including the acquisition of land through donation, and STAFFDIV Heads who have oversight responsibilities that directly involve implementing facilities functions. At present these members include:
 - Assistant Secretary for Administration and Management (ASAM) (Board Chair)
 - Assistant Secretary for Budget Technology and Finance (ASBTF)
 - Assistant Secretary for Legislation
 - Assistant Secretary for Planning and Evaluation
 - CDC Director (or designee)



- FDA Commissioner (or designee)
 - IHS Director (or designee)
 - NIH Director (or designee) and
 - three at-large appointments (no term limitation), who are recommended by the ASAM and ASBTF and approved by the Secretary.
5. Documents Review Process: The submission of proposed projects for consideration by the Board will be properly identified and included with the Department's annual budget formulation and review process, which are presented to the Board in June. The applicable OPDIV will provide the Board with those matters, as identified above, for which a funding requirement is being requested in the budget submission, including funding of studies, planning, and design for out-year projects. These documents will be distributed to the other Board members. Projects will be reviewed by the Board and recommendations made to the ASAM, and when appropriate to the ASBTF, on each project for consideration at the Secretary's Budget Council meetings.

The Board will conduct a meeting after the OMB pass-back to provide advice to the Secretary regarding the implication of OMB's recommendations. Additional meetings may be convened by the Board Chair to review the status of ongoing projects and, in unique and special cases (i.e., National emergency, Congressional mandate, etc.), or to review required out-of-cycle projects.



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SECTION 1-8 PROJECT RECORDS MANAGEMENT

1-8-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

1-8-00 POLICY

This Section describes how project records, customer supplied drawings and other required records, are controlled and filed. This Section applies to all records listed in the Records section of all procedures and work instructions within this manual.

A. RESPONSIBILITIES

- Division Director's and Supervisors are responsible for ensuring that all employees are familiar with and are maintaining records in accordance with this procedure.
- Project Officers (PO) are responsible for creating organized project files and for ensuring that current and complete information is included in the project files. Current records identified in the Record Section of procedures (that are applicable to the project) shall be maintained in project files throughout the life of the project. Upon completion of the project, PO are responsible for ensuring that files/records are made available for archival.
- Individuals or organizations responsible for retaining files/records shall make them available to anyone within the ORF, or to others, as identified by supervisors.

1-8-10 PROCEDURES

1. ORF project officers shall file records as required by the Records section on procedures and work instructions. Customer supplied drawings shall also be filed and controlled within project files.
 - a. When filing project related records, POs shall organize them in a project file using the appropriate work categories.
 - b. Electronic project files shall be maintained, hard copy is acceptable if Electronic copy is not practical to develop. To provide a basic filing consistency across the branch, both the electronic and the hard copy project files will be divided into one or more of the following folder headings (work categories):
 - Project assignment/Project Plan
 - Program of Requirements
 - Pre-design/study
 - Procurement
 - Design
 - Post-design
 - Construction
 - As-Built
 - Administrative closeout.
 - b. While the above folder headings are required, the project officer can further group documents within each folder into subsections as he or she chooses. Project ID labels, folder labels, and subsection labels must be clearly discernible.





2. Upon project closeout, both the hard copy and/or electronic project file shall be forwarded to the Business Center, Work Reception for retention

1-8-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Administrative Closeout
- Document Control and Distribution

B. RELEVANT DOCUMENTS

- Master list of quality system documents
- List of Records required in Section 7.0 of each procedure.

1-8-30 Reporting Requirements

Upon project closeout, both the hard copy and/or electronic project file shall be forwarded to the Business Center, Work Reception for retention. (See: Section 6-14 Administrative Closeout).



SECTION 1-9: PRE-PROJECT PLANNING DOCUMENTS AND DELIVERABLES

1-9-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

1-9-00 POLICY

This section provides policies and guidance on pre-project planning documents and deliverables required by HHS for project funding and approval.

- A. HHS may require the following documents to be addressed for funding approval depending on its funding level.
- Sustainability Checklist
 - Project Definition Rating Index
 - Facilities Approval Agreement
 - Project Delivery and Contracting Strategy
 - Life Cycle Cost Analysis (LCCA) ECONPAK

1-9-10 PROCEDURES

- B. NIH requires that the following pre-planning documents be in an integrated excel file and submitted to HHS. See Appendix C
- POR Checklist
 - Project Definition Rating Index (PDRI)
 - Sustainability Checklist
 - Facilities Approval Agreement (FPAA)

1-9-20 GUIDANCE AND INFORMATION

- A. The following documents are recommended to be completed prior to starting the documents listed in Section 1-8-00-A to improve the project's definition.
- Program of Requirements (POR) see Section 2-5
 - Site Selection Report see Section 2-6
 - Request for Proposal if a design-build is the preferred method of project delivery.



SECTION 1-10 PRE-PROJECT DEVELOPMENT

1-10-00	Policy
10	Procedures
20	Guidance and Information
30	Reserved

1-10-00 POLICY

This Section defines the typical steps required by fee for service personnel in the use of marketing time (non-billable hours) when assisting a customer to define a project prior to issuing a Work Request.

“*Non-billable hours*” is refers to the marketing time spent assisting a customer without issuing a request of “*fee for service*” (FFS) to the customer.

A. APPLICABILITY

This procedure applies to any fee for service employee (referred to as the contact) who receives an inquiry from a customer (IC) regarding a potential project.

B. RESPONSIBILITIES

- The contact, (who may be a supervisor, employee, PO or any fee for service personnel), is responsible for providing contact information to the customer and following up as necessary.

1-10-10 PROCEDURES

1. The contact receives an inquiry from a customer. As an example: the inquiry may consist of the process to initiate a work request; an idea that needs more development in terms of scope, feasibility, and budget; insufficient space to implement an idea; or a specific problem to be addressed to support new equipment or a new NIH or IC initiative.
2. The contact notifies the immediate supervisor and describes the inquiry. The supervisor will follow up with the customer or designate a contact for inquiry follow up.
3. The designated contact undertakes a preliminary investigation of the scope/idea submitted by the customer. The investigation may include, but is not limited to, the following:
 - Investigation of the physical limitations of the request such as adjacencies, code limitations, availability of support, and infrastructure (mechanical and electrical support).
 - Preliminary coordination with other NIH facility support groups that may be affected by the potential project.
 - Investigation of the appropriate funding source.
 - If in Building 10, reviewing the appropriateness of the project against the Building 10 (Clinical Center Complex) Renovations Restriction Policy: <http://orf.od.nih.gov/building10.htm>
 - If in Building 10, review the C-420 ILSM & CRA requirements.
 - a. The contact meets with the customer to discuss the scope/idea in detail. If the scope/idea is well defined and understood the customer is informed of the procedure for submitting a Work Request (CSA) to the Work Reception.



- b. The contact must not exceed 8 hours of marketing time in helping a potential customer define a scope of work. Should the process exceed 8 hours, the contact (if it is not the supervisor), must ask for the supervisor approval prior to continue with the process.
- c. The supervisor may approve up to 20 hours of marketing time without the prior approval of the Division Director. Approval must be obtained from the appropriate Division Director if more than 20 hours of time are anticipated.
- d. If a customer submits a Work Request and it is assigned to another PO, the initial contact must forward all relevant project information, to the assignee.

1-10-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURE

- Project Assignment and Transfers Procedure

B. RELEVANT DOCUMENTS

- Building 10 (Clinical Center) Renovations Restriction Policy.

C. Records

- Summary of IC inquiry and/or investigation (e-mail or written memorandum)
- Program of Requirements, or Space Justification Document; approval (if required)



SECTION 1-11 PROJECT ASSIGNMENT AND TRANSFER

1-11-00	Policy
10	Procedures
20	Guidance and Information
30	Reserved

1-11-00 POLICY

This Section defines the process of assigning or transferring a Work Request (Central Services Activity request (CSA) from receipt in the Work Reception to assignment as a project to the implementing area.

A. APPLICABILITY

This procedure applies to all Work Requests.

B. RESPONSIBILITIES

The Work Reception responsibilities include the following:

- Receive all electronic work requests.
- Sort capability should be by IC, and Building number.
- Make any status changes and assign status codes and job types for automatic funding.
- Route electronically to Project Officer (PO) and or their supervisor.
- Work Requests [CSA] shall be electronically entered into the system.

The PO/PO Supervisor has the following responsibilities:

- Receive and review Work Request.
- Make Work Request assignment recommendations, electronically route to next applicable step.

1-11-10 PROCEDURE

A. INITIAL WORK REQUEST ASSIGNMENT.

1. The Work Reception receives CSA requests and routes requests electronically to the ORF Division of Property Management (DPM) or applicable parties in any of the other Divisions in ORF.
2. The Small Alterations Team may accept, cancel, or recommend a Work Request for reassignment to another group.

B. TRANSFER OF WORK REQUEST PROJECT.

1. For transfer of requests or projects within DPM, the transfer must be agreed upon by the supervisor of the implementing area before the transfer of the project can occur.
2. For transfer of requests or projects between Branches or Divisions and within the Office of Research Facilities Development and Operations (ORF), the transfer must be agreed upon by the Supervisor or Director before transferring the project.



C. UPDATES

The Work Reception updates SSFAS with status code/job types. The Work Reception processes the CSA request according to its recommended assignment after all transfers are complete. Combined requests: If two CSA requests should be combined, the Work Reception updates SSFAS with the “Combined With” status code. Cancellation: If notified, the Work Reception updates SSFAS with the “Cancelled” status code. Once the PO assignment is finalized, a notification e-mail shall be sent to customers.

The PO sets up the project and the electronic project file. The PO arranges an initial meeting with the customer and proceeds with implementing the Project Plan.

1-11-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Pre-Project Development

B. RELEVANT DOCUMENTS

- Project Plan

C. RECORDS

- Work Request (electronic or hard copy)



SECTION 1-12 PROJECT PLAN

1-12-00	Policy
10	Procedures
20	Guidance and Information
30	Reserved

1-12-00 POLICY

This Section defines the process for developing a Project Plan that defines the project scope, budget, schedule, and quality assurance, that defines customer and NIH requirements and then communicating and obtaining customer approvals of this plan. The Project Plan, Quality Assurance, Project Descriptors, Technical Requirements Checklist, Customer Checklist, and PRB Design Review checklist are located in an electronic format accessible through Constructware.

A. APPLICABILITY

This procedure applies to all ORF construction and leasing projects except those performed in the Construction Management Branch (CMB) by Team F - “Small Alterations Team” or any other project under \$25,000 within ORF. RML, NIEHS, NCI-Frederick, and Baltimore Bayview IC-Facility projects initiated by these other campuses must also be reviewed and approved by ORF and a Project Plan will be required as described in this procedure.

B. RESPONSIBILITIES

- The Project Officer (PO) is responsible for preparing the Project Plan, and complying with the approved Project Plan in Constructware.
- Capital Projects require a Project Management Plan executed by the project stakeholders and approved by supervisor.
- The PO is responsible for revising the Project Plan when ever there is a change in scope, schedule or budget.
- The PO is responsible for consulting with the Contracting Officer (CO) and his or her supervisor on acquisition strategy, and for reviewing and approving the Project Plan and all attachments.
- The Chief Engineer, ORF, shall periodically review projects within organization for review of the source of funds for assurance that the funding source for the projects is in accordance with Departmental policy.

1-12-10 PROCEDURES

1. The PO sets up and chairs the initial customer meeting to understand the customer’s project requirements and to identify roles and responsibilities in providing those requirements. PO completes the Technical Requirements and Customers Requirement Checklist attachments accessed through Constructware in the Project Plan workflow.
2. For all Capital Projects or any other projects identified as part of the submission to Operating Division (OPDIV) Facility Project Approval Agreement (FPAA) the PO shall use Pre-Project planning tool called Project Definition Rating Index (PDRI). In addition, a Project Management plan executed by the project stakeholders is required. The documented material from this process will be part of the Project Plan.



3. The PO writes the scope of work and Program of Requirements (POR) that defines the customer and NIH's requirements.
4. The PO, in consultation with the CO and his/her supervisor, determines the acquisition strategy including the design procurement process, the planned construction procurement process and the need for construction management services.
5. The PO completes the Preliminary Quality Assurance Plan Elements Form and the Project Plan, which includes the scope (including the Project Descriptors), budget (including Fee-for-Service for the Division of Property Management, Office of Acquisition and the Division of Technical Resources), and schedule. The PO should advise the Administrative Officer (A/O) of additional expenses not covered in the Project Plan, including but not limited to: phone, LAN, locks, security, moving expenses, furniture, etc.
6. The supervisor reviews and approves the Project Plan.
7. The PO prints out a hard copy of the Project Plan along with the list of PRB reviewers, the Quality Assurance Elements and the Project Descriptors and forwards them to the customer for review and approval. The customer approves the Project Plan.
8. During the course of the project, the Project Plan shall be revised whenever there is significant change in scope and/or projected budget and schedule from what is reflected in the current Project Plan. The PO must indicate additional Fee-for-Service if there is an increase in the budgeted amount so it is reflected in the Revised Project Plan. The supervisor and customer shall approve the Revised Project Plan.

1-11-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Pre-Project Planning Chapter 2
- Design-Build Procurement Chapter 4
- Design Chapter 5
- Design Review and Permitting 5-7
- Construction Chapter 6
- Leasing Chapter 7

B. RECORDS

- Project Plan
- Project Budget Estimate
- Quality Assurance Plan Elements
- Project Descriptors
- Program of Requirements
- PDRI (if applicable)
- Project Management Plan (if applicable)
- • DHHS Facility Project Approval Agreement (FPAA) – If applicable
- Environmental checklist
- Sustainability Checklist



SECTION 1-13 REQUESTING FEE FOR SERVICE (FFS)

1-13-00	Policy
10	Procedures
20	Guidance and Information
30	Reserved

1-13-00 POLICY

This Section outlines the process, authority, and responsibilities for requesting and obtaining FFS funding and the process for adding new employees to the ORF FFS system and how employees' times are billed to projects.

A. APPLICABILITY

This procedure applies to all ORF projects for which FFS employees provide services, such as acquisition, project management, design, design review, procurement of studies, and inspection. This procedure also applies to all ORF employees requesting FFS and to Business Support Center, Work Reception Team personnel who process the funding requests.

B. RESPONSIBILITIES

- The Business Support Center shall develop procedure and plan and determine the FFS and request funding for FFS in partnership with PO.
- The Business Support Center, Work Reception Team is responsible for submitting funding requests to the approving officials, contacting the PO regarding problems, selecting electronic funds approval into Business Electronic System for collecting and tracking of FFS.

1-13-10 PROCEDURES

A. REQUESTING FFS:

1. The Business Support Center in Partnership with PO determines the FFS for design and construction for the project.
2. Business Support Center runs the FFS obligation report at least bimonthly. Business Support Center, Work Reception Team requests all funds indicated to be obligated on the report or indicated on the Project Plan from the approving official on behalf of the requesting PO. Backup documentation is submitted to the approving official upon request.
3. The approving official approves/disapproves the funds request.

B. ADDING EMPLOYEES TO FFS

1. The supervisor, via e-mail, notifies the Business Support Center, Work Reception Team of all incoming employees. The notification shall contain the employee's name and the team to which the employee is assigned. The notification shall also indicate whether the person is a government or a contract employee.
2. The Business Support Center, Work Reception Team assigns each incoming employee an identification number.



1-13-20 GUIDANCE AND INFORMATION

A. RELEVANT DOCUMENTS

- Project Plan

B. RECORDS

- Project Plan



SECTION 1-14 FUNDING REQUEST

1-14-00	Policy
10	Procedures
20	Guidance and Information
30	Reserved

1-14-00 POLICY

This Section defines the process, authority, and responsibilities for requesting contract funding.

A. APPLICABILITY

This procedure applies to all projects for which funding is needed to provide services such as: project management, design, and design review, procurement of studies, construction and inspection.

B. RESPONSIBILITIES

- The PO is responsible for requesting funding for contract action and resolving funding issues.
- The Business Support Branch, Work Reception is responsible for submitting funding requests to approving officials and receiving approval, entering and print reviewing market requisitions and contacting the PO about funding problems.
- The Chief Engineer, ORF, is responsible for reviewing IC funded projects within the organization and for assurance that the funding source(s) for the projects are in accordance with Departmental policy. PO must consult and request approval from the Chief, Engineer regardless of cost.

1-14-10 PROCEDURES

The following procedures are not applicable to the leased facilities. For the leased facilities, the PO shall review the leased facilities procedure.

1. The PO submits a RFCA Memorandum for design, construction, or CQM via the electronic process for an IDIQ Contracts, or any other procurement process selected. IDIQ Contract Manager, (when applicable) reviews request and determines if there is sufficient ceiling left on the selected contractor. If yes, the RFCA Memorandum is signed and forwarded on to the Work Reception. If no, the IDIQ Contracts Manager returns the RFCA Memorandum to the PO stating so. The PO then resubmits the RFCA Memorandum using another contractor to the IDIQ Contracts Manager for approval.
2. Work Reception reviews the memo for completeness. If the form is incomplete, Work Reception either makes revisions, or returns it to the PO for revision.
3. When the form is complete, Work Reception requests funds from the approving official on behalf of the requesting PO.
4. The approving official approves/disapproves the funds request. If funds are approved within 7 days of notification, proceed to Step 4.5.



- a. If the approving official does not approve funds within 7 days, Work Reception orally contacts the PO for resolution. If the PO resolves funding issues within another 7 days, proceed to Step 4.5.
 - b. If funding issues are not resolved within another 7 days, the PO sends notice to the approving official to either fund or cancel the project within an additional 7 days of the notification. If the approving official funds the project, proceed to Step 4.5.
 - c. If the approving official does not fund the project, the PO begins closeout and notifies the approving official and Work Reception that the project is being canceled.
 - d. Work Reception checks “no” under the attributes tab that funds were not approved and returns RFCA Memorandum to P.O.
5. After the approving official approves the electronic or hard copy funding document, Work Reception selects funds approval in SSFAS or receives a faxed approved hard-copy funding document.
 6. Work Reception enters the RQM (QQK) into DELPRO. (No RQM is necessary for prior year or change to existing purchase orders.)
 7. Work Reception inserts RQM (QQK) on the RFCA Memorandum and checks “yes” under attributes that funds are approved and return memo to P.O.
 8. The PO notifies Work Reception via the electronic process to print review RQM for Procurement execution.
 9. Work Reception performs final print review and forwards a copy of the funds approval and RQM to the approving official.

1-14-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Design-Build Section 4-6
- Design-Bid-Build Section 4-7
- Simplified Acquisition / Micro purchase
- Design Modification Change Order
- Construction Change Order

B. RECORDS

- Approved RFCA Memorandum



SECTION 1-15 FEDERAL REAL PROPERTY ASSET MANAGEMENT DAILY DECISION MAKING

1-15-00	Policy
10	Reserved
20	Guidance and Information
30	Reserved

1-15-00 POLICY

The purpose of this section is to establish policy and guidelines, consistent with *Executive Order (EO) 13327— Federal Real Property Asset Management* (4 February 2004) and the *Achieving Green in Federal Real Property Asset Management* (February 2006) scorecard protocols, for evidencing that HHS and its organizations include:

1. A routine management process (both horizontal and vertical) using inventory data and relevant performance measure information consistent with the Federal Real Property Council (FRPC) performance measures, and HHS specific performance measures as established annually in the Real Property Asset Management Plan (RAMP) and 3-Year Timeline (TYTL), to make daily decisions;
2. The implementation of processes that encompass the full cycle of the decision-making process with its results, and using the performance measure information to identify opportunities that result in short and long term decisions to effectively and efficiently manage the portfolio of assets;
3. The ability to provide specific examples demonstrating where data/reports were used in the decision-making process to produce tangible improvements (results).

Any exceptions to the provisions of this section must be approved in writing by the Office for Facilities Management and Policy (OFMP), Office of the Secretary (OS).

A. REAL PROPERTY MANAGEMENT PLANNING AND GUIDANCE PROCESS

All HHS organizations, land-holding and non-land-holding shall establish, in writing, real property management planning and guidance processes specific to the mission and structure of their particular component. The purpose of this is, at a minimum, to define the processes to be used by their organization to manage their portfolio of assets with consideration to the three areas articulated in section 1-15-00 above.

B. EFFECTIVE DATE

This policy is effective June 2, 2008.

1-15-20 GUIDANCE AND INFORMATION

The organizations within HHS with real property management responsibilities perform day-to-day prioritization and execution of their asset management program, including: master planning; facilities planning and design, construction, leasing, operations and maintenance, and space utilization; and management programs (environmental management, historic preservation, energy management, and occupational safety and health).

HHS implementation plan and guidance for capturing daily decision making and demonstrating results focuses on right-sizing the portfolio. Five questions should be clearly addressed in developing a Real



Property Management Planning and Guidance Process for capturing daily decision making and demonstrating results.

A. WHAT ARE THE BUSINESS CHALLENGES THE DEPARTMENT IS ADDRESSING?

The following are examples of business challenges the Department faces to effectively and efficiently manage the HHS Portfolio of Real Property assets:

- Address mission requirements, including adapting to changes;
- Sustain and improve asset condition;
- Address emergent repair requests;
- Reduce operating costs;
- Prioritize use of available funding resources;
- Improve utilization through collocations/consolidations/disposals;
- Ensure accreditation;
- Retain trained and experienced staff;
- Address sustainability/energy/ADA (regulatory requirements);
- Consult with Tribes on operations of Federal real property assets under P.L. 93-538 (Indian Self Determination Act);
- Address security; and
- Address health and life safety;

B. WHAT DATA IS AVAILABLE TO ASSIST IN DAILY DECISION-MAKING?

Sources of data that could be considered include:

- Facility portfolio data;
- Federal Real Property Profile (FRPP) for benchmarking;
- Performance Assessment Tool (PAT) Analysis;
- Asset Business Plan;
- Facilities Assessment Data;
- Master Plan;
- Prioritization Tool Results;
- Historical Knowledge;
- Statistical data from program using the facility;
- Site Analysis; and
- Industry Benchmarking.

C. WHAT TYPES OF ANALYSES ARE USED TO MAKE DECISIONS?

The following are different types of analyses that should be used to guide the daily decision making process:

- Alignment with strategic plan and performance measures;
- Evaluation of Tools: Life Cycle Cost Analysis (LCCA)/Project Development Rating Index (PDRI);
- Feasibility Studies
 - Retention/Disposal Studies; and
- Program Prioritization



D. WHAT ARE THE EXPECTED RESULTS IDENTIFIED THROUGH THE ANALYSIS?

The following are common areas in real property management which demonstrate positive results in managing a portfolio of assets:

- Sustainment and improvement of asset condition;
- Better utilization;
- Efficiency of operations performance; and
- Increased support of the organization's mission.

E. HOW WERE THE RESULTS REPLICATED ACROSS THE ORGANIZATION?

The following are a few methods that can be utilized after results have been realized to affect positive influences to the organization's asset portfolio management process:

- Sharing lessons learned;
- Implementation of new or revised, improved policy, procedures, and standards across the Department's organizations; and
- Defined templates to capture specifics.

1-15-30 REPORTING

Following the initial submission and clearance of each HHS organization's Real Property Management Planning and Guidance Process documentation to the Senior Real Property Officer (SRPO), each HHS organization shall provide an annual updated version by June 1st of each year.

The document will be used to identify:

- Effective processes leading to positive results in portfolio management; and
- Gaps in the portfolio management processes.

The effective processes will be shared within the HHS organization as best practices. The identified gaps will be used by the SRPO and the HHS organizations to identify goals and milestones for the coming reporting year and inclusion in the OPDIV Specific Goals and Milestones section of the 3-year timeline

NIH Facilities Development Manual



Chapter 2 Project Planning & Approval



SECTION 2-1: FUNDING SOURCES FOR FACILITIES PROJECTS

2-1-00	Policy
10	Procedures
20	(Reserved)
30	Reporting Requirements

2-1-00 POLICY

The purpose of this section is to provide policy and guidelines for using funds appropriately for facilities projects and preparing facility project budgets for inclusion in budget submissions. This policy applies to all Departmental facilities activities, including facilities owned or leased by HHS/NIH, or operated by HHS or on behalf of HHS. These policies and guidelines apply unless inconsistent with an agency's appropriations act or other applicable law. Any exceptions to the provisions of this section must be approved in writing by the Office for Facilities Management and Policy (OFMP), Office of the Secretary (OS).

A. MAJOR FACILITY PROGRAM ACTIVITIES

The HHS/NIH facilities program generally includes all activities necessary to provide land, structures, and equipment (whether owned or leased) required by a Department Operating Division (OPDIV) or Institute (IC) to carry out its mission. The facilities program includes construction, improvements, repairs, maintenance, and temporary construction. Congress requires a specific appropriation for purpose of the erection, repair or furnishing of public buildings, 41 USC§ 12. Congress has also authorized appropriations for health care facilities for the benefit of Indian tribes, 25 USC§ 13. An appropriation act satisfying the requirements of 41 USC§ 12 or which is authorized by 25 USC§ 13 could include funds for several of the major facilities program activities as defined in this section, such as "Construction," "Improvements" and "Repair-by-Replacement."

These definitions and all other definitions in this Manual must be read consistently with all other similar relevant definitions set forth in any other potentially relevant and applicable laws, regulations and similar government-wide requirements.

1. Construction - The erection of a building, structure or facility, including the installation of equipment, site preparation, landscaping, associated roads, parking, environmental mitigation and utilities, which provides space not previously available. It includes freestanding structures, additional wings or floors, enclosed courtyards or entryways, and any other means to provide usable program space that did not previously exist (excluding temporary facilities). Construction projects are capitalized in accordance with the accounting principles of the Federal Accounting Standards Advisory Board (FASAB).
2. Improvements (Renovations/Alterations) - Any betterment or change to an existing property to allow its continued or more efficient use within its designated purpose (Renovation), or for use for a different purpose or function (Alteration). Building improvements also include improvements to or upgrading of primary mechanical, electrical, or other building systems, and site improvements not associated with construction projects. Improvements typically increase the useful life of a facility and are capitalized against the existing property in accordance with the accounting principles of the FASAB. Improvements do not include the addition of wings, floors, or other increases to usable program space; such projects constitute construction as defined in paragraph 1



above. The only added space, which may be construed as a building improvement rather than construction, would be new stairwells, elevator towers, pipe chases, etc., not providing usable program space. If, however, an increase in usable program space is incidental to the overall improvement project, the OPDIV may request a waiver from classification as construction. After reviewing the project's Facility Project Approval Agreement (FPAA), OFMP may waive the classification of the project as construction on a case-by-case basis.

3. Minor Renovations - Renovations that are directly related to the installation of special-purpose equipment, as well as related design and inspection services. These renovations may include extending utility services, providing suitable safety and environmental conditions for proper operations, and making structural changes such as cutting walls and floors, and new partitions, provided such improvements are proximately incident to the installation, operation and use of special purpose equipment and necessary to conduct the functions of the program(s). Renovations could include the removal of interior walls and partitions and their replacement or rearrangement to accommodate the installation of special purpose equipment. Minor renovation projects do not change the value of the underlying asset or increase the useful life of the facility. Projects that change the permitted use or function of a space or add program space are not classified as minor renovations. Some examples of the types of work that would not be considered Minor Renovations are: the addition of wings, floors, or other increases in useable program space, which would constitute construction as defined in paragraph 1 above. Projects that changes the use or function of a space or add program space would also not be classified as Minor Renovations: for example, a laboratory that is converted to an office or an office converted to a laboratory, even if the office had previously been a laboratory, each of which would be classified as changes in use or function and therefore not Minor Renovations. However, an Institute or Center may make minor renovations to a laboratory that was previously used by another Institute or Center and still have those renovations considered being Minor Renovations. Sequential or concurrent projects in the same building will be evaluated as a single project.
4. Repair - The restoration of a failed or failing primary building system or real property component to a condition that restores its effective use for its designated purpose. A repair does not increase the underlying value of an existing facility and is typically not capitalized. An example of a primary building system would be the structural foundation and frame, domestic water system, or building HVAC system; a real property component would be a piece of the primary building system such as a roofing system, central chiller/boiler, generator, or elevators. A failed or failing primary building system or real property component may be the result of action of the elements, fire, explosion, storm and/or other disasters, and by use near to or beyond its expected useful life or technical obsolescence. Because of its nature or extent, this deterioration or damage cannot be corrected through maintenance. Like maintenance, repairs may require environmental documentation. Repairs may include reconstruction or replacement of a primary building system or real property component, but reconstruction or replacement of constituent parts or materials is classified as maintenance. Repairs do not include the addition of wings, floors, or other increases in usable program space; such projects constitute construction as defined on paragraph 1 above.
 - a. Repair-by-Replacement - Repair-by-Replacement is used to correct deficiencies in an existing building by replacing the building when it is more advantageous than using those funds to renovate the building. A building may be replaced under Repair-by-Replacement if the cost of documented eligible repairs is 75% of the cost to replace that building with a new equivalent building meeting current code and design standards. The NIH shall establish a process and document their analysis to support Repair-by-Replacement. Buildings replaced under Repair-by-Replacement must be demolished because, by definition, they are not worth reno-



- vating. Replacement buildings are not intended to house more programs or staff than the space they are replacing. However, a replacement building may be slightly larger to support improved functionality or to be compatible with current standard sizes, such as a pre-manufactured modular building. The FPAA for a Repair-by-Replacement project shall include documentation supporting the replacement in the project justification.
5. Maintenance - Work to keep a property, facility, and/or building system or component in a continuously usable state or condition. Maintenance may include inspection, cleaning, calibration, and adjustment, lubrication and replacement of constituent parts, materials and/or sub-assemblies worn, broken, damaged or otherwise compromised. Maintenance includes routine recurring work, which is incidental to everyday operations, as well as preventive work, which is programmed at scheduled intervals, and predictive work, which is indicated by analysis. Maintenance also includes the upkeep or replacement of landscaping, and the upkeep of utility distribution infrastructure systems. Examples of routine maintenance would be pavement coatings or overlays less than 7.62 cm or 3 inches, roof coatings or resurfacing. Replacement of roof systems, including finish roofing and pavers, insulation, sheathing and/or underlayment is repair not maintenance. Like repairs, maintenance may require environmental documentation.
 6. Temporary Construction - Construction to provide a building, structure, or facility needed for a limited period of time to meet an urgent and compelling agency need. Such facilities should be of a clearly temporary nature to meet a temporary need. The temporary need is demonstrated by a facility requirement for less than 5 years or the long-term need has been programmed in the OPDIV/IC Facilities Plan, but may not have been funded. Generally, structures in this category would have a lower initial cost, higher annual maintenance and utility cost and a shorter usable life than non-temporary structures of the same approximate size. Exterior enhancements solely to provide the appearance of permanence should not to be included in temporary construction.
 7. Equipment –
 - a. Fixed Equipment –

Fixed, built-in, attached, and installed equipment normally included as part of the construction contract and capitalized as facility costs.

 - (1) Building Equipment - Building equipment is a permanently fixed, built-in part of a building or structure, the removal of which would generally require repairs or improvements to place the area in which it was located in a usable condition. Building equipment includes building service items, such as elevators; utility systems, such as heating, electrical and other utilities; main feeds coming into the building for telephone service; walk-in refrigerators; vaults; built-in autoclaves; generators; etc.
 - (2) Attached or Installed Equipment - Attached or installed equipment is a semi-permanent part of a building or structure, the removal of which terminates a utility or equipment service without affecting or damaging the integrity of a building, structure or utility system. Drinking fountains, laboratory casework and sinks, etc., are examples of installed or attached items.



b. Moveable Equipment –

- (1) Major Moveable Equipment - This category consists of items having a useful life of 5 years or more. Major moveable equipment is typically capitalized. Moveable equipment does not require attachment to the building or utility service, other than that provided by an electrical plug or disconnect fitting. The placement of moveable equipment needs to be addressed in facilities programming such that electrical load and receptacles, structural requirements such as vibration, floor loads and magnetic interference, etc., have been considered. Examples include cabling for telephone, computer networks and security systems, chairs, beds, bassinets, desk, microscopes, portable whirlpool units, exercise bars, refrigerators, linen carts, and systems and modular furniture.
- (2) Minor Moveable Equipment - This category consists of items having a useful life of less than 5 years. These items are of relatively small cost and size and lend themselves to on-site storage for replacement of lost or worn out equipment. Examples include washbasins, bedpans, pipettes, and surgical instruments.

c. Special-Purpose Equipment –

Special purpose equipment is technical, medical, or scientific equipment that is needed to operate a laboratory, a hospital, a clinic, a clinical research patient care unit, an animal care facility, or is specific to a single purpose and not generally suitable for other purposes. Examples of such equipment include incubators, electric ovens, sterilizers, vacuum and pressure pumps, centrifuges, water baths, cabinets, cupboards and shelving for laboratory supplies, workbenches for microscopes, sinks for mixing of chemicals and disposing of same, movable apparatus for laboratory animals, and electrical and gas appliances. Special-purpose equipment may be classified as either fixed or moveable equipment. A special purpose laboratory in some cases may be considered as special purpose equipment. A special purpose laboratory, in the context of special purpose equipment, could include a fully prefabricated structure meant to be installed within an existing building space. It is not a freestanding building with independent utilities and services.



2-1-10 PROCEDURES

A. FUNDING SOURCES

There are several key appropriation laws that apply to facilities programs. A primary statutory provision is 31 USC§ 1301, which provides that “appropriations shall be applied only to the objects for which the appropriations were made except as provided by law.” Another relevant statutory provision is 41 USC§ 12, which provides that “No contract shall be entered into for the erection, repair, or furnishing of any public building or for any public improvement which shall bind the Government to pay a larger sum of money than the amount in the Treasury appropriated for that specific purpose.” A third significant statute is 41 USC§ 14, which imposes the following limitation on acquisition of land, “No land shall be purchased on account of the United States, except under a law authorizing such purpose.” Additional statutes relevant for the planning, design, construction and renovation of health care facilities for the benefit of Indian tribes are 25 USC§ 13 and 25 USC§ 1631. In addition, appropriations law provides that Federal appropriated funds may not be used to make permanent improvements to non-Federal real property in the absence of statutory authority.

NIH receives a Building and Facilities (B&F) appropriation, or a B&F earmark within an NIH’s appropriation, most often as a lump sum for construction and several associated purposes. (Hereinafter when we refer to B&F appropriation it should also be read to include a B&F earmark within an NIH’s appropriation.) Sometimes specific construction projects are identified as earmarks in the appropriation, more often they are included in the legislative history of an appropriations act or an OPDIV’s Congressional Justification. The actual obligation of these funds must be consistent with the appropriation act and any other applicable statutes or regulations. As a matter of policy, obligation of funds must also be consistent with the President’s budget request, as amended by Congressional appropriation reports or HHS B&F budget process documents. There are circumstances in which the funds must be reprogrammed in accordance with Congressional policy. OPDIVs should work with their budget office in this regard. Each OPDIV’s annual operating appropriation may also be a source of funds for facilities program activities such as maintenance.

1. Buildings and Facilities (B&F) Funding – Except for IHS, each OPDIV in preparing its budget submission in the HHS budget request for the Buildings and Facilities (B&F) appropriation identifies two broad categories: (1) Construction and (2) Repair and Improvements (R&I). The exact language of each of the several HHS Buildings and Facilities (B&F) appropriations determines the flexibility an OPDIV may have to apply specific sources of funds to a project. As a general rule, unless there is a limitation in the appropriations act or some other statutory limitation, funds within a “lump sum” appropriation may be used for any item covered by that lump sum appropriations act. HHS requires that contracted design, construction inspection and construction management services for construction projects be funded from the B&F funding for that project. HHS also requires that the OPDIV use the same type of funds for contracted design, construction inspection, and construction management services as the OPDIV uses for the actual repair, maintenance and improvement projects. OPDIV annual operating funds are not to be used for contracted design, inspection or management services of any project funded from the B&F appropriations.
 - a. Construction - Construction projects as defined in 2-1-00A.1 shall be designed and constructed with funds specifically identified for that purpose in either an NIH’s B&F appropriation or in an earmark in the NIH’s appropriation. As a matter of policy, the use of such funds must also be consistent with the HHS B&F budget process documents (starting with an NIH’s



Preliminary Budget Submission to DHHS through the Congressional Justification to the Appropriations Committee), or a Congressional reprogramming action as defined in Section 1-2. These projects must be identified in the NIH's Annual Facilities Plan. If the project is not earmarked in the appropriation, the NIH shall identify the project by name and program amount within the appropriate NIH apportionment request. Because these projects add program space not previously available, they are typically NOT funded from Repair & Improvements or Maintenance & Improvements funds which are budgeted by the NIH with the exception of those funds that have been budgeted for Repair-by Replacement.

Land Purchases - Undeveloped land acquisitions are generally for construction projects. All acquisitions of land require specific statutory authority, 41 USC§ 14, and specifically designated funding in an NIH's appropriation and/or budget. All land acquisitions must be submitted to and approved by the HHS Capital Investment Review Board. See Section 4-2 of this manual for developed land acquisitions.

Equipment - All fixed equipment installed as part of the original construction project shall be funded from the B&F appropriation. It is noted that some equipment may qualify as both fixed equipment and special-purpose equipment. If this equipment is included as part of the original construction process, it is to be considered fixed equipment and funded from the B&F account. If this equipment is added to an existing facility, it is to be considered special-purpose equipment and funded from operating funds. Moveable equipment may be funded from the B&F appropriation only when specifically authorized by law. Otherwise, purchases of moveable equipment are funded from operating funds. Equipment in leased facilities is to be funded using operating funds or with funds specifically identified by statute for equipment. Also, as noted previously, Federal appropriations law requires that Federal appropriated funds may not be used to make permanent improvements to non-Federal property in the absence of statutory authority.

- b. Repair & Improvements— Funds identified for Repair & Improvements (R&I) in an OPDIV's B&F appropriation or budget may be used for all improvements and repairs as defined in 2-1-00A.2. and 2-1-00A.4. above, as well as associated equipment defined in 2-1-00A.7.

Improvements (Renovations or Alterations) - Improvement projects not Construction or Minor Renovations, as defined above, shall be funded from the B&F appropriations from funds identified in an OPDIV's budget lump sum R&I funds. NIH shall submit improvement projects costing \$1,000,000 or more to the OFMP and those costing \$10,000,000 or more to the Capital Investment Review Board. These projects must be identified in the NIH Annual Facilities Plan. If the project is not earmarked in the OPDIV's appropriation, the OPDIV shall identify the project by name and program amount within the appropriate OPDIV apportionment request.

Repairs – Repairs, including Repair-by-Replacement, shall be funded from the B&F appropriation from funds either specifically identified in an NIH B&F appropriation or in its budget as lump sum R&I funds. NIH shall submit repair projects costing \$3,000,000 or more to OFMP for prior written approval and costing \$10,000,000 or more to the Capital Investment Review Board. These projects must be identified in the OPDIV's Annual Facilities Plan.



Maintenance - NIH shall not use funds identified for R&I in either an NIH appropriation or in an OPDIV budget for maintenance, as defined in 2-1-00A.3., with the exception of IHS because IHS' B&F appropriation typically includes maintenance within it.

2. NIH Annual Operating Appropriations - In addition to salaries, supplies, and other repetitive annual OPDIV operating expenses, these appropriations are to be used for certain facilities related work as listed below.

- a. Maintenance – Unless the appropriation act provides otherwise, NIH (except IHS) is to perform maintenance of existing facilities, as defined in 2-1-00A.3., including related engineering and inspection services, with annual operating funds allocated for maintenance of facilities in the HHS operating budget request.

Maintenance projects are not subject to the \$3,000,000 threshold requiring ASAM approval under the Capital Investment Review Board policy, e.g., maintenance contracts for paving sealing, roof recoating, mechanical equipment calibration, etc.

- b. Lease Facilities – HHS has delegated authority to some of the NIH to enter into non-capital leases. Non-capital leases are typically funded with operating funds. B&F funds are not to be used for fit-out or permanent improvements of such leased facilities. However, equipment that would not be considered a permanent improvement to the leased property must be funded from annual operating appropriations unless the NIH has a specific appropriation for such equipment. Note, per OMB Circular A-11 capital leases require scoring of the entire cost of the lease in the year signed and shall be included in the OPDIV's budget submission.
- c. Minor Renovations - Operating funds may be used for minor renovations to install special purpose equipment as defined above, as well as related design and inspection services, unless appropriated funds for the special purpose equipment and its installation are specifically provided by statute. Operating funds may only be used for those physical changes directly incident to and required to accommodate special purpose equipment. Operating funds may not be used, however, for costs of more general improvements, such as alteration of existing laboratories, conversion of existing office space into laboratories, or other structural or physical changes to a facility which are not directly related to the installation of a specific item of special purpose equipment, 16 Comp. Gen 160 and 816 (1936), Comp. Gen. B-170587-O.M. (October 21, 1970) and Comp. Gen. B-164031(2) (November 24, 1972). A FPAA must be submitted to OFMP for prior written approval on any minor renovations projects with a total project cost \$1,000,000 or greater, including the special purpose equipment.
- d. Planning and Programming Documents - Operating funds may be used to develop Programs of Requirements, Program Justification Documents, NEPA documentation, planning and programming documents and/or other studies, and concept drawings necessary to establish project scope and funding requirements, unless B&F funds have been specifically identified for these purposes in an appropriations act, the HHS B&F budget process documents (starting with an NIH Preliminary Budget Submission to DHHS through the Congressional Justification to the Appropriations Committee), or a Congressional reprogramming action as defined in Section 1-2,.
- e. Temporary Construction - Operating funds may be used for temporary buildings (as defined above) to support urgent, short-term needs. Written approval (through submittal of a FPAA)



- from OFMP must be obtained before using operating funds for any temporary construction exceeding 134 square meters.
- f. Equipment - Operating funds are used for the purchase of moveable equipment except when funding from the B&F appropriation has been specifically authorized by law. Operating funds are used for the purchase of special purpose equipment unless the equipment meets the definition of fixed equipment. For new facilities only, special purpose equipment that can be classified as fixed equipment per Section 2-1-00A.7.a. shall be funded from the B&F construction appropriation.
 - g. Activation and Relocation Costs – Operating funds are used for activation and relocation costs such as telecommunications cabling, moving, etc. except where B&F funds have been specifically identified for these purposes in NIH’s appropriation act, the HHS B&F budget process documents (starting with NIH’s Preliminary Budget Submission to DHHS through the Congressional Justification to the Appropriations Committee), or a Congressional reprogramming action as defined in Section 1-2.
3. Other Sources of Funds
- a. Quarters Rental Return Funds - In accordance with P.L. 98-473, quarters rental return funds (i.e., funds collected as rent) are to be used for the operation and maintenance of quarters. These funds should be used prior to using appropriated funds.
 - c. Gift Funds – The acceptance and use of gifts of money received from external sources shall be in accordance with the Section 231 of the Public Health Service Act, as codified in 42 USC§ 238. OFMP shall be notified of any project(s) that are being constructed using gift funds or gifts of real property in any form.
 - d. Other – Appropriations language may from time to time authorize the use of other sources of funds for facilities construction. In such cases, the OPDIV shall refer to the language of that authorizing legislation in the FPAA documentation to ensure the appropriate use of the funds.

B. FACILITY PROJECT BUDGETS

1. General - Unless described otherwise in the justification for the HHS Budget request, a facility project budget is assumed to include all component costs necessary to design, construct, inspect and equip new or improved space, and as detailed in the Facility Project Approval Agreement (FPAA). On all construction, improvements, minor renovations and repair projects requiring a FPAA, a breakdown of project costs shall be provided in the FPAA. See Section 2- 3 for detailed instructions on preparing a FPAA and identifying project costs. This is a routine requirement for major new research and health care facilities because the length of the design phase generally equals or exceeds one year and construction funds would typically be proposed one or more years after the request for planning and/or design funds. On design-build projects where both design and construction will commence in the same year, and the overall project duration is 18 months or less, there may not be a need for separate budget requests.
2. Planning Phase – The planning phase includes all costs associated with preparation of planning and programming documents and any special studies necessary to adequately define the scope, budget and schedule of the project.



3. Design Phase - The design phase includes the estimated cost of design services plus any necessary site survey, geotechnical surveys, National Environmental Policy Act documentation, historic preservation studies, archeological studies and other special studies and/or associated costs not included in the planning process.
4. Construction Phase - The construction phase includes the estimated cost of the construction contract (with appropriate escalation factors applied), fixed equipment, construction management and inspection fees, and an appropriate construction contingency allowance. HHS policy stipulates that full funding of the entire construction phase component must be requested in the OPDIV budget submission. Projects planned, designed and constructed in discrete complete phases may be funded over multiple years. Partial funding, which could result in an incomplete facility should additional funds not be appropriated, is not permitted unless funds for phased construction are identified and approved in the appropriation act, the HHS B&F budget process documents, or a Congressional reprogramming action.
5. Equipment - Costs for all fixed equipment are included in the construction phase component of the facility project budget and funded from the B&F appropriation. The FPAA shall clearly identify the source of funding for all moveable equipment required to make the facility fully operational.

C. MORATORIUM ON NEW CONSTRUCTION

Upon completion of construction on a construction project meeting the definition of 2-1-00 A.1., no new construction work can begin in the facility until at least 365 days after beneficial occupancy to avoid the appearance of incrementing or increase in scope.

2-1-30 REPORTING REQUIREMENTS

By September 30th of each year, the NIH shall provide an annual report to OFMP summarizing all minor renovation projects that do not require an FPAA (less than \$1,000,000 total project cost) funded with operating funds including total project cost, type of work, gross area, dates of project start and completion, building, and user.



SECTION 2-2: ANNUAL FACILITIES PLANS

2-2-00	Policy
10	(Reserved)
20	(Reserved)
30	Reporting Requirements
X2-2-A	NIH Buildings and Facilities Plan
X2-2-B	IHS Buildings and Facilities Plan

2-2-00 POLICY

This section describes HHS policies and procedures to be followed by **NIH** in preparing the fiscal year Annual Facility (5-year) Plan, as well as the projected facilities plan for the next five budget cycle years (HHS Budget requirement) for all federally-owned real property assets. The Annual (5 year) Facilities Plan will be used as an aid in determining facilities funding needs and in developing HHS-wide budget priorities on an annual basis.

A. RESPONSIBILITIES

1. The Deputy Assistant Secretary (DAS), Office for Facilities Management and Policy (OFMP) has overall responsibility for establishing and implementing the procedures and criteria to be followed regarding the **NIH** Annual Facilities Plan. The Division of Planning and Construction, OFMP is designated as the coordinating point for **NIH** Annual Facilities Plan activities.
2. The head of each **NIH OPDIV/IC** is responsible for the development of the OPDIV Annual Facilities Plan. The Annual Facilities Plan reflects those projects, which could be constructed in the event that funding is made available. Each Plan should be developed jointly by the **NIH** program planning, budget, environmental, and facilities staffs and shall include all facilities projects that are requested in the forthcoming annual budget process.

B. CONTENTS OF THE PLAN

1. All Annual Facilities (Five-Year) Plans shall include project titles, locations, and budget amounts for all projects (line items) costing \$1,000,000 or more from Budget year-3 through Budget year+5, for example BY 2007 plan would include FY 2004 through FY 2012. All requirements through FY 2012 shall be shown, regardless of anticipation of funding, and should be listed in priority order. The plan shall also include planning, study and design (PS&D) funding that is necessary for future projects expected to be in the B&F budget request in Budget Year + 1 and beyond. Each **IC** should assure that it budgets adequate PS&D funding to arrive at a solid Program of Requirements, Schedule, and Cost Estimate prior to locking in the construction budgets for major projects. This funding should be programmed for Budget Year-2 or earlier depending on the size and complexity of the major project proposed. Show a lump sum total for all PS&D funding on a separate line. Costs should be escalated to the mid-point of construction using OMB escalation rates or other published construction escalation rates as appropriate. R&I or M&I budgets in out years may be shown as a lump sum total for each year. Maintenance handled from operating funds should not be included in the lump sum R&I or M&I amount.
2. Samples of acceptable Annual Facilities Plans are provided as Exhibits X2-2-A and X2-2-B.



2-2-30 REPORTING REQUIREMENTS

A. SUBMISSION OF THE PLAN

The Annual Facilities Construction Plan shall be submitted to the DAS, OFMP by NIH as part of the initial budget submission each year. This plan identifies for the benefit of the DAS, OFMP and the NIH Head those projects that should be constructed in the proposed budget year in the event funding is available.

OPDIVs are encouraged to submit Annual Facilities Plans that show all requirements, regardless of anticipation of funding.

The Annual Facilities Plan should show prior year requests if appropriations were not received, and rank all according to current year requirements. Totals are to be shown for all (current and prior years), current year, and 5-year projection requirements.

B. AMENDMENTS AND/OR MODIFICATIONS TO ANNUAL FACILITIES PLAN

Amendments and/or modifications to the Annual Facilities Plan shall be submitted to reflect current year lump sum funded improvements, repairs and/or maintenance projects exceeding OPDIV approval authority by October 1st each year. NIH shall have the flexibility to remove and add projects funded from lump sum amounts as requirements are identified. Facility Project Approval Agreements for new requirements shall be submitted as project need arises.



NIH BUILDINGS AND FACILITIES PLAN										
Building & Facilities										
FY 2005-2010 Preliminary Estimates - OMB Submission										
(Dollars in Millions)										
	FY 2003 Budget	FY 2004 President's Budget	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	Out-years	TOTAL Project Cost
Buildings & Facilities Budget										
CONTINUING COMMITMENTS (needed every year)										
Essential Safety and Regulatory Compliance	6.0	14.0	6.0	14.0	15.5	14.0	15.5	14.0		
Asbestos Abatement Program	0.5	2.0	0.5	2.0	3.0	2.0	3.0	2.0	ongoing	
Fire Protection & Life Safety Program	2.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	ongoing	
Eliminate Barriers to Persons With Disabilities	1.0	1.5	1.0	1.5	1.5	1.5	1.5	1.5	ongoing	
Indoor Air Quality Improvement Program	0.5	0.5	0.5	0.5	1.0	0.5	1.0	0.5	ongoing	
Rehabilitation of Animal Research Facilities	2.0	5.0	2.0	5.0	5.0	5.0	5.0	5.0	ongoing	
Repair and Improvements	45.8	70.5	59.2	50.0	73.0	60.0	73.0	60.0	ongoing	
Concept Development Studies	0.0	0.0	2.0	1.5	3.0	1.5	3.0	1.5	ongoing	
Sub-Total for Continuing Commitments	51.8	84.5	67.2	65.5	91.5	75.5	91.5	75.5		
RECOMMENDED PRIORITIES (year-specific)										
Essential Safety and Regulatory Compliance (one time)										
Building 10 Revitalization	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Building 10 Clinical Research Renovation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	330.0	390.0
Building 10 Stabilization	0.0	0.0	0.0	10.0	10.0	10.0	5.0	0.0	0.0	35.0
Environmental Assessments/Remediation Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Campus-wide Fire Alarm Replacement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Safety Improvements, Building 31	0.0	0.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	14.0
New Construction: Major on-going projects										
Central Vivarium/Animal Research Center	0.0	0.0	5.0	0.0	200.0	0.0	0.0	0.0	0.0	220.3
Porter Neuroscience Res. Center Ph I	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.3
Porter Neuroscience Res. Center Ph II	31.7	0.0	0.0	166.3	0.0	0.0	0.0	0.0	0.0	208.6
New Construction: Policy Decisions										
Center for Bioterrorism & Emerging Infections	186.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	186.1
BSL-4 Lab @ Ft. Detrick	104.318	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	104.3
Lab N - South Quad/Center for Biology of Disease	0.0	0.0	0.0	0.0	0.0	0.0	126.0	0.0	0.0	126.0
Lab P - South Quad/Center for Biology of Disease	0.0	0.0	0.0	0.0	0.0	0.0	19.3	143.0	0.0	162.3
Lab M - South Quad/Center for Biology of Disease	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Quad Parking	0.0	0.0	0.0	0.0	0.0	36.4	0.0	0.0	0.0	36.4
RML Buffer Replacement Facility	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	9.5
Renovations										
Building 10 Transition Program	24.069	5.5	10.8	0.0	0.0	0.0	0.0	0.0	0.0	69.9
Building 3	0.0	0.0	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7
Bldg. 29A / 29B Renovation / Bldg. 29 Demo	0.0	0.0	0.0	0.0	0.0	0.0	65.8	0.0	0.0	65.8
Equipment/Systems/Enabling										
Demolish Bldg. 14/28/32 Complex	0.0	0.0	0.0	0.0	0.0	32.2	0.0	0.0	0.0	32.2
South Quad Chiller	0.0	0.0	0.0	0.0	0.0	33.6	0.0	0.0	0.0	33.6
Boiler # 7	0.0	0.0	0.0	0.0	0.0	14.7	0.0	0.0	0.0	16.0
Demolish Buildings 7 & 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Complete South Loop Road	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
West Campus Electrical Switching Station	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	9.4
Chiller #27	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
Upgrade Mechanical Systems, NIEHS	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Physical Security Improvements	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0
Sub-total of Recommended Priorities	432.4	5.5	32.3	185.7	210.0	155.6	215.9	203.0		
PROPOSED PROJECTS										
New Construction										
Northwest Child Care Facility	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0.0	0.0	10.0
NLM Additions (\$7.1M funded in FY 2001 for design)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	210.4	217.5
NIEHS Lab & Vivarium Addition	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upgrade HVAC Rall Bldg., NIEHS	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	16.7
NIAD Vaccine Unit CRC/5C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Building 552 - Frederick	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NCI Production Area Facility - Frederick	0.0	0.0	0.0	0.0	0.0	14.4	0.0	0.0	0.0	14.4
NCI Labs - Frederick	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC Patient Imaging Facility, Building 10	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0
Renovations										
Renovation at NNMC Bldgs. 17	0.0	0.0	0.0	53.3	0.0	0.0	0.0	0.0	0.0	53.3
Building 37 - Renovate Basement	0.0	0.0	0.0	0.0	0.0	12.4	0.0	0.0	0.0	12.4
Rehab Utility Upgrade, Building 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Modernization, Building 31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NLM Renovation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equipment/Systems/Enabling										
Sub-total of Proposed Projects	0.0	0.0	0.0	53.3	3.0	53.0	0.0	0.0		
Mark O. Hatfield Clinical Research Center	144.5									
TOTAL B&F	628.687	90.0	99.5	304.5	304.5	284.1	307.4	278.5		



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SECTION 2-3: HHS FACILITY PROJECT APPROVAL AGREEMENTS

2-3-00	Policy
10	(Reserved)
20	(Reserved)
30	Reporting Requirements
X2-3-A	HHS Form 300 – HHS Facility Project Approval Agreement
X2-3-B	Instructions for HHS Facility Project Approval Agreement
X2-3-C	Changes to Facility Project Approval Agreement

2-3-00 POLICY

This section describes HHS policy and procedures for Facility Project Approval Agreements (FPAA) for the requirements, budget, scope, and schedule of projects for federally-owned real property assets above NIH approval authority as defined in the Capital Investment Review Board (Board) policy. (Refer to Chapter 1 for additional information.) The HHS Facility Project Approval Policy codifies the three-tiered capital facilities review procedure supporting the HHS budget formulation process. The policy distinguishes approval authorities within NIH with real property acquisition authorities, ASAM and the Board based on the full cost (considering all sources of funding) for each project.

A. CAPITAL FACILITIES REVIEW PROCESS

The HHS facility project review process has a three-tiered structure supporting the HHS fiscal year budget formulation process that distinguishes HHS approval authorities based on the full costs of each project considering all sources of funds. Within HHS, facility projects are approved as follows:

OPDIVs with Real Property Authority: The Commissioner of the Food and Drug Administration (FDA), and the Directors of the Centers for Disease Control and Prevention (CDC), Indian Health Service (IHS), and the National Institutes for Health (NIH) are responsible for the approval of construction and improvement projects under \$2,000,000, and all repair projects under \$5,000,000. They are also responsible for submission of these projects in the HHS annual budget. This responsibility may be delegated within the OPDIV.

ASAM: The Deputy Assistant Secretary for Facilities Management and Policy (DAS/OFMP), ASAM, will approve HHS OPDIV facility construction and improvements projects between \$1,000,000 and \$10,000,000; improvement projects between \$2,000,000 and \$10,000,000 and repair projects between \$5,000,000 and \$10,000,000, which do not require review by the Board.

HHS Board: The HHS Board will review and make recommendations to the Secretary, the ASAM and ASBTF on a range of issues to include: 1) the development of facility capital investment guidelines; 2) the development of guidelines to implement an investment review process that provides strategic planning for and oversight of facility investments; and 3) regular monitoring and proper management of these investments, once funded. Projects that must be reviewed by the HHS Board include the following:

- OPDIV investments \$10M or more and all land acquisitions
- Department-wide investments that affect multiple organizations
- Investments that have a significant impact on a single OPDIV
- OPDIV investments that the Office of the Secretary determines to have a significant risks; high development, operating or maintenance costs; or have high public visibility
- OPDIV repair and improvement (alteration and renovation) projects more than \$10M
- Other project types as may be designated by the Board.



B. HHS FACILITY PROJECT APPROVAL AGREEMENT

All projects approved by Headquarters will require a written approval agreement between designated officials of the sponsoring OPDIV and ASAM.

The Facilities Project Approval Agreement (FPAA) (Exhibit X2-3-A) will document the project's scope and description, basis of need, funding source(s) and total cost from all sources. It also identifies project schedule milestones, including completion of design, construction, activation and operational phases. The agreement represents a commitment by NIH to the requirements, scope, schedule, cost and programmatic need of the project and will be submitted with the NIH annual budget submission. Instructions for completing the form are provided as Exhibit X2-3-B.

2-3-30 REPORTING REQUIREMENTS

A. SUBMITTAL AND APPROVAL PROCESS

The FPAA will serve as the project justification, and as such shall be submitted as part of the HHS budget formulation process. Draft FPAAs should be submitted for review to the Division of Planning and Construction, OFMP no later than June 1 each year in preparation for the annual HHS Board meeting in June. The final FPAA consistent with the decisions of the Secretary's Budget Council will require the signatures of the NIH Board Member, Project Director, and Project Manager. Departmental sign-off will signify HQ and Board approval and acceptance of NIH's commitment to execute projects within defined requirements, scope, budget and schedule as presented or modified during the review process.

New requirements for projects that occur outside the normal budget formulation process will be submitted for review as soon as the requirement has been identified. OFMP will work with NIH to facilitate approval of the project in a timely manner. Planning and Programming Documents are not required as part of the FPAA submission; however, as part of the review process OFMP may require that the OPDIVs submit these documents.

The HHS Facility Project Approval Agreement must be approved by the Department prior to awarding a contract for design services.

B. REVISIONS TO PROJECTS

All revisions or changes to project budget, scope and/or schedule after the original FPAA approval shall be addressed in accordance with Exhibit X2-3-C. Those revisions or changes not within OPDIV approval authority require submittal of a revised FPAA through OFMP.



HHS FACILITY PROJECT APPROVAL AGREEMENT				1. Project No./ID <p style="text-align: center;">N-08-006</p>		2. Revision No.: <p style="text-align: center;">0</p>	
				4. Budget Year: <p style="text-align: center;">2008</p>		5. Date: (mm/dd/year) <p style="text-align: center;">5/20/2008</p>	
				6.a. Total B&F Cost (\$): <p style="text-align: center;">\$0.00</p>		6.b Total Project Cost (\$M) <p style="text-align: center;">\$2.72</p>	
3. Project Title: Test Project			7. OPDIV/Program Office: NIH/NCI/OSFM				
8. Installation/Location (City & State) National Institutes of Health, Bethesda, Maryland				9. Facility Cost Estimate (\$M)			
10. Related Cost Estimate (\$M)							
Item	Amount	Funds Sources	Fiscal Year	Item	Amount	Fund Sources	Fiscal Year
a. Land Acquisition				a. Special Studies	\$ 0.05	IC	2002
b. Design	\$ 0.27	IC	2008	b. Pre-project Planning	\$ 0.12	IC	2007
c. Construction	\$ 1.50	IC	2009	c. Activation (include moving)	\$ 0.03	IC	2009
d. Equipment	\$ -			d. Special Purpose Equipment	\$ 0.75	IC	2009
e. Other	\$ -			e. Other	\$ -		
f. Total Facility Cost Est.	\$ 1.77			f. Total Related Cost Est.	\$ 0.95		
g. Off-Site Utilities:		<input checked="" type="checkbox"/> Sufficient capacity and type of off-site utilities are available to support this project. <input type="checkbox"/> Costs have been included in the estimate for the required off-site utilities.					
11. Category		<input type="checkbox"/> Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/> Improvements <input type="checkbox"/> Maintenance <input type="checkbox"/> Minor renovations <input type="checkbox"/> Temporary Construction				12. PDRI Rating: 246 out of 1000 at 25% preliminary engineering.	
13. Project Requirements:				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
a. PMA: This project directly supports the PMA Real Property Asset Management Initiative. b. PART: This project supports a program assessed under the Program Assessment Rating Tool. c. Sustainable Design: This project meets the Guiding Principles of the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (EPAAct 2005 and EO 13423).							
14.a. Project Description (Scope/Quantify): This project is to renovate 2,225 sf of former mechanical space in Building 37 (basement level) of Building 37 into a state of the art Imaging suite. This renovation will support the installation of 2 highly sophisticated microscopes costing over \$4M. The center piece being be an existing \$3.3M electron microscope, currently located off campus, which is the world's first fully automated tool for high resolution nanotechnology and a new \$725K state of the art confocal microscope. This project will involve the demolition of abandoned mechanical equipment and piping, installing new HVAC, piping, and electrical systems, and all architectural finishes to support a modern imaging facility. (Continue on page 2)							



14.b. Justification:

This project will support the installation of a state of the art \$3.3M electron microscope and a \$725K confocal microscope for the Laboratory of Cellular Biology at the National Cancer Institute. The project brings to NCI and the NIH community at large the unique expertise for nanotechnology, and is expected to result in NCI/NIH being the flagship for high resolution electron microscopic imaging in biology and medicine. A key target of collaboration is to accelerate the development of technology for automated subcellular imaging by at least 5 years. This will provide powerful platforms to drive approaches for nanoparticle standardization, analysis, structure and diversity for HIV and many forms of Cancer. Discovery in biomedical research and drug development for pharmaceutical applications is the ultimate goal. The electron microscope is currently located at an NCI off campus facility. This location has proved to be less than ideal in terms of collaboration. The proposed site will support the microscope since it meets the ceiling height, structural and vibration resistant requirements of this sensitive instrument. (Continue on page 2)

15. Schedules (Month/Year)			16. Program Commitment Approval		
a. Studies	Start	Sep-02	Authority	Signature	Date
	Complete	Dec-02			
b. Planning	Start	Sep-07	a. Project Manager	Daryl Paunil, Director, OSFM / NCI	
	Complete	Mar-08			
c. Design	Start	Apr-08	b. Project Director	Daniel G. Wheeland, Director ORF / NIH	
	Complete	Aug-08			
d. Construction	Start	Sep-08	c. OPDIV Board Member	Colleen Barros, Dep. Director for Management, NIH	
	Complete	May-09			
e. Activation	Start	Jun-09	e. Office of the Secretary	Howard D. Kelsey, DAS OFMP	
	Complete	Jul-09			
f. Operational	Complete	Aug-09			



Instructions for HHS Facility Project Approval Agreement

The bolded numbers and titles in the following paragraphs provide the cross references to the HHS Facility Project Approval Agreement (FPAA) form.

1. Project No. /ID – OPDIV code followed by project number assigned by the submitting organization.

OPDIV	Code
CDC	C
FDA	F
IHS	I
NIH	N

2. Revision No. - the revision number provides a record of the resubmissions. The initial submittal will be numbered as “0” with revisions starting at “1” and numbered consecutively. Revisions are generated *after* the original FPAA approval when there are proposed changes in the budget, scope and/or schedule of a project that are not within the OPDIV approval authority as defined in the Facility Project Approval policy.

3. Project Title – a descriptive title that includes the category of work (see form block 11); describes the primary focus of the project accomplishment; includes the building name and number, if assigned; and campus, if applicable.

4. Budget Year – shall be the year in which funds are being requested on the current FPAA. . For example, all projects proposed for an increment or full funding in 2007 budget shall show 2007.

5. Date – date this form is prepared or revised.

6.a. Total B&F Cost (\$M) – an automatic entry that reflects the sum of all B&F costs (Funds Source is labeled B&F, R&I, M&I or HCFC) only from blocks 9.a. - e. and 10.a. - e. Verify costs are totally correctly. The formula searches the Funds Source column to identify costs, so multiple funds sources cannot be shown on one line.

6.b. . Total Project Cost (\$M) – an automatic entry that reflects the total from blocks 9.f., Total Facility Cost Est., and 10.f., Total Related Cost Est. The cost estimates must fully disclose all costs required to complete and make the project fully operational as described in the HHS FPAA.

7. OPDIV/Program Office – enter Operating Division, then identify the type of project, e.g. institute or center, followed by the actual Program Office. For example: IHS/OPH/OEHE.

8. Installation/Location (City & State) –the city and state or territory of the facility location.

9. Facility Cost Estimate (\$M) and 10. Related Cost Estimate (\$M) – The cost estimates must fully disclose all costs necessary to provide an operational facility as described in block 13. Project Description; see also HHS Facilities Program Manual, Volume 1, Section 2-1, concerning Facility Project Budgets. Clearly describe on Sheet 2 continuation, projects planned in phases, either based on funding or scope.



Items under Facility Cost Estimate – typically incorporates all costs associated with providing the building itself, i.e., land acquisition, design, construction, equipment, and other associated costs.

- All fixed (building) equipment that is a permanently fixed, built-in part of a building or structure, shall be captured under construction, e.g., elevators, HVAC, mechanical and electrical equipment, walk-in refrigerators, built-in autoclaves, generators, etc. Removal or replacement of this equipment typically requires repairs or improvements.
- All fixed (attached and/or installed) equipment that becomes an integral part of the building when installed, e.g., drinking fountains, sinks, casework, and is typically included as part of the construction contract, shall captured under construction.
- Equipment captures moveable equipment that is required to make the facility fully operational.
- Generally, if a service is included in the specific design and/or construction contract, it is captured under 9.b. or c. as appropriate. If it is accomplished under a separate contract, capture under 9.e.
- Other associated costs may include telecommunications, commissioning, construction management, etc. Provide description on Sheet 2 continuation of all 9.e. costs.

Items under Related Cost Estimate – typically incorporates all costs to complete planning and programming, make the building fully operational, develop infrastructure, and complete interim moves and ancillary related projects. Provide description on Sheet 2 continuation of 10.a. through 10.e. costs.

- Special studies and pre-project planning may include environmental technical studies, NEPA documentation, historic/archeological compliance, feasibility analysis, geological testing, etc..
- Activation shall include all move related expenditures and interim moves.
- Special purpose equipment is specialized technical, scientific and/or medical equipment that may be fixed or moveable, e.g., incubators, sterilizers, centrifuges, cage racks, etc. Special purpose equipment is that equipment required to operate a laboratory, a hospital, a clinical research patient care unit, etc., or is specific to a single purpose and not generally suitable for other purposes.
- Other costs may include such items as infrastructure, telecommunications, and ancillary related projects.
- List all items and their costs that make up the amount entered in the cost estimate.

Amount – the total estimated costs for the item should be entered in millions to the hundredth. The cost estimates should include a reasonable amount for contingencies.

Funds Source – see also HHS Facilities Program Manual, Volume 1, Section 2-1, Funding Sources for Facilities Projects.

<u>Funds Source</u>	<u>Code</u>
Buildings & Facilities	B&F
Repair/Maintenance & Improvements	R&I or M&I
Agency Annual Operating	Ops or IC
Quarters Return	Qtr



Donation or gift

Gift

Only one funds source should be shown for specific line. If a specific line is composed of more than one funds source, separate costs using line 9.e. or 10.e. as needed to describe additional funds source(s). Provide an explanation of the breakdown on Sheet 2 continuation.

FY – enter the fiscal year of appropriation for the funds being used for that item. If funds from more than one FY are to be used for the item, in blocks 9 and 10 show multiple years. For example, if funding is continuous over 3 years indicate as 2006-08, if 2 years indicate as 2006/08. On Sheet 2 continuation show the breakdown by fiscal year of the item amount.

Off-Site Utilities: Check “sufficient capacity and type” if utilities already exist, and only a connection is required. On Sheet 2 continuation detail utility connection charges or unusual conditions, such as extended distance requirements. Check “costs included for off-site utilities” only if a major system upgrade is required to support the project, such as an additional cell must be added to a sewage lagoon. On Sheet 2 continuation describe the utilities improvements required and costs incurred by the project.

11. Category – see HHS Facilities Program Manual, Volume 1, Section 2-1, for definitions of Major Facility Program Activities. *Check all applicable categories.*

12. PDRI Rating – enter the project’s actual PDRI rating, the total possible rating, and the percent of preliminary engineering or design completion when the rating was performed. Provide PDRI summary score sheet as part of supporting documentation in initial FPAA submittal. Indicate on Sheet 2 continuation any significant action items that were identified as a result of the PDRI analysis and could prevent the project moving forward if not accomplished timely. Document to project records the basis for ratings, analysis of project risks and mitigation strategies developed as a result of the PDRI analysis.

13. Project Description (Scope/Quantify) – a concise, clear statement of the project’s scope and description. The scope shall be stated first and include:

- Physical size and characteristics such as units of measures (for health care, laboratory, office, etc.), functions, and special features (infrastructure, central utility plant or major equipment upgrades required to support the facility).
-
- Quantify to the maximum extent possible (e.g., number of buildings, design capacity, and gross and net area developed per HHS Facilities Manual, Volume 1, Section 2-5).
- Specifically address the FRPC performance measures of mission dependency and utilization.
-

The format and language for the description shall be similar to the format used for budget documents submitted per OMB Circular A-11 Part 7, Planning, Budgeting, Acquisition and Management of Capital Assets, and specifically include intended acquisition strategy. A copy of the acquisition strategy shall be included with the initial FPAA submittal on all Board level projects. The description shall include the current status of the project in the OPDIV’s internal planning and programming process, as well as assumptions and basis for the project. The description shall also include a summary of status of pre-project planning activities to date, and any project risks identified to date. Any agreements in place with stakeholders should be referenced. Also include a description of all related projects. The project scope described in this entry will be the approved scope of the project. Changes in project scope require resubmittal of the HHS FPAA.



14. Justification – should begin with a concise statement of the functional purpose for which the project is needed.

- The need should specifically refer to [NIH](#) mission and program requirements and to the role of the proposed facility in the mission or program.
- Specifically address FRPC performance measures of operating costs and condition index.
- Customer and stakeholders should be identified.
- As an example, a personnel housing project's justification should discuss the personnel requirements, deficiencies in existing housing, resulting excessive administrative costs and plans for the use of the existing space for other purposes or its disposal.
- Support facilities, such as libraries, auditoriums and cafeterias, must be justified separately and specifically.
- Justification should clearly establish the requirements for the facility, cite any applicable studies.
- Identify how the project will reduce costs or improve efficiencies.
- Highlight the project's priority, describe and justify any relationship to any current or new project, and identify link to approved master plans.
- Identify the disposition and/or disposal of any existing facilities.
- Identify how life cycle cost (LCC) analysis as required by OMB Circular A-11 has been or will be addressed.
- Include a summary of alternatives considered and their viability.

15. Schedules – enter the schedule dates for the activities listed and the date the facility is to be operational.

- Include a month and year for each milestone date.
- Dates should be consistent with funding proposal.
- Do not use durations.

16. Program Commitment Approval – the Project Manager signs as the project submitter committing to complete the project within the stated budget, scope and schedule. The Project Director's signature commits the OPDIV organization to completing the project within the stated budget, scope and schedule. The OPDIV Board Member's concurrence indicates a commitment to the programmatic need and the stated budget, scope and schedule for the project. The Department signature approves the project and accepts the OPDIV's commitment to execute the project, based on the requirements, budget, scope and schedule as defined in the FPAA.

HHS Facility Project Approval Agreement (Continuation Sheet 2) – the form automatically completes blocks 1 through 8 with the same information as sheet 1. Any continuation data provided shall be prefixed with the block number from sheet 1.



CHANGES TO FACILITY PROJECT APPROVAL AGREEMENT*			
	<u>OPDIV Approval</u>	<u>ASAM Approval</u>	<u>Board Approval</u>
Line Item Projects			
<u>Budget</u>	Any variance below President's Budget	Any variance above President's Budget--concur/notify OMB/Cong	Any variance above President's Budget--concur/notify OMB/Cong
<u>Scope</u>			
Board Level (\geq \$10.0M)	..... No variance	..... Any variance	..... ASAM decides which will be referred to Board or higher
ASAM Level ($<$ \$10.0M)	..... Variance plus or minus 10%	..... Variance greater than 10% plus or minus	..... ASAM decides which will be referred to Board or higher
<u>Schedule</u>	..... Completion date varies one year or less	..... Completion date varies more than one year	..... ASAM decides which will be referred to Board or higher
Projects Funded from Lump Sum Programs			
<u>Budget</u>			
Board Level (\geq \$10.0M)	..... Variance 10% or less per project	..... Variance greater than 10% per project	..... ASAM decides which will be referred to Board
ASAM Level ($<$ \$10.0M)	..... Variance 10% or less per project	..... Variance greater than 10% per project	..... ASAM decides which will be referred to Board
<u>Scope</u>			
Board Level (\geq \$10.0M)	..... Variance plus or minus 10% per project	..... Variance greater than 10% plus or minus per project	..... ASAM decides which will be referred to Board
ASAM Level ($<$ \$10.0M)	..... Variance plus or minus 10% per project	..... Variance greater than 10% plus or minus per project	..... ASAM decides which will be referred to Board
<u>Schedule</u>	..... All Changes		
* Use of FPAA is mandatory for ASAM or Board level projects. Use is optional on OPDIV level projects.			
<u>Types of Work (HHS Facilities Manual):</u>	<u>Funding Categories (HHS Facilities Manual):</u>	<u>Approvals (CIRB Policy Document):</u>	
Construction	B&F Construction (HCFC for IHS)	OPDIV: $<$ \$1.0M Improvement, Construction	
Improvements (Renovations/ Alterations)	B&F Repair & Improvements	OPDIV: $<$ \$3.0M Repair	
Minor Renovations	B&F Maintenance & Improvement (IHS only)	ASAM: $<$ \$10.0M	
Repair	Annual Operating		
Maintenance	Other	Board: \geq \$10.0M	
Temporary Construction			





SECTION 2-4: PRE-PROJECT PLANNING AND THE PROJECT DEFINITION RATING INDEX

2-4-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

2-4-00 POLICY

This section describes HHS policies and procedures to be followed by HHS OPDIVs in accomplishing thorough pre-project planning using industry best practices and specifically, the use and preparation of the Construction Industry Institute (CII) Project Definition Rating Index (PDRI). Pre-project planning is defined as a process of developing sufficient strategic information with which an OPDIV can address risk and decide to commit resources to maximize the chance of a successful project. HHS has adopted pre-project planning as a best practice. The Project Definition Rating Index (PDRI) is to be used as a tool to evaluate the ongoing status of a project. A PDRI is required as part of the submission of HHS Form 300 – Facility Project Approval Agreement for federally-owned real property assets. The rating index is not used as criteria for project approval, but as an indication of the projects readiness in terms of its development. The index should be further developed throughout the planning and design stage of the project.

2-4-10 PROCEDURES

A. PRE-PROJECT PLANNING OVERVIEW

Pre-project Planning – Pre-project Planning starts with the identification of requirements and continues through schematics of the project. The pre-project planning phase establishes the project requirements and concept, and provides the basis for project budget and approval. The CII’s Pre-Project Planning Handbook can be used as additional guidance on pre-project planning. Pre-project planning should include:

- Statement of mission requirements
- Outline of known alternatives
- Defined schedule for Pre-project planning
- Defined Pre-project planning
- Defined budget for Pre-project planning
- Defined information availability
- Location of Pre-project planning work
- Contract Strategy
- Permit analysis
- Defined deliverables
- Status reporting requirements
- Defined tasks for minimizing risk
- Project outline
- Pre-project planning priorities
- Defined responsibilities for all Pre-project planning team members

B. ORGANIZING FOR PRE-PROJECT PLANNING

For projects of minimal scope, the pre-project planning effort may be informal, but for larger, more complex projects, the pre-project planning should be formal, rigorous and well documented. Partnering among all project stakeholders is necessary to ensure all requirements are defined and incorporated into the project documentation and budget. The following are suggestions for use by the pre-project planning team as appropriate:



- Stakeholders for the team may change as the project progresses through its planning and development phase. The team should include members based upon knowledge, skills, authority, and operations and administrative functions that are needed to develop the project requirements.
- For a formal team draft a charter to define the objectives. It is important the stakeholders define their respective project goals.
- For larger, more complex projects develop a Pre-Project Plan defining needs, requirements, and objectives and team member roles and responsibilities.
- After the team has been organized for the project, use the PDRI tool as a checklist to review the project collectively so each team member understands the implications of the project and the team can assess what information is missing.

C. STREAMLINED FORMAL ORGANIZATION FOR LARGE/COMPLEX PROJECTS

Formal pre-project planning can be an expensive, people intensive and time consuming process. As an alternative a less formal process can be used. The objective of the Pre-Project Plan is to assure that all information for the project to proceed to the next step is documented. A team of subject matter experts led by an Examiner and an Advocate will determine the project PDRI. The role of the Advocate (Project Officer) is to collect the project specific or relevant information listed in Exhibit X2-4-A (PRDI Checklist) and submitted to the panel of subject matter experts. The Examiner will assure and affirm that the information is sufficient. The panel will set the level of definition with the Examiner's concurrence.

D. PROJECT DEFINITION RATING INDEX

Project Definition Rating Index - The PDRI is a tool to evaluate and measure the level of scope definition for proposed projects. The intent is to evaluate the completeness of scope definition at any point prior to the time a project is considered for authorization to perform detailed design and construction. It is a comprehensive checklist of 64 scope definition elements in a 1000-point scoring system. Each element is weighted based on its relative importance to the other elements. The PDRI score relates to risk. Those areas that need further work can easily be isolated.

The overall rating helps determine whether the project should proceed through the budget cycle, allowing the OPDIV to make the best investments and improving project success by thinking ahead and planning early. All projects requiring HHS approval should be evaluated using the PDRI tool at three separate points during a project's development as follows:

- After assembling the pre-project planning team for a project, collectively use the PDRI as a checklist so that each team member understands the implications of the project, to assess what information may be missing, and to assign actions to collect missing information. Scoring is not recommended at this stage, as most of the elements still need to be developed.
- The project must be evaluated and scored by the pre-project planning team near completion of the requirements documentation and prior to initial budget submittal. The evaluation should provide a sense of adequacy of the project estimate; rate the completeness of the project scope definition, and redirect efforts to correct inadequately defined areas prior to design. The PDRI documentation must be included with the FPAA as part of the initial budget submittal.
- The final evaluation and scoring is required on all projects and should take place after completion of the planning documents (planning studies, program of requirements, project justification document, schematic design) and prior to the decision to proceed with final design.



2-4-20 GUIDANCE AND INFORMATION

A. PRE-PROJECT PLANNING CHARTER

The Charter is a statement of business need and an opportunity for a project team to translate business objectives or mission into project specific objectives. It is the link between the organizations management and project management functions. The charter may be several pages or one page, should be reviewed with the decision maker early in the team's life and should be revisited if there are major changes to the project. The charter should address cost, schedule, and quality tradeoffs.

Recommended Contents of the Charter

- Translate business need into a project objective
- Outline of known alternatives
- Define mission
- Define quality of deliverables
- Timing requirements
- Budget requirements

B. ALIGNMENT DURING PRE-PROJECT PLANNING

To ensure that the appropriate project participants are working together to develop and meet a uniformly defined and understood set of project objectives, the project team should measure alignment throughout pre-project planning. A suggested tool to address project team alignment is CII's Alignment Thermometer as addressed in CII IR 113-3 Alignment during Pre-Project Planning. The Alignment Thermometer addresses the following 10 key alignment issues:

- a. Stakeholders are appropriately represented on the project team.
- b. Project leadership is defined, effective, and accountable.
- c. The priority between cost, schedule and required project features is clear.
- d. Communication within the team and with stakeholders is open and effective.
- e. Team meetings are timely and productive.
- f. The team culture fosters trust, honesty and shared values.
- g. The PPP process includes sufficient funding, schedule and scope to meet objectives.
- h. Reward and recognition systems promote meeting project objectives.
- i. Teamwork and team building programs are effective.
- j. Planning tools (e.g., checklists, simulations and work flow diagrams) are effectively used.

C DOCUMENT GOALS TO REACH LEVEL 1 RATING FOR PDRI ELEMENTS

For a project to be fully defined the following items must be documented or addressed in each element:

PDRI Section I Basis of Project

A. Business Strategy:

A1. Building Use -

A detailed list of all programs, uses and functions that would affect the project is complete. Disposition of existing facilities is clearly identified and includes a completed disposition tree. Department LCCA tool used to address alternatives. There is a written analysis of alternatives to meet the facility need. Requirements are identified in project planning documents, such as PJD, PDS, POR, Basis of Design, and/or Concept design.



A2. Business Justification -

Business justification for the project is documented, and includes input from the users, key stakeholders, and the HHS OPDIV facility program office. Items are addressed, identified and prioritized to clearly state needs and basis for the project. The business justification is documented in the FPAA and the PJD, POR, PDS, and any feasibility studies performed for the project.

A3. Business Plan -

A documented business plan/strategy that supports the business justification is developed, which clearly identifies the planned and actual funding available for the project and schedule milestones.

A clear strategy is in place that is consistent with the NIH's 5-year Strategic Facilities Plan. The approved strategy is documented in the FPAA.

A4. Economic Analysis -

An economic analysis is developed for the project alternatives solutions. Analysis typically includes a status quo alternative. If Congress gives a mandate or earmark, an analysis must still be done to evaluate the alternatives to meet the mandate.

A5. Facility Requirements -

Overall requirements for the facility are documented including data for any special/unique spaces, i.e., animal, special labs, etc. Existing facilities that must remain operational are specifically addressed. Documents include but are not limited to PJD, POR, PDS, B&SP. Requirements are included in FPAA.

A6. Future Expansion/Alteration Considerations-

Specific requirements for future expansion, alterations, adaptability and/or flexibility are documented, for example in the NIH's Master Plan, POR, and/or PDS. Impacts are quantified, and included in the FPAA. If not applicable, it is noted in the appropriate documents.

A7. Site Selection Considerations -

Analysis of alternative sites is documented. The site selection evaluation has considered viable options and relative strengths and weaknesses of each proposed site. NEPA requirements and key stakeholders are identified. If the project is a major capital project it is documented in NIH's Master plan.

A8. Project Objectives Statement -

The project has clearly defined objectives that have been agreed to by all stakeholders. Any constraints or limitations are considered in setting objectives. Priority of Project objectives is documented, for example in PDCS. Project Objectives are clearly stated in the FPAA, POR, and PDS. (The OPDIVs are referred to CII's Setting Project Objectives tool as a means to assist them in defining objectives.)

B. Owners Philosophies

B1. Reliability Philosophy -

Team can answer "Are you aware of the requirements and are you addressing? If so, how?" NIH design guidelines are available and applicable. Reliability may also be addressed in Lessons Learned database. Specific analysis is not required under this element, only that the general requirements are defined.



B2. Maintenance Philosophy -

Team can answer “Are you aware of the requirements and are you addressing? If so, how?” NIH design guidelines are available and applicable. Maintenance may also be addressed in Lessons Learned database. Specific analysis is not required under this element, only that the general requirements are defined.

B3. Operating Philosophy -

Team can answer “Are you aware of the requirements and are you addressing? If so, how?” NIH design guidelines are available and applicable. Operations may also be addressed in Lessons Learned database. Specific analysis is not required under this element, only that the general requirements are defined.

B4. Design Philosophy -

Team can answer “Are you aware of the requirements and are you addressing? If so, how?” NIH design guidelines are available. Department’s Sustainable Design policy and implementation plan addresses specific sustainable design requirements. Design may also be addressed in Lessons Learned database. Specific analysis is not required under this element, only that the general requirements are defined.

C. Project Requirements

C1. Value Analysis Process -

Team has identified specific processes to be utilized for this project. Project complies with HHS value engineering requirement. Unique considerations for project are identified in FPAA. A/E or consultant requirements are based on the OPDIV Master statement of work and Technical guidelines and/or handbook. Project specific A/E or consultant statement of work is required.

C2. Project Design Criteria -

Specific design criteria are identified in the project planning documents such as the basis of design, POR and/or PDS. Criteria must be compatible with NIH master plan, guidelines and program mission. Reference applicable guidelines and review requirements, also specifically list criteria not addressed in guidelines. Unique internal and external project review requirements are identified in the A/E’s statement of work and incorporated into project schedule and budget.

C3. Evaluation of Existing Facilities -

Existing Facility Assessments have been reviewed, including backlog of maintenance and repair and condition index. Feasibility Study which analyzes the ability of an existing facility to meet the program requirements is completed. Proposed utilization of existing facilities is consistent with current NIH Master Plan and Historic Preservation Plans.

C4. Scope of Work Overview -

FPAA is completed. Project planning documents are complete such as basis of design, POR, PDS and are referenced in the statement of work. NEPA process is initiated.

C5. Project Schedule -

Complete project schedule has been developed, including activation and operational startup, and documented in FPAA. Schedule specifics and unique requirements are addressed in planning documents such as POR or PDS. Schedule includes stakeholder and regulatory requirement milestones. Schedule contingency has been included. Assumptions, rationale and methodology are identified and documented. First A/E-generated project schedule is submitted.



C6. Project Cost Estimate -

Complete project budget estimate has been developed including hard and soft costs through activation and operational startup and is documented in FPAA. The basis of the budget estimate is fully documented and traceable and supporting backup information is available. Major budget estimate assumptions, especially those affecting major cost drivers, are fully documented and explained. Budget estimate exclusions are fully documented and explained. Project construction cost uses current OPDIV escalation rates. Budget estimate includes reasonable contingencies developed in accordance with OPDIV guidance. A/E-generated construction cost estimate is developed and the overall project budget estimate is updated. Scoring is based on level of detail/completion of budget estimate. Parametric or square foot based budget estimates do not warrant the maximum rating.

PDR I Section II Basis of Design

D. Site Information

D1. Site Layout -

General information for the selected site is documented in the completed site selection analysis, see element A.7. Detailed layout criteria are documented in project planning documents such as basis of design, concept design, and OPDIV master plan. Criteria include potential impacts on and any restrictions imposed by adjacent properties. Consider alternate site layouts where appropriate.

D2. Site Surveys -

Site survey has been performed and is available documenting relevant criteria. Topographic information may be documented separately. If a campus master topographic map or aerial surveys are available, a separate topography map may not be required. Actual final site elevation is not required, but how site would need to be cut/fill to reach the final site elevation is addressed.

D3. Civil/Geotechnical Information -

Investigation and development of site-specific characteristics sufficient to support final design and key assumptions are clearly documented in Geotechnical Report. Site assessment includes storm water management. Waste minimization plan addresses construction waste including demolition. LEED™ or Green Globes checklist may be used to document site specific evaluation.

D4. Governing Regulatory Requirements -

A detailed list of all tribal, local, state and federal requirements applicable to the project is documented including articulation of level of environmental requirements. A plan of compliance is developed and shall incorporate planned versus actual milestones. If basis of design, NEPA evaluation, POR and/or PDS do not fully address, a separate checklist is necessary to be considered complete. It is very important to identify those items that may become project showstoppers in work plan.

D5. Environmental Assessments -

An environmental baseline survey is complete and documented. This is not the actual NEPA evaluation but rather an evaluation of all those environmental items that may impact project cost or schedule. Baseline survey clearly articulates site versus building contamination, for example, specific asbestos contamination.

D6. Utility Sources with Supply Conditions -

The existing capacity and points of connection for site utilities has been evaluated and compared to project requirements. Documentation includes utilities studies, site analysis and master (utility) plan.



D7. Site Life Safety Considerations -

Fire and life safety related items have been evaluated for the selected site and are documented, such as in the access and evacuation plans, basis of design, fire protection analysis and flow tests. Security does not conflict with life safety. (Communications may include blue light phones, external speakers, A/V devices.) Access to site and building's) for emergency equipment is addressed.

D8. Special Water and Waste Treatment Requirements -

Special water and waste water requirements, for example, specialty labs or dialysis units, have been evaluated and are documented, such as in basis of design, POR, PDS, and site selection and/or analysis. Water reuse, recycling, etc. are documented in LEED™ or Green Globes checklist.

E. Building Programming

E1. Program Statement -

A written Program Statement is incorporated into planning/programming documents (basis of design, POR and PDS) and documented in FPAA that addresses the level of performance of the facility including major functions, adjacencies and space requirements. The statement clearly defines how this project will support the OPDIV's Mission, including workflow and increased throughput, and that validates the project drivers. Any specific design objectives and/or design vision are addressed. Alternatives or consequences if this project is not completed are well articulated.

E2. Building Summary Space List -

A complete Building Summary Space List has been developed and includes a list of specific rooms or spaces that comprise the needs of the facility. The total FTE or staffing population housed in the facility is identified. The list correlates spaces to occupancy, as appropriate. Information is organized by department or division to correlate to overall adjacency requirements. The planned net area for each space is provided. The completed list includes the calculation of the net to gross area in accordance with the HHS Facilities Program Manual, Volume 1.

E3. Overall Adjacency Diagrams -

Department or division level adjacency diagrams have been developed as either bubble diagrams or a matrix and demonstrate mandatory or desirable space relationships. If bubble diagrams are used, relative graphic scaling of the space representations is included. Security set-backs or other security elements are incorporated in adjacency considerations. Mechanical interstitial spaces or galleries are defined as a known requirement, or as an option for consideration later.

E4. Stacking Diagrams -

Stacking diagrams have been developed for multi-story buildings. Adjacent spaces with varying height requirements have been studied and are highlighted in the diagrams. Diagrams address vertical program, circulation and utility requirements, including interstitial spaces and galleries.

E5. Growth and Phased Development -

Provisions for future growth or phased development have been considered and included in planning/programming documents (basis of design, POR, PDS) as appropriate. Each project will address potential for technology and use changes over time. Requirements are documented in the FPAA.

E6. Circulation and Open Space Requirements -

Requirements for circulation and open space are included in planning/programming documents (master plan, POR, PDS and signage policy). Special requirements are identified, such as spatial organization



requirements around a building lobby or the need for public identity or public entry. Fire and life safety and security requirements related to circulation and open space are well defined.

E7. Functional Relationship Diagrams/Room by Room -

Room by room functional relationship diagrams have been developed as either bubble diagrams or a matrix and demonstrate mandatory or desirable space relationships. If bubble diagrams are used, relative graphic scaling of the space representations is included. Security set-backs or other security elements are incorporated in adjacency considerations. Mechanical interstitial spaces or galleries are defined as a known requirement, or as an option for consideration later.

E8. Loading/Unloading/Storage Facilities Requirements -

Specific Loading/Unloading/Storage Facility criteria for the project are developed and included in planning/programming documents (basis of design, POR, PDS). Specific project criteria are not general criteria that are dictated by design guidelines. Specific project criteria are developed as a result of various analyses including functional relationships and security. Criteria include specific regulatory requirements for the project.

E9. Transportation Requirements -

Specific Transportation criteria for the project are developed and included in planning/programming documents (basis of design, POR, PDS). Specific project criteria are not general criteria that are dictated by design guidelines. Specific project criteria are developed as a result of various analyses including functional relationships and security. Criteria include specific regulatory requirements for the project.

E10. Building Finishes -

Specific Interior and Exterior Finishes criteria for the project are developed and included in planning/programming documents (basis of design, POR, PDS, HSP templates). Specific project criteria are not general criteria that are dictated by design guidelines. Specific project finishes are analyzed for sustainability utilizing tools such a LEED™ or Green Globes checklist. Criteria include specific regulatory requirements for the project

E11. Room Data Sheets -

Room Data Sheets for each room type are developed and included in planning/programming documents (basis of design, POR, PDS templates). Similar rooms with different layouts have separate room data sheets. Room Data Sheets are not general room requirements that are dictated by design guidelines; and note specific functional requirements and details.

E12. Furnishings, Equipment and Built-Ins -

Furnishings, Equipment and Built-Ins for each room type are developed and included on Room Data Sheets. Specific fixed and moveable equipment and furnishings are not general requirements that are dictated by design guidelines or standard OPDIV equipment lists. Long lead delivery items are identified. Impacts on utilities are identified and documented.

E13. Window Treatment -

Window Treatment criteria for the project are developed and included in planning/programming documents (basis of design, POR, PDS, HSP templates). Specific project criteria are not general criteria that are dictated by design guidelines. Window treatments are analyzed for sustainability utilizing tools such a LEED™ or Green Globes checklist and security. These are the specific treatments built-in the structure rather than drapes, blinds, etc., installed as furnishings after construction.



F. Building Project Design Parameters

F1. Civil/Site Design -

Project specific Civil/Site design criteria are developed and included in Basis of Design, POR, PDS, HSP Templates, and/or Concept design. Specific project criteria are not general criteria that are dictated by design guidelines. Criteria are developed as a result of various studies, reports, surveys, alternative analyses, testing and preliminary calculations performed for the project design. Criteria include specific regulatory requirements for the project.

F2. Architectural Design -

Project specific Architectural design criteria are developed and included in Basis of Design, POR, PDS, HSP Templates, and/or Concept design. Specific project criteria are not general criteria that are dictated by design guidelines. Criteria are developed as a result of various studies, reports, surveys, alternative analyses, testing and preliminary calculations performed for the project design. Criteria include specific regulatory requirements for the project.

F3. Structural Design -

Project specific Structural design criteria are developed and included in Basis of Design, POR, PDS, HSP Templates, and/or Concept design. Specific project criteria are not general criteria that are dictated by design guidelines. Criteria are developed as a result of various studies, reports, surveys, alternative analyses, testing and preliminary calculations performed for the project design. Where required, progressive collapse requirements are included. Criteria include specific regulatory requirements for the project.

F4. Mechanical Design -

Project specific Mechanical design criteria are developed and included in Basis of Design, POR, PDS, HSP Templates, and/or Concept design. Specific project criteria are not general criteria that are dictated by design guidelines. Criteria are developed as a result of various studies, reports, surveys, alternative analyses, testing and preliminary calculations performed for the project design. Criteria include specific regulatory requirements for the project.

F5. Electrical Design -

Project specific Electrical design criteria are developed and included in Basis of Design, POR, PDS, HSP Templates, and/or Concept design. Specific project criteria are not general criteria that are dictated by design guidelines. Criteria are developed as a result of various studies, reports, surveys, alternative analyses, testing and preliminary calculations performed for the project design. Criteria include specific regulatory requirements for the project.

F6. Building Life Safety Requirements -

Project specific Building Life Safety design criteria are developed and included in Basis of Design, POR, PDS, HSP Templates, and/or Concept design. Specific project criteria are not general criteria that are dictated by design guidelines. Criteria are developed as a result of various studies, reports, surveys, alternative analyses, testing and preliminary calculations performed for the project design. Criteria include specific regulatory requirements for the project. Security requirements must be coordinated with life safety requirements.

F7. Constructability Analysis -

A documented process is in place to ensure a constructability review process takes place beginning with the concept design submission and ending with the final construction document submission. Process identifies review schedule, participants and roles, reporting requirements and recommendation/resolution



process. At the concept design submission, an initial constructability analysis is performed and valid comments are incorporated.

F8. Technological Sophistication –

Project specific Technological Sophistication design criteria are developed and included in Basis of Design, POR, PDS, HSP Templates, and/or Concept design. Specific project criteria are not general criteria that are dictated by design guidelines. Criteria are developed as a result of various studies, reports, surveys, alternative analyses, testing, and preliminary calculations performed for the project design. Criteria include specific regulatory requirements for the project.

G. Equipment

G1. Equipment List –

The Equipment list of project-specific equipment, including owner-furnished or contractor-furnished, is complete. The list includes detailed, comprehensive requirements for all major equipment, other than building systems equipment. Major equipment includes fixed and movable equipment (including special purpose equipment) that impacts project design because of access, size, utility, or operating requirements.

G2. Equipment Location Drawings –

Layout and location/arrangement drawings that identify locations of each piece of major equipment listed in G1 are complete and finalized. All appropriate parties affected by equipment placement (operations, maintenance, etc.) have had the opportunity to provide input in the placement and have reviewed the layout.

G3. Equipment Utility Requirements –

The Equipment List includes a tabulated list of utility requirements for all major project-specific equipment.

PDR I Section III Execution Approach

H. Procurement Strategies

H1. Identify Long-Lead/Critical Equipment and Materials –

All long-lead equipment and materials that are on the project's critical path and all critical equipment and materials requiring supplier information to proceed with design are identified in a consolidated list.

H2. Procurement Procedures and Plans –

Procedures and plans are in place for the purchasing and delivery of equipment and materials required for the project. This is a detailed project-specific plan, not only standard procurement procedures and guidelines.

J. Deliverables

J1. CADD/Model Requirements –

The required CADD software and specific guideline format has been identified in the A/E Statement of Work (SOW) with references to applicable NIH design policy and technical guidelines. The specific 3D/modeling/rendering requirements (if any) are identified as a deliverable. Level of document security/data backup has been identified. At concept design submission (final HHS required PDR I evaluation), the A/E submittal demonstrates incorporation of CADD requirements on major capital projects.



J2. Documentation/Deliverables -

The required documents and deliverables with specific electronic media requirements has been identified in the A/E SOW with references to applicable NIH design policy and technical guidelines. The required deliverables schedule, quantity and delivery instructions are identified in the A/E SOW with references to applicable OPDIV design policy and technical guidelines.

K. Project Control

K1. Project Quality Assurance and Control -

An NIH Quality Assurance (QA) program is in place and functional that applies to all phases of project development and includes team member duties and responsibilities. Program includes how deficiencies and omissions are addressed, as well as decontamination and building material abatement. Contractor Quality Control (CQC) programs are established that address design and construction requirements for incorporation into design and construction contracts. At concept design submission (final HHS required PDRI evaluation), the A/E submittal demonstrates incorporation of a formal CQC program on major capital projects.

K2. Project Cost Control -

Complete project budget estimate is developed, including hard and soft costs, through activation and operational startup and is documented in the FPAA. Cost Control Plan contains NIH and project specific requirements and defines all sources of funds, system for allocating and tracking through project completion including funding and cost tracking requirements by project phase and/or areas. Plan also includes specific details that address design and construction requirements for incorporation into design and construction contracts. Project is using the NIH's project control systems in place for managing project baselines such as earned value techniques, variance analysis, value engineering, contingency/reserve management and effective reporting.

K3. Project Schedule Control -

Detailed project schedule is developed that addresses all the requirements identified in the element. Schedule is summarized in the FPAA. A process is in place for periodic schedule reviews. Project is using the NIH's project control systems in place for managing project baselines such as earned value techniques, variance analysis, value engineering, contingency/reserve management and effective reporting.

K4. Risk Management -

Risk management plan is developed that identifies all potential showstoppers for the project. Well detailed cost control and schedule plans are the mitigation measures for budget and schedule. Periodic PDRI evaluations may be your overall risk management plan IF low definition items are well documented with action plans and responsibilities and there is planned follow through to ensure timely completion.

K5. Safety Procedures -

General provisions and standard specifications are in a place which defines general safety procedures and responsibilities including CFR and design guidelines. Unique project requirements such as OPDIV specific policies and standards, AAALAC, BSL, Joint Commission, etc., are identified.

L. Project Execution

L1. Project Organization -

Project organization chart including core stakeholders and project team has been developed which establishes roles and responsibilities of team members and stakeholders, i.e., Integrated Project Team and Pro-



ject Charter including approval matrix. Documented role of project officer identified by COTR letter(s) from Contracting Officer(s). See OMB A-11, Appendix 7.

L2. Owner Approval Requirements -

NIH Standard Operating Procedures and FAR contract clauses are included in project charter and define all tasks, elements and documents from external sources that require a Government approval before proceeding.

L3. Project Delivery Method -

Project Delivery and Contract Strategy (PDCS) tool or similar evaluation conducted to assist in determining best method for project delivery. This process should feed into the development of the Acquisition Plan, which defines how the project will be executed, including tailoring general requirements and processes to the specifics of the project.

L4. Design/Construction Plan and Approach -

NIH Standard Operating Procedures, FAR contract clauses, QA/QC plan, partnering plan and other detailed requirements of the project related to execution are incorporated into a consolidated design and construction plan for the specific project. This is not a requirement typically done in the past and there is no standard format at this time.

L5. Substantial Completion Requirements -

Detailed requirements for substantial completion are defined and documented in the construction documents including unique requirements based on project use. This element is typically a low definition element until design is well under way and therefore should be on a project's action plan.



PDRI Check List

PDRI Section I Basis of Design

A. Business Strategy

A1. Building Use Requirements

Identify and list proposed programs, uses and functions to be constructed, improved or repaired. These may include uses such as:

- Retail
- Institutional
- Instructional
- Medical
- Storage
- Food service
- Recreational
- Research
- Multimedia
- Office
- Utilities/Industrial
- Mass Transit Facilities
- Residential
- Parking, Grounds and Roads
- Other

A description of options which can meet the facility need should be defined, i.e., new construction, expansion or renovation of an existing facility, leased facility, etc. A listing of current facilities that will be vacated and their planned reuse or disposal due to the new project should be produced.

A2. Business Justification

Identify driving forces for the project and specify what is most important from the viewpoint of the owner including both needs and expectations. Address items such as:

- Mission dependency
- Utilization
- Condition Index
- Operating cost
- Level of amenities
- Location
- Sustainability considerations
- Required Operational date
- Target users
- Other

A3. Business Plan

A project strategy should be developed that supports the business justification in relation to the following items:



- Funding availability
- Cost and financing
- Schedule milestones (including known deadlines)
- Types, amounts and sources of project funds
- Related/resulting projects
- Other

A4. Economic Analysis

An economic analysis should be developed to determine the viability of the venture and evaluate the various alternatives to meet the project requirement. The analysis should clearly show multiple equivalent alternatives and acknowledge the uncertainties of the analysis. The analysis should also consider the economic impact of early or late project delivery. Late delivery at the project end equates to what kind of negative impact. The analysis should also indicate what “certification” level of environmental sustainability is being targeted. Emphasis is on the viability of macro-level analysis of the various alternatives, not detailed Life Cycle Cost (LCC) analysis of systems. It should acknowledge items such as:

- Design life
- Building ownership (relative to IHS only)
- Long-term operating and maintenance costs
- End of life termination/salvage value or cost
- Analysis of capital and operating cost
- Capital cost of sustainability implementation versus the operating cost savings
- Other

A5. Facility Requirements

Facility size requirements are many times determined by applicable code, circumstance, or site conditions and are often driven by occupancy. Note that this analysis is at the macro level at this point. Some considerations are listed below:

- Use flexibility
- Number of lessors/occupant types
- Facility replacement/consolidation
- Number of occupants
- Volume
- Net and gross square footage by area uses
- Support infrastructure
- Special space size (auditorium, cafeteria, etc.)
- Compare project to current business sector benchmarks
- Occupant accommodation requirements (i.e., number of hospital beds, number of desks, number of workstations, onsite child care, on-site medical care, cot space, etc.)

- Identify operational security system requirements for both facility infrastructure and human assets.
- Identify any anti-terrorism standards that are applicable to the project or as adopted by the Owner
- Other

Ongoing operations during the construction phase, and in the operation of the completed facility, should be carefully planned in coordination with the responsible entity during this early planning cycle.

A6. Future Expansion/Alteration Considerations



The possibility of expansion and/or alteration of the site and building should be considered for facility design. These considerations consist of a list of items that will facilitate the expansion or evolution of building use including adaptability/flexibility. Evaluation criteria may include:

- Provisions for site space in case of possible future expansion up or out
- Technologically advanced facility requirements
- “Grow in place” intentions for departments or functional areas during the future phase
- Future building occupants in five, 10, 15, or 20 years
- Identify functional areas that are more likely to move out of the building in the future to allow others to expand or move in
- Flexibility or adaptability for future uses.
- Future phasing plan
- Consideration of future expansion of the building or functions with the master plan
- Other

A7. Site Selection Considerations

Evaluation of sites should address issues relative to different locations (i.e., global, country, or local). This evaluation may take into consideration existing buildings or properties, as well as new locations. The selection criteria include items such as:

- General geographic location
- Access to the targeted market area (population served)
- Local availability and cost of labor (e.g., construction, operation and staffing)
- Available utilities
- Existing facilities
- Economic considerations (such as HUB zones)
- Consistent with Master Plan
- Land availability and developed costs
- Legal constraints
- Community relations
- Labor relations
- Government relations
- Political issues/constraints
- Safety and health considerations
- Environmental issues
- Historical/archaeological considerations
- Weather/climate
- Sustainability analysis (such as LEEDTM or Green Globes)
- Security and anti-terrorism analysis
- Other

A8. Project Objectives Statement

This statement defines the project objectives and priorities for meeting the business strategy. It should be clear, concise, measurable, and specific to the project. It is desirable to obtain total agreement from the entire project team regarding these objectives and priorities to ensure alignment. Specifically, the priorities among cost, schedule, and value-added quality features should be clear. The objectives also should comply with any master plan documents. To ensure the project is aligned to the applicable objectives, the following should be considered:

- Stakeholder’s understanding of objectives, including questions or concerns



Constraints or limitations placed on the project
Typical objectives:

- Safety
- Quality
- Cost/funding strategy
- Schedule
- Technology usage
- Capacity or size
- Decommissioning
- Startup or commissioning
- Communication
- Operational performance
- Maintainability
- Sustainability
- Security
- Other

B. Owner Philosophies

B1. Reliability Philosophy

A brief description of the project intent in terms of reliability should be defined. A list of the general design principles to be considered to achieve optimum/ideal operating performance from the facility/building should be addressed. The durability, reliability and criticality of the facility itself should also be agreed to by the team and considerations may include:

- Critical systems redundancy
- Architectural/structural/civil
- Mechanical/electrical/plumbing
- Security and anti-terrorism
- Other

B2. Maintenance Philosophy

A list of the general design principles to be considered to meet building maintenance requirements should be identified. Life cycle cost analysis of major facilities should also be addressed in the general design principles. Considerations may include:

- Daily occupancy loads by area
- Maximum building occupancy requirements
- Building systems
- Equipment monitoring requirements
- Energy and resource conservation programs
- Environmentally sustainable maintenance
- Selection of materials and finishes
- Requirements for building finishes
- Access to equipment and systems for maintenance
- Maintenance staff
- Other



B3. Operating Philosophy

A list of the general design issues that need to be considered to support routine operations should be developed. Issues may include:

- Operating schedule/hours
- Provisions for building occupancy assignments (i.e., by room, floor, suite) including flexibility of partitioning
- Future renovation schedule
- Limited access to the area immediately around the building for cars and trucks
- Program fit-out philosophy
- Flexibility to change layout
- Operations staff
- Access to equipment & systems for operations
- Environmentally sustainable operations

B4. Design Philosophy

A listing of design philosophy issues should be developed. These issues should be directed at concerns such as the following:

- Design life
- Aesthetic requirements:
 - Architectural style and character
 - Image (character of occupants or function portrayed to public by the building, i.e., welcome, power, or nature)
 - Culture – as appropriate
- Compatibility with master plan
- Environmentally sustainable design (internal/external)
- Quality of life
- Requirements of any adopted anti-terrorism design standards
- Limitations of design parameters
- Other

C. Project Requirements

C1. Value-Analysis Process

A structured value analysis approach should be in place to consider design and material alternatives in terms of their cost effectiveness, including sustainability considerations. Items that impact the economic viability of the project should be considered. Items to evaluate include issues such as:

- Discretionary scope issues
- Expensive materials of construction
- Life-cycle analysis of construction materials, methods, and structure
- Economic cost and socioeconomic benefits of a sustainable design
- Other

C2. Project Design Criteria

Project design criteria are the requirements and guidelines which govern the design of the project. Any design review board or design review process should be clearly articulated. Evaluation criteria may include:



- Level of design detail required
- Codes, standards and federal regulations:
 - National
 - Agency/government specific
 - Local
 - International
- Security operations
- Anti-Terrorism
- Sole source requirements for equipment or systems
- Climatic data
- Utilization of design standards
- Donor or benefactor requirements
- Cultural preferences
- Environmental sustainability certification
- Other

C3. Evaluation of Existing Facilities

If existing facilities are available, then an analysis must be performed to determine if the existing facilities will meet program requirements. The analysis will assess the features and condition of the existing facilities and determine feasibility of housing the program. If the existing facility is to be demolished, portions of the facility should be recycled or salvaged. Evaluation criteria may include:

- Capacity:
 - Utilities (i.e., potable water, gas, oil)
 - Fire protection water
 - Waste treatment/disposal
 - Sanitary sewer
 - Telecommunications
 - Security
 - Storm water containment system/filtration
- Condition assessment of existing facilities and infrastructure
 - Condition Index
 - Operating Cost
 - Type and size of buildings/structures
 - Space Utilization
 - Access:
 - Rail accessibility standards
 - Roads
 - Parking areas
 - Pedestrian
 - Loading Dock
- Amenities:
 - Food service
 - Health facilities
 - Employee services, such as fitness centers, day care, credit unions, etc.
 - Change rooms
 - Public transportation
- Environmental hazard characterization or assessment
- Determination of historic status
- Recycling/salvage



Decommissioning
Other

C4. Scope of Work Overview

A complete narrative description of the project laying out the major components of work to be accomplished, generally discipline oriented, should be developed. Items to consider would include:

Phasing or sequencing of work
Interface issues for various contractors, consultants, or contracts
Other

C5. Project Schedule

Ideally, the project schedule should be developed by the project team. It should include milestones, unusual schedule considerations and appropriate master schedule contingency time (float), procurement of long-lead or critical pacing equipment, phasing, and required submissions and approvals. This schedule should involve obtaining early input, as appropriate, from:

Operations
Architects/Engineers
Construction
Procurement
Users
Tribe
Other

C6. Project Cost Estimate

The project cost estimate should address all costs necessary for completion of the project from planning through activation. This cost estimate may include the following:

Construction contract estimate

- TERO (Tribal Employment Rights Ordinance)
- Labor productivity/prevaling wage rates
- Cost escalation to the midpoint of construction
- Professional fees
- Land cost, to include mitigation and/or set asides
- Furnishings
- Equipment
- Special Purpose Equipment
- Swing Space
- Administrative costs (e.g. fee for service, Public Law 93-638)
- Contingencies
- Allowances
- Safety
- Incentives
- Inspection and testing services
- Site clearance and demolition
- Bringing utilities to the site
- Environmental impact mitigation measures
- Local authority permit fees
- Decommissioning



Activation

- Occupant moving and staging costs

- Furnishings

- Installation of operating security, LAN and telecom systems

- Temporary storage of government-owned equipment in remote or rented facilities

Special Services

- Site Surveys

- Soils Testing

- Archeological survey

- Historic recordation

- Specialty consultants (e.g. LEED™, EIS)

Commissioning

PDR I Section II Basis of Design

D. Site Information

D1. Site Layout

The facility should be sited on the selected property. Layout criteria may include items such as:

- Access (e.g., road, rail, marine, air)

- Construction access

- Historical/cultural

- Trees and vegetation

- Site massing and context constraints or guidelines (i.e., how a building will look in three dimensions at the site)

- Nearby mass transit

- Access transportation parking, delivery/service, and pedestrian circulation considerations

- Open space, street amenities, community adjacencies, local master plans

- Climate, wind, and sun orientation for natural lighting views, heat loss/gain, energy conservation, and cultural and aesthetic concerns

- Consistent w/ agency master plan

- Other

D2. Site Surveys

The site should be surveyed for property boundaries, including limits of construction. A topography map with the overall plot and site plan is needed. In a campus setting, an existing survey and/or topography map may be used if all relevant information is included. Evaluation criteria may include:

- Legal property descriptions with property lines

- Easements

- Rights-of-way

- Drainage patterns

- Deeds

- Definition of final site elevation

- Benchmark control systems

- Setbacks

- Access and curb cuts

- Limits of construction

- Proximity to drainage ways and flood plains



- Known below grade structures and utilities (both active and inactive)
- Trees and vegetation
- Existing facility locations and conditions
- Solar/shadows
- Wetlands locations
- Location of mass transit
- Other

D3. Civil/Geotechnical Information

The civil/geotechnical site evaluation provides a basis for foundation, structural, and hydrological design. Evaluations of the proposed site should include items such as:

- General site description (e.g., terrain, soils type, existing structures, spoil removal, areas of hazardous waste, etc.)
- Depth and type of bedrock
- Settlement potential
- Slope stability
- Expansive or collapse potential of soils
- Fault line locations
- Seismic requirements
- Water table elevation
- Flood plain analysis
- Soil percolation rate and conductivity
- Ground water flow rates and directions
- Need for soil treatment or replacement
- Description of foundation design options
- Allowable bearing capacities
- Pier/pile capacities
- Paving design options
- Overall site analysis
- Underground obstructions
- Waste minimization plan including excess soil
- Other

D4. Governing Regulatory Requirements

The local, state, and federal government permits and approvals necessary to construct and operate the facility should be identified. A work plan should be in place to prepare, submit, and track permit, regulatory, re-zoning, and code compliance for the project, including responsibility for permitting process. It should include items such as:

- Construction
- Unique requirements (e.g., JC, AAALAC)
- Environmental (e.g., NEPA, NPDES)
- Structural requirements
- Building height limits
- Setback requirements
- Fire
- Building
- Occupancy
- Signage



- Historical issues
- Accessibility
- Demolition
- Solar
- Platting
- Air/water
- Transportation (e.g. FAA)
- Anti-terrorism standards
- Agency requirements
- Other

The codes that will have a significant impact on the scope of the project should also be investigated and explained in detail. Particular attention should be paid to local requirements. Regulatory and code requirements may affect the defined physical characteristics and project cost estimate. The project schedule may be affected by regulatory approval processes.

D5. Environmental Assessment

An environmental baseline survey should be performed for the site to evaluate issues that can impact the cost estimate or delay the project. These issues may include:

- Archeological
- Location in a sensitive air quality zone
- Location in a wet lands area
- Environmental permits now in force
- Existing contamination
- Location of nearest residential area
- Ground water monitoring in place
- Downstream uses of ground water
- Existing environmental problems with the site
- Past/present use of site
- Noise/vibration requirements
- Air/water discharge requirements and options evaluated
- Discharge limits of sanitary and storm sewers identified
- Detention requirements
- Endangered species
- Erosion/sediment control
- Brownfield development alternatives and impacts
- Waste acceptance criteria and waste packaging
- Other

D6. Utility Sources with Supply Conditions

The availability/non-availability of site utilities needed to operate the facility with supply conditions of quantity, temperature, pressure, and quality should be evaluated. This may include items such as:

- Non-potable water
- Potable water
- Chilled water
- Fire protection water
- Sewers – sanitary, storm
- Compressed air



- Conditioned Air
- Heating water
- Natural Gas
- Steam
- Electricity (voltage levels)
- Communications (e.g., data, cable television, telephones)
- Special requirements (e.g., deionized water or medical/lab gases)
- Emergency or backup power (e.g., UPS, generator)

D7. Site Life Safety Considerations

Fire and life safety related items should be taken into account for the selected site. These items should include fire protection practices at the site, available fire protection water supply (amounts and conditions), and special safety requirements unique to the site. Evaluation criteria may include:

- Wind direction indicator devices (e.g., wind socks)
- Fire monitors and hydrants
- Flow testing
- Access and evacuation plan
- Available emergency medical facilities
- Security considerations (site illumination, access control, communications)
- On-site medical care
- Other

D8. Special Water and Waste Treatment Requirements

Special water and waste water requirements including on site retention, pre-treatment and/or treatment should be evaluated. Items for consideration may include:

- Wastewater treatment
- Process waste
- Sanitary waste
- Waste disposal
- Storm water retention and /or treatment
- Water recycling (e.g., irrigation)
- Neutralization system
- Other

E. Building Program

E1. Program Statement

The program statement identifies the levels of performance for the facility in terms of space planning and functional relationships. It should address the human, physical, and external aspects to be considered in the design. Each performance criteria should include these issues:

A performance statement outlining what goals are to be attained, such as inpatient beds, outpatient vis-its, number of personnel, or types of laboratories.

Validation of the requirements that must be achieved, i.e. basis of need, such as population served or emerging health initiatives.

Any certification requirements that must be met, such as AAALAC, JCAHO, or OPDIV-specific requirements.



Other

E2. Building Summary Space List

The summary space list includes all space requirements for the entire project. This list should address specific types and areas. Possible space listings include:

- Building population
- Administrative offices
- Break Rooms
- Food Service Cafeteria
- Conference rooms
- Vending alcoves
- Janitorial closets
- Elevators
- Stairs
- Loading docks
- Dwelling units
- Special technology considerations
- Classrooms
- Laboratories
- Corridors
- Morgues
- Telemedicine Areas
- Imaging Suites
- Pharmacy
- Medical Records
- Labor Delivery/ Recovery Rooms
- Clinical areas
- Surgery suites
- Emergency rooms
- Inpatient care areas
- Telecommunication /Data closets
- Lobby/ Waiting areas
- Security
- Storage facilities
- Mechanical rooms
- Electrical rooms
- Parking space
- Restrooms
- Data/computer rooms
- Porte cocheres
- Vestibules (e.g., in extreme climates)
- Libraries
- Auditoriums
- Service Support Areas (e.g., copy rooms, mailrooms, clean/soiled areas, locker rooms)
- Waste Holding/Treatment Areas (e.g., lab waste, recycling)
- Lab support areas (e.g., autoclaves, clinical equipment, biomedical equipment, shops)
- Vivarium/Insectaries
- Cage washing
- Fitness centers



Other

This list is not intended to be all inclusive. Each OPDIV shall consider their appropriate space list in preparing the building summary space list.

Room data sheets are discussed in element E11. The room data sheet contains information that is necessary for the summary space list. Reference is made to the HHS Facilities Program Manual, Volume 1 to calculate the net to gross area from the Building Summary Space List.

E3. Overall Adjacency Diagrams

The overall adjacency diagrams depict the layout of each department or division of the entire building. The adjacency diagrams must adequately convey the overall relationships between functional areas within the facility. Note that these diagrams are sometimes known as “bubble diagrams” or “balloon diagrams.” They are also commonly expressed in an adjacency matrix or descriptions. Anti-terrorism standards should use adjacency diagrams to confirm that configuration and setback distances have been met.

E4. Stacking Diagrams

A stacking diagram portrays each department or functional unit vertically in a multi-story building. Stacking diagrams are drawn to relative scale, and they can help establish key design elements for the building. These diagrams are easily created with space lists and adjacency (or bubble) diagrams. Critical vertical relationships may relate to circulatory (stairs, elevators), structural elements, and mechanical or utility shafts. Stacking diagrams can establish building elements such as floor size. This type of diagram often combines functional adjacencies and space requirements and also shows how the project is sited.

E5. Growth and Phased Development

Provisions for future phases or anticipated use change must be considered during project programming. A successful initial phase necessitates a plan for the long term phases. The following phasing issues may be addressed:

- Guidelines to allow for vertical or horizontal additions (e.g., siting of departments, over-design of structural systems, joist layout, column spacing, exterior finishes)
- Technology needs as facility grows and expands or changes (e.g., utilities, medical systems)
- Comparing the additional costs involved with making the building “expandable” versus the probability of the future expansion occurring as envisioned.
- Provisions for infrastructure that allow for future expansion (e.g., vertical or horizontal transportation, utilities)

E6. Circulation and Open Space Requirements

An important component of space programming is common-area open spaces, both interior and exterior. These areas include the items listed and considerations such as:

Exterior:

- Service dock areas and access
- Circulation to parking areas
- Passenger/patient drop-off areas
- Pedestrian walkways or other pedestrian routes
- Courtyards, plazas, or parks
- Landscape buffer areas
- Unbuildable areas (e.g., wetlands or slopes)
- Circulation to adjacent buildings



- Bicycle facilities
- Entries and access (including ambulatory and emergency)
- Security considerations (e.g., setbacks, card access)
- Snow removal plan
- Postal and newspaper delivery (Separate from loading dock)
- Waste removal
- Fire and life-safety circulation considerations
- Ambient lighting
- Directional and location signage

Interior:

- Lobbies and waiting areas
- Interior aisle ways and corridors
- Vertical circulation (i.e., personnel and material transport including elevators and escalators)
- Ambient lighting
- Directional and location signage
- Fire and life safety circulation considerations
- Security considerations

E7. Functional Relationship Diagrams/Room by Room

The structure of adjacencies of a group of rooms shall be shown in room by room functional relationship diagrams. With these adjacency diagrams (also known as bubble diagrams), the architect can create a floor plan with all the relationships. Each space detail sheet should have a minimum of one functional relationship diagram. Rooms are often represented by circles, bubbles, squares, or rectangles. Larger rooms are represented with bigger symbols. They are also commonly expressed in an adjacency matrix.

E8. Loading/Unloading/Storage Facilities Requirements

A list of requirements shall be prepared that identifies materials to be unloaded and stored and products to be loaded along with their specifications. This list should include items such as:

- Storage facilities to be provided and/or utilized
- Refrigeration requirements and capabilities
- Animal delivery
- Laundry delivery
- Mail/small package delivery
- Recycling requirements
- Medical/ Pathological waste
- Controlled substances delivery (e.g., biological agents, radioactive materials, hazardous chemicals/gases)
- Other

A functional relationship analysis of access and materials handling should be completed, including security considerations.

E9. Transportation Requirements

Specifications for implementation of facility transportation (e.g., roadways, conveyers, elevators) as well as methods for receiving and shipping of materials (e.g., air, rail, truck, marine) should be identified. Provisions should be included for items such as:

- Facility access requirements based on transportation
- Drive-in doors



- Helipads
- Extended ramps for low clearance trailers
- Transshipping facilities
- Service elevators
- Loading docks / adjustable ramps
- Temporary parking for deliveries
- Dumpster requirements
- Materials handling systems (e.g., pneumatic tubes, records carts, mule carts)
- Other

E10. Building Finishes

Levels of interior and exterior finishes should be defined for the project. Broad finish types are also noted on room data sheets. Basic, standard finishes shall be identified for each project. Upgraded and specialty finishes shall be addressed and justified as needed. Any specific exterior finishes required, i.e., to meet campus master plan, shall also be defined. Finishes and local design standards are further defined in F2.

E11. Room Data Sheets

Room data sheets contain the specific requirements for each room considering its functional needs. The format of the room data sheet should be consistent. Possible issues to include on room data sheets are:

- Critical dimensions
- Technical requirements (e.g., fireproof, explosion resistance, X-ray)
- Furnishing requirements
- Equipment requirements
- Audio/visual (A/V) data and communication provisions
- Lighting requirements
- Utility requirements
- Security needs including access/hours of operation
- Finish type
- Environmental issues (e.g., indoor air requirements, special power requirements)
- Acoustics/vibration requirements
- Life-safety

E12. Furnishings, Equipment and Built-Ins

All fixed and moveable equipment (including special purpose equipment) and furnishings should be listed on the room data sheets. Moveable and fixed in place equipment should be distinguished. Building modifications, such as wide access doors or high ceilings, necessary for any equipment also need to be listed. Long delivery time items should be identified and ordered early. It is critical to identify the utility impact of equipment (e.g., electrical, cooling, special water or drains, venting, radio frequency shielding). Examples may include:

- Furniture
- Kitchen equipment
- Medical /Laboratory/Vivarium equipment
- Material handling
- Partitions
- Record Storage
- Casework
- IT administration equipment (e.g., LAN, computers, fax, copiers)
- Outdoor equipment



Other

New items and relocated existing items must be distinguished in the program. The items can be classified in the following categories:

New Items:

- Contractor furnished and contractor installed
- Owner furnished and contractor installed
- Owner furnished and owner installed
- Contractor furnished and owner installed

Existing Items:

- Relocated as is and contractor installed
- Refurbished and installed by contractor
- Relocated as is and owner installed
- Refurbished and installed by owner

E13. Window Treatment

Any special fenestration window treatments for energy, security, privacy and/or light control should be noted in order to have proper use of natural light. Some examples include:

- Blocking of natural light
- Glare reducing windows
- Exterior/interior louvers
- Blast resistant film or glazing
- Interior blinds
- Obscure glass
- Light Shelves
- Other

F. Building/Project Design Parameters

F1. Civil/Site Design

Civil/site design parameters should be developed to provide a basis for facility design. Items to consider include:

- Service and storage requirements
- Elevation and profile views
- High point elevations for grade, paving, and foundations
- Location of equipment
- Minimum overhead clearances
- Storm drainage system
- Location and route of existing utilities
- Site utilities
- Earth work
- Subsurface work
- Paving/curbs
- Landscape/xeriscape



- Fencing/site security
- Waste Treatment
- EMS (Environmental management system)
- Sustainable design requirements (for proposed level of certification)
- Future expansion/flexibility considerations, as appropriate
- Other

2. Architectural Design

Architectural design parameters should be developed to provide a basis for facility design. Items to consider include:

- Determination of metric (hard/soft) versus Imperial (English) units
- Requirements for building location/orientation horizontal and vertical (e.g., solar, wind)
- Access requirements
- Nature/character of building design (e.g., aesthetics, historic, contextual, cultural)
- Construction materials
- Acoustical considerations
- Accessibility requirements
- Architectural Review Boards
- Occupancy classification (including building type)
- Planning and zoning review boards
- Circulation considerations
- Seismic design considerations
- Color/material standards
- Hardware standards
- Furniture, furnishings, and accessories criteria
- Design grid
- Floor to floor height
- Security and Anti-terrorism standards
- Privacy requirements
- EMS (Environmental management system)
- Sustainable design requirements (for proposed level of certification)
- Future expansion/flexibility considerations, as appropriate

F3. Structural Design

Structural design parameters should be developed to provide a basis for the facility design. Items to consider include:

- Structural system (e.g., construction materials, constraints)
- Seismic requirements
- Foundation system
- Corrosion control requirements/required protective coatings
- Program specifications (e.g., basis for design loads, vibration, deflection)
- Design loading parameters (e.g., live/dead loads, design loads, collateral load capacity, equipment/material loads, wind/snow loads, uplift, blast loads)
- Functional spatial constraints
- EMS (Environmental management system)
- Sustainable design requirements (for proposed level of certification)
- Future expansion/flexibility considerations, as appropriate
- Security and Anti-terrorism standards



Other

F4. Mechanical Design

Mechanical design parameters should be developed to provide a basis for facility design. Items to consider include:

- Outdoor design conditions (e.g., minimum and maximum yearly temperatures access)
- Indoor design conditions (e.g., temperature, humidity, pressure, air quality)
- Special ventilation or exhaust requirements (e.g., location of intakes)
- Equipment/space special requirements with respect to environmental conditions (e.g., air quality, special temperatures)
- Energy conservation and life cycle costs
- Acoustical requirements
- Vibration control
- Zoning and controls (e.g., building automation system)
- Air circulation requirements
- Building emissions control
- Utility support requirements
- System redundancy requirements
- Plumbing requirements
- Special requirements for local utility connections
- Special piping requirements
- Location of vertical shafts and mechanical rooms
- Seismic requirements
- Fire protection systems requirements
- EMS (Environmental management system)
- Sustainable design requirements (for proposed level of certification)
- Future expansion/flexibility considerations, as appropriate
- Other

F5. Electrical Design

Electrical design parameters should be developed to provide the basis for facility design. Items to consider include:

- Power sources with available voltage/amperage
- Special power requirements for equipment (e.g., clean power, quality of power)
- Special lighting considerations (e.g., controls, lighting levels, color rendition)
- Voice, data and video communications requirements
- Uninterruptable power source (UPS) and/or emergency power requirements
- Energy consumption/conservation and life cycle cost
- Ability to use daylight in lighting
- Seismic requirements
- Lightning/grounding requirements
- Outdoor lighting requirements
- Location of vertical shafts and electrical rooms
- Special requirements for local utility connections
- EMS (Environmental management system)
- Sustainable design requirements (for proposed level of certification)
- Future expansion/flexibility considerations, as appropriate



Other

F6. Building Life Safety Requirements

Building life safety requirements are a necessity for building operations. They should be identified at this stage of the project. Possible safety requirements are listed below:

- Fire resistant requirements
- Explosion resistant requirements
- Area of refuge requirements in case of catastrophe
- Safety and alarm requirements
- Fire detection and/or suppression requirements
- Eye wash stations
- Safety showers
- Deluge requirements and foam
- Fume hoods and lab exhaust
- Handling of hazardous materials
- Biosafety cabinets
- Isolation facilities
- Sterile environments
- Emergency equipment access
- Personnel shelters
- Egress
- Accessibility requirements
- Public address requirements
- Data or communications protection in case of disaster or emergency
- Fall hazard protection
- Gas hazard detection
- EMS (Environmental management system)
- Sustainable design requirements (for proposed level of certification)
- Other

F7. Constructability Analysis

A structured process is in place for constructability analysis. CII defines constructability as, "the optimum use of construction knowledge and experience in planning, design, procurement, and field operations to achieve overall project objectives. Maximum benefits occur when people with construction knowledge and experience become involved at the very beginning of a project." Provisions have been made to provide this on an ongoing basis. This process includes examining design options that minimize construction costs while maintaining standards of safety, security, quality, and schedule. Process shall ensure completeness of project documents with all elements quantifiable for purposes of bidding. This process should be initiated in the front end planning process during concept or detailed scope definition. Elements of constructability during front end planning include:

- Constructability programming existence
- Construction knowledge/experience used in project planning
- Early construction involvement in contracting strategy development
- Developing a construction-sensitive project schedule
- Considering major construction methods in basic design approaches
- Developing site layouts for efficient construction
- Early identification of project team participants for constructability analysis
- Usage of advanced information technologies
- Continuity of operations during construction
- EMS (Environmental management system)
- Sustainable design requirements (for proposed level of certification)



F8. Technological Sophistication

The requirements for intelligent or special building systems should be evaluated. Identify new technology or development efforts, including software development requirements. Examples of these systems may include:

- Video conferencing
- Internet connections
- Advanced audio/visual (A/V) connections
- Personnel sensing
- Computer docking stations
- “Smart” heating or air-conditioning
- Intercommunication systems
- Security systems
- Communication systems
- Conveyance systems
- EMS (Environmental management system)
- Sustainable design requirements (for proposed level of certification)
- Other

G. Equipment

G1. Equipment List

Project-specific equipment, including owner-furnished or contractor-furnished, should be defined and listed with sufficient detail to design. (Note: Building systems equipment is addressed in elements F4 – Mechanical Design and F5 – Electrical Design). The list should define items such as:

- Medical/Laboratory/Vivarium
- Records storage
- Food service/vending
- Trash Disposal
- Distributed control systems
- Material handling
- Outdoor equipment
- Other

For each item on the equipment list address:

- Existing sources and characteristics of equipment
- Relative sizes
- Weights
- Location (e.g., room and mounting)
- Capacities
- Materials of construction
- Insulation and painting requirements
- Shielding requirements
- Equipment related access



- Vendor and model
- Equipment delivery time
- Requirements to operate in a secure mode (e.g., power failures)
- Vibration characteristics
- Other

G2. Equipment Location Drawings

Equipment location/arrangement drawings identify the specific location of each item of equipment in a project. These drawings should identify items such as:

- Plan and elevation views of equipment and platforms
- Location of equipment rooms
- Physical support requirement (e.g., installation bolt patterns)
- Coordinates or location of all major equipment
- Major equipment positioned to allow for maintainability and/or future replacement
- Other

G3. Equipment Utility Requirements

This evaluation should consist of a tabulated list of utility requirements for all major equipment (e.g., imaging equipment, autoclaves, cold rooms) such as:

- Power and/or all utility requirements
- Flow diagrams
- Design temperature and pressure
- Diversity of use
- Gas
- Water
- Other

PDRI Section III Execution Approach

H. Procurement Strategy

H1. Identify Long-lead/Critical Equipment and Materials

Identify engineered equipment and material items with lead times that will impact the design for receipt of supplier information or impact the construction schedule with long delivery times. List should capture building systems equipment and materials, as well as program specific equipment.

H2. Procurement Procedures and Plans

Procurement procedures and plans include specific guidelines, special requirements, or methodologies for accomplishing the purchasing, expediting, and delivery of equipment and materials required for the project. Requirements to be considered:

- Who will perform procurement?
- Listing of approved vendors, if applicable
- Client or contractor purchase orders
- Guidelines for single source or competitive bids
- Guidelines for A-E/construction contracts
- Responsibility for government-purchased items, including:
 - Funding source



- Shop inspection
- Expediting
- Source inspection requirements and responsibilities
- Procurement status reporting requirements
- Additional/special government accounting requirements
- Spare parts requirements
- Local regulations
- Storage
- Operating manual requirements and training
- Restricted distribution of construction documents for security and anti-terrorism reasons
- Warranties
- Other

J. Deliverables

J1. CADD/Model Requirements

Computer Aided Drafting and Design (CADD) requirements should be defined. Requirements to be considered:

- Application software preference (e.g., 2D or 3D CADD, application service provider (ASP), etc.), including licensing requirements
- If 3D CADD is to be used, will a walk through simulation be required for operation's checks, interference checks, construction planning and scheduling, etc.
- Government-specific guidelines (e.g., format, layering, symbols)
- Physical model requirements
- Renderings
- Configuration and administration of servers and systems documentation defined
- Information technology infrastructure to support electronic modeling systems, including uninterruptible power systems (UPS) and disaster recovery
- Handling of life cycle facility data including asset information, models, and electronic documents in accordance with OPDIV guidelines
- Security and auditing requirements defined
- Other

J2. Documentation/Deliverables

Documentation and deliverables required during project execution should be identified. If electronic media are to be used, format and application packages should be outlined. The following items may be included in a list of deliverables:

- Drawings and specifications
- Project correspondence
- Permits and approvals (e.g., NEPA, JCAHO)
- Maintenance and operating information/startup procedures
- Facility keys, keying schedules, and access codes
- Project data books (quantity, format, contents, and completion date)
- Equipment catalog cuts
- Design calculations
- Requests for information
- Waivers
- Construction cost estimates



- Project schedule
- Spare parts and maintenance stock
- Procuring documents/contract documents
- Record (as-built) documents
- Quality assurance documents
- Project signage
- Guarantees/warranties
- Inspection documents
- Certificates of inspection
- Shop drawings and samples
- Bonds
- Distribution matrix
- Other

K. Project Control

K1. Project Quality Assurance and Control

Quality assurance and quality control procedures need to be established. Responsibility for approvals needs to be developed. Electronic media requirements should be outlined. These issues may include:

- Responsibility during design and construction
- Testing of materials and workmanship
- ISO 9000 requirements
- Submittals and shop drawing approach
- Inspection and acceptance reporting requirements
- Progress photos
- Reviewing changes and modifications
- Communication documents (e.g., Requests for Information, Requests for Qualifications)
- Commissioning tests and report
- Report and verification of hazardous materials, abatement/decommissioning.
- Lessons-learned feedback
- Other

K2. Project Cost Control

Procedures for controlling project cost need to be outlined and responsibility assigned. Electronic media requirements should be identified. These may include cost control requirements such as:

- Financial (client/regulatory)
- Capital vs. non-capital expenditures
- Report requirements
- Payment schedules and procedures
- Earned value analysis (Cash flow projections/draw down analysis)
- Cost code scheme/strategy
- Costs for each project phase
- Periodic control check estimates
- Change order management procedure, including scope control and interface with information systems
- Bid alternates, bid options and allowances
- Value Engineering
- Other



K3. Project Schedule Control

The project schedule is created to show progress and ensure that the project is completed on time. The schedule is necessary for design and construction of the building. A schedule format should be decided on at the beginning of the project. Project schedule control requirements may include:

- Milestones
- Unusual schedule considerations
- Required submissions and/or approvals
- Required documentation/responsible party
- Baseline vs. progress to date
- Long-lead or critical pacing equipment delivery
- Critical path activities
- Contingency or “float time”
- Permitting or regulatory approvals
- Activation and commissioning
- Liquidated damages/incentives
- Phasing
- Change order management
- Earned Value analysis

The owner must also identify how special project issues will be scheduled. These items may include:

- Selection, procurement, and installation of equipment
- Program occupancy
- Requirements for swing space
- Design of interior spaces (including furniture and accessory selection)
- Stages of the project that must be handled differently than the rest of the project Tie-ins, service interruptions, and road closures
- Other

K4. Risk Management

Major project risks need to be identified, quantified, and management actions taken to mitigate problems developed. Major design, construction and management risks should be documented. Pertinent elements may include:

- Expertise
- Experience
- Work load
- Teamwork orientation
- Communication
- Integration and coordination
- Availability of craft labor and construction materials
- Weather
- Differing/unforeseen/difficult site conditions
- Long-lead item delays
- Strikes
- Inflation
- Scope growth
- Availability of designers
- Critical quality issues
- Bidders
- Human error



- Cost and schedule estimates
- Timely decisions
- Team chemistry
- Insurance considerations
- Security
- Occupant disruptions
- Environmental considerations
- Dependence on other projects
- Funding availability
- Other

K5. Safety Procedures

Safety procedures and responsibilities must be identified for design consideration and construction. Safety issues to be addressed may include:

- Hazardous material handling
- Interaction with the public
- Working at elevations/fall hazards
- Evacuation plans and procedures
- Drug testing
- First aid stations
- Accident reporting and investigation
- Pre-task planning
- Safety orientation and planning (training)
- Safety incentives
- Other special or unusual safety issues

L. Project Execution Plan

L1. Project Organization

The project team should be identified including roles, responsibilities, and authority. Items to consider include:

- Core team members (stakeholders)
- Project manager assigned
- Working relationships between participants
- Communication channels
- Organizational chart
- Approval responsibilities/responsibility matrix
- Steering committee

L2. Owner Approval Requirements

All documents and requirements for owner approval should be clearly defined. These may include:

- Milestones for drawing approval by phase
- Review comments
- Bid issues
- Bid tabulations
- Construction documents (drawings, specifications, change orders, RFI's, shop drawings, etc.)
- Durations of approval cycle compatible with overall project schedule



- Contract documents and general conditions
- Purchase orders
- Historic Preservation/ Archeological
- NEPA documents
- Waivers

L3. Project Delivery Method

The methods of project design and construction delivery, including fee structure should be identified. Issues to consider include:

- Owner self-performed
- Designer and constructor qualification selection process
- Selected methods (e.g., design/build, CM at risk, competitive sealed proposal, bridging, design-bid-build)
- Contracting strategies (e.g., lump sum, cost-plus)
- Design/build scope package considerations
- Bid alternates, bid options and allowances
- Incentives/liquidated damages

L4. Design/Construction Plan and Approach

This is a documented plan identifying the specific approach to be used in designing and constructing the project. Items to consider include:

- Responsibility matrix
- Subcontracting strategy
- Work week plan/schedule
- Organizational structure
- Work Breakdown Structure (WBS)
- Construction sequencing of events
- Site logistics plan
- Safety requirements/program
- Identification of critical activities that have potential impact on facilities (i.e., existing facilities, crane usage, utility shut downs and tie-ins, testing)
- Quality assurance/quality control (QA/QC) plan
- Design and approvals sequencing of events
- Equipment procurement and staging
- Contractor meeting/reporting schedule
- Partnering or strategic alliances
- Alternative dispute resolution
- Furnishings, equipment, and built-ins responsibility
- Regulatory approvals

L5. Substantial Completion Requirements

Substantial Completion (SC) is defined as the point in time when the Government may take over the facility and receive beneficial occupancy for the purpose intended. The following may need to be addressed:

- Specific requirements for SC responsibilities developed and documented
- Warranty and permitting considerations
- Commissioning
- IT/Data/Communications system startup and testing



- Equipment/systems startup and testing
- Occupancy phasing
- Final code inspection
- Calibration
- Verification (i.e., certification, whether program or contractor)
- Documentation
- Training requirements for all systems
- Landscape requirements
- Substantial completion certificate for construction contract
- Punchlist completion plan and schedule
- Acceptance for construction contract
- Furnishings and fit-out installation
- Health and Safety inspections
- Other



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SECTION I - BASIS OF PROJECT

CATEGORY Element	LEVEL	COMMENTS
A. BUSINESS STRATEGY		
A1. Building Use	0	
A2. Business Justification	0	Business justification is based on the following documents: IC Mission Statement or Science Program Mission Statement; POR Questionnaire for Research Facilities (X2-__); POR Questionnaire for Services and Support (X2-__); and DRM Chapter 2 Design Considerations
A3. Business Plan	0	The financial information is documented in the FPAA
A4. Economic Analysis	0	Board order of magnitude project estimate is complete and noted in the FPAA. Site selection report has been completed to determine cost impacts of potential sites. The site is located in the "_____ Zone" of the NIH Master Plan. The building will be in context with its surroundings in accordance with the NIH Master Plan.
A5. Facility Requirements	0	Overall facility requirements are documented in the POR; POR Questionnaire for Research Facilities (X2-__); POR Questionnaire for Services and Support (X2-__); and Design Requirements Manual (DRM) Chapter 2 Design Considera-



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		tions
A6. Future Expansion/Alteration Considerations	0	Future expansion/alteration considerations are documented in the POR; POR Questionnaire for Research Facilities (X2-___); POR Questionnaire for Services and Support (X2-___); and DRM Chapter 2 Design Considerations
A7. Site Selection Considerations	0	Site selection considerations are documented in the Site Selection Report.....
A8. Project Objectives Statement	0	Project Objectives Statement is documented in the POR; POR Questionnaire for Research Facilities (X2-___); POR Questionnaire for Services and Support (X2-___); and DRM Chapter 2 Design Considerations
Sub Total		
B1. Reliability Philosophy	0	Reliability Philosophy is documented in Chapter 4, Volume II of the HHS Facilities Program Manual; POR
B2. Maintenance Philosophy	0	Maintenance Philosophy is documented in Chapter 4, Volume II of the HHS Facilities Program Manual; POR.....
B3. Operating Philosophy	0	Operating Philosophy is documented in Chapter 4, Volume II of the HHS Facilities Program Manual; POR



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B4. Design Philosophy	0	Design Philosophy is documented in the DRM and Master Plan.
Sub Total		
C. PROJECT REQUIREMENTS		
C1. Value Analysis Process	0	Value Analysis process is documented in the Sustainability Checklist; DRM; and POR with respect to sustainable design.....
C2. Project Design Criteria	0	Project design criteria are documented in the POR; Master Plan and DRM.....
C3. Evaluation of Existing Facilities	0Most of the existing facilities at NIH is utilized or over utilized as documented in HHS Utilization Improvement Action Plan. Condition and functional suitability of NIH facilities are found in the NIH Master Plan
C4. Scope of Work Overview	0	Scope of work overview is documented in the POR and FPAA
C5. Project Schedule	0	Project Schedule is documented in the POR and FPAA
C6. Project Cost Estimate	0	Project cost estimate is documented in the POR and FPAA
SECTION II – BASIS OF DESIGN		



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CATEGORY	LEVEL	COMMENTS
D. SITE INFORMATION		
D1. Site Layout	0	Site layout is documented in the Site Selection Report; the NIH Master Plan and POR
D2. Site Surveys	0	Site surveys are documented in the Site Selection Report; the NIH Master Plan and POR
D3. Civil/Geotechnical Information	0	Civil/Geotechnical Information is documented in NIH topographic surveys; NIH Master Plan; Chapter 3 of the DRM.....
D4. Governing Regulatory Requirements	0	
D5. Environmental Assessment	0	Results from environmental review are documented in the Environmental Check List. The results are.....
D6. Utility Sources with Supply Conditions	0	Utility Sources with Supply Conditions is documented in the Site Selection Report, POR, and Master Plan
D7. Site Life Safety Considerations	0	Site life safety considerations are documented in the Site Selection Report; the NIH Master Plan and POR
D8. Special Water and Waste Treatment Requirements	0	Special Water and Waste Treatment Requirements for containment and vivarium is documented in the NIH DRM
Sub Total		



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E. BUILDING PROGRAMMING		
E1. Program Statement	0	
E2. Building Summary Space List	0	
E3. Overall Adjacency Diagrams	0	
E4. Stacking Diagrams	0	
E5. Growth and Phased Development	0	
E6. Circulation and Open Space Requirements	0	
E7. Functional Relationship Diagrams/Room by Rm.	0	
E8. Loading/Unloading/Storage Facilities Requirements	0	Documented in the DRM.....
E9. Transportation Requirements	0	Documented in Chapter 4 - Architecture of the DRM.....
E10. Building Finishes	0	Documented in Chapter 4 - Architecture of the DRM.....
E11. Room Data Sheets	0	In lieu of Room Data Sheets; space descriptions and space summary tables were used to document this definition in the POR and Chapter 2 of the DRM
E12. Furnishings, Equipment, and Built-Ins	0	Documented in the DRM Chapters 2 and 4
E13. Window Treatment	0	Documented in Chapter 4 - Architecture of the DRM.....
Sub Total		



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F. BUILDING/PROJECT DESIGN PARAMETERS		
F1. Civil/Site Design	0	Documented in the DRM Chapter 3
F2. Architectural Design	0	Documented in the DRM Chapters 2 and 4
F3. Structural Design	0	Documented in the DRM Chapter 5
F4. Mechanical Design	0	Documented in the DRM Chapters 6,7 and 8
F5. Electrical Design	0	Documented in the DRM Chapter 10
F6. Building Life Safety Requirements	0	Documented in the DRM Chapter 9
F7. Constructability Analysis	0	
F8. Technological Sophistication	0	Documented throughout the DRM
Sub Total		
G. EQUIPMENT		
G1. Equipment List	0	Documented in the DRM Chapter 2
G2. Equipment Location Drawings	0	
G3. Equipment Utility Requirements	0	
Sub Total		
SECTION III - EXECUTION APPROACH		
CATEGORY	LEVEL	COMMENTS



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Element		
H. PROCUREMENT STRATEGY		
H1. Identify Long-Lead/Critical Equip. and Materials	0	
H2. Procurement Procedures and Plans	0	Procurement procedures documented in Volume I of the HHS Facilities Program Manual Chapter 4
Sub Total		
J. DELIVERABLES		
J1. CADD/Model Requirements	0	
J2. Documentation/Deliverables	0	
Sub Total		
K. PROJECT CONTROL		
K2. Project Cost Control	0	
K3. Project Schedule Control	0	
K4. Risk Management	0	
K5. Safety Procedures	0	
Sub Total		
L. PROJECT EXECUTION PLAN		



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L1. Project Organization	0	
L2. Owner Approval Requirements	0	
L3. Project Delivery Method	0	
L4. Design/Construction Plan and Approach	0	
L5. Substantial Completion Requirements	0	



HHS Project Definition Rating Index

Project Title

PROJECT SCORE SHEET - OVERALL

Examiner Tracey Johnson - Butler

Advocate Alamelu Ramesh, P.E.

Status of Project: Pre-Design

Date: July 1, 2008

<i>Overall</i>	Score	Max	%
	Score	Score	%
Section 1 - Basis of Project Decision	37	413	9%
Section 2 - Basis of Design	143	401	36%
Section 3 - Execution Approach	26	158	16%
TOTAL	206	972	21%
PDRI TOTAL SCORE		212	
(Target = 200)			



SECTION 2-5: PLANNING AND PROGRAMMING DOCUMENTS

2-5-00	Policy
10	(Reserved)
20	Guidance and Information
30	(Reserved)

2-5-00 POLICY

This section describes HHS policies and guidelines to be followed by [NIH](#) in determining the requirements for and the development, submission, and approval of the planning and programming documents for construction projects and major improvement projects (whether they be the traditional design-bid-build or design-build facility delivery system), and for the acquisition of facilities under lease agreements. The purpose of Planning and Programming documents is to describe the required performance outcomes that are needed to design the facility.

Programming is the process of project definition where project goals are established; projects needs are determined; project facts are analyzed; and project concepts are tested all resulting in project problem statements. The programming process involves the following considerations: function, form, economy and time.

Project goals are the customers and users expectations and the programming is a cooperative process emphasizing customer/user decision-making. Project needs are the projects requirements such as space, power, utilities, etc. Project facts are site constraints, site potentials, regulations that affect the project, etc. Project concepts are functional relationships, adjacency requirements, etc. Programming is finding out what the whole problem is and is the basis for a more comprehensive solution. The whole problem covers a wide range of factors that influence design.

A. DOCUMENT DEVELOPMENT

1. The planning and programming documents should be developed to meet two distinct purposes. Initially, the documents serve as a mechanism for obtaining approval for the project and its scope, for identifying potential environmental impacts, for developing a cost estimate for inclusion in the HHS budget, and as a basis for the development of the HHS Facility Project Approval Agreement (FPAA), the [NIH Sustainability Checklist](#), and the [Project Definition Rating Index \(PDRI\)](#).
2. [Once](#) the project is approved and funds are appropriated, the [POR](#) become part of a design contract document that defines the Government's program needs to enable an Architectural/Engineering (A/E) firm to estimate design fees and negotiate a contract for the design. The boundaries established in the planning and programming documents serve as a deterrent to unnecessary modifications and increases in the scope of approved projects. Planning and programming documents also serve as the basis for a lease in the Solicitation for Offers (SFO).
3. Planning and programming documents must be approved by the [NIH Director](#) or his/her designee before design services are solicited for all construction projects, and for those major improvement projects to existing facilities involving changes in program functions, operations or facilities uses or leases. Improvement projects estimated to cost \$1,000,000 or more require planning and programming documents. Some smaller improvement projects also require documentation based on



related changes in program functions or new facilities use. All projects require environmental review and environmental reviews are not to be waived.

The OPDIVs may start A/E acquisition concurrently, provided funds are available. A/E contract award shall not be made until the final planning and programming documents are approved, and incorporated into the A/E's scope of work.

4. Planning and programming documents must also be approved when an OPDIV proposes to obtain space by leasing a facility designed and constructed to its requirements, i.e., build-lease or lease-purchase or the leasing of a structure requiring major alterations. Such projects also require environmental review.
5. When contracted out, A/E firms chosen for the planning and programming documents development should not participate directly or indirectly (as a subcontractor) in the eventual solicitation for design services to avoid an organizational or consultant conflict of interest.

B. ROLES AND RESPONSIBILITIES

1. The DAS, OFMP has overall responsibility for establishing and implementing planning and programming policy and guidelines. The Division of Planning and Construction, OFMP, is designated as the coordinating point for these activities within OS. OFMP may require the submission of final planning and programming documents as part of the HHS B&F budget process documentation.
2. The head of each OPDIV is responsible for the development of the documents for those facilities under his/her OPDIV jurisdiction, for ensuring the sufficiency of the document to meet the policy and guidelines established in this section, and for approving the final planning and programming documents. OPDIV heads are encouraged to designate an OPDIV facilities management coordinator to ensure this compliance. OPDIV heads may also re-delegate authority for compliance with environmental requirements. Planning and Programming documents must be signed off by the customer and the OPDIV Facility Director.

2-5-20 GUIDANCE AND INFORMATION

CONTENTS OF PLANNING AND PROGRAMMATIC DOCUMENT

The following is to be considered a guideline for development of the planning and programming documents. The documents should consist of and address all of the issues listed and any special requirements or features needed for the particular project involved. In addition to the following requirements, OPDIVs are free to provide any other background information and data that further explains the project and assists the A/E in the development of the design. These general requirements may be adjusted or changed to meet the requirements of the projected facility. Statutory requirements (e.g., environmental reviews) may not be omitted.



Table of Contents for PORs

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a. Background	b. Staffing and Organizational Structure
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b. Sustainable Design	h. Electrical
c. Architectural	i. Communications
d. Interior Design	j. Miscellaneous
e. Structural	i. Security
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i. Land Acquisition	i. Special Studies
ii. Design	ii. Pre-project Planning
iii. Construction	iii. Activation (Including Moving)
iv. Equipment	iv. Special Purpose Equipment

¹ NIH expanded the Site Category to be consistent with HHS Site Selection Category and reflect the findings of NIH Environmental Review process.



	v. Other
10. Schedule	
a. Design	c. Activation
b. Construction	
11. Sign-off	
a. Customer	b. OPDIV

A. THE USE OF THE NIH DESIGN REQUIREMENTS MANUAL AND OTHER NIH DOCUMENTS FOR PREPARING NIH PROGRAMS OF REQUIREMENTS

Chapter 2 Design Considerations of the NIH Design Requirements Manual (DRM) is devoted to the development of NIH Programs of Requirements (PORs) for laboratories and animal research facilities. The DRM provides a wide variety of design considerations with minor editing that can directly incorporated into the POR. The following matrix matches the various NIH documents need to complete the POR.

POR	DRM or NIH/HHS Document	Remarks
1. Introduction		
2. General Overview	NIH POR Questionnaire Research Facilities	
Background	NIH POR Questionnaire Research Facilities	
Staffing and Organizational Structure	NIH POR Questionnaire Research Facilities and Support Services	
3. Site	Site Selection Report	
Site Description	Site Selection Report	
Accessibility	Site Selection Report	
Physical Features	Site Selection Report	
Environmental Features	Site Selection Report; Environmental Checklist	
Integration with the NIH's Present and Future Plans	Site Selection Report	
Utilities	Site Selection Report	
Site Development Cost		
Environmental Review	NIH POR Questionnaire Research Facilities; Site Selection Report	
4. Design Parameters	NIH POR Questionnaire Research Facilities; Chapter 2 of DRM	
5. Space Descriptions & Occupancy Requirements	NIH POR Questionnaire Research Facilities; Chapter 2 of DRM	
6. Functional Relationships & Concepts	NIH POR Questionnaire Research Facilities; Chapter 2 of DRM	
7. Design Standards	NIH POR Questionnaire Research Facilities; Applicable Regulations, Codes & Standard	List
8. Design Criteria & Recommendations	NIH POR Questionnaire Research Facilities; DRM	List
9. Budget	NIH POR Questionnaire Research Facilities	
10. Schedule	NIH POR Questionnaire Research Facilities	



Program of Requirements Questionnaire For Research Facilities

GENERAL

The purpose of this questionnaire is to obtain information from the customer that is necessary to produce the Program of Requirements (POR).

I. Introduction

1. Where is the proposed facility located?

- | | |
|-------------------------------------------------|----------------------------------------|
| <input type="checkbox"/> Bethesda, MD | <input type="checkbox"/> Frederick, MD |
| <input type="checkbox"/> Poolesville, MD | <input type="checkbox"/> Baltimore, MD |
| <input type="checkbox"/> Research Triangle Park | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Hamilton, MT | |

2. What is the general function(s) of the proposed facility?

- Laboratory Animal Facility Clinical Research Research Support

3. Are there any unique or specialized functions that should be addressed in the POR?

Yes, List:

No

II. General Overview

A. Background

Program Mission:

4. Please provide brief mission and functional statement for the units to be housed in the proposed facility.

Existing Facilities:

5. Please provide a list of your current facilities by site location, building number, and floors occupied. Please provide the total net square feet that you currently occupy, if available.

6. How is the current space being utilized and what is its condition?



7. Will the proposed facility replace existing facilities?

Yes No

Need for the Proposed Project

8. Why do you need this facility?

New Program Program Expansion Functional Obsolescence

Facility in poor physical condition

Unique program requirements that cannot be accommodated in existing facilities.

Other

B. Staffing and Organizational Structure

Institute/Center Organizational Chart:

9. Please provide an organization chart.

Staff Summary:

10. What will be the total number of personnel assigned to the proposed facility? Please include on board staff as well as additional personnel required.

11. Please provide a list of personnel by type for each organizational unit by category (on-board or additional staff) that will be housed in the proposed facility. For example:

Laboratory of Biology

1 Laboratory Chief
2 Clerical
1 Senior Scientist

Biochemistry Section

1 Section Chief
9 Scientist
2 Lab Technicians

Cell Genetic Section

1 Section Chief
9 Scientist
4 Lab Technicians

III. Site

Site Description

12. Do you have a preferred site?



Yes, Where? _____

Environmental Mitigation Requirements

13. Will the facility generate any of the following? Check all that apply and specify the approximate quantity of hazardous material that may be generated.

Radioactive Waste _____

Chemical Waste _____

Medical/Pathological Waste _____

IV. Space and Occupancy Requirements:

Activity Analysis:

14. What are the primary activities to be performed in the proposed facility?

15. What are the secondary activities to be performed in the proposed facility?

16. Do you have any quality of work environment issues that you would like the POR to address?

17. If applicable. Do you want windows in:

Laboratories	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Offices	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Conference Rooms	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Break Rooms	<input type="checkbox"/> Yes	<input type="checkbox"/> No

It may not be possible to provide windows for each type of space due to site and physical constraints. Please list the space in order of priority that are required to have windows.

1. _____ 2. _____ 3. _____ 4. _____

Space Descriptions:

Check all the boxes below that apply:

Administration and Ancillary Space:

- Conventional Furniture
- Secured Areas
- Systems Furniture
- Other _____
- Power (High Density) Files



19. Number of private offices? _____
20. Please provide list titles of persons to be assigned to private offices.
21. Conference space required?
 - Yes No Number of Conference Room Required? _____
Number of persons to be accommodated? _____

22. Break rooms required?
 Yes Number of persons to be accommodated? _____ No

Wet Laboratories:

23. What type of science will be conducted in the proposed facility?
- | | | | |
|------------------------------------|--------------------------------------------|---------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> Biology | <input type="checkbox"/> Biochemistry | <input type="checkbox"/> Cell Biology | <input type="checkbox"/> Molecular Biology |
| <input type="checkbox"/> Pathology | <input type="checkbox"/> Organic Chemistry | <input type="checkbox"/> Physical Chemistry | <input type="checkbox"/> Anaerobic Chamber |
| <input type="checkbox"/> Fermenter | <input type="checkbox"/> Other _____ | | |

24. Please indicate the type of science that will be conducted in each section or branch, for example:

Cell Genetics Section Molecular Biology

Dry Laboratories:

25. What type and number (No.) of instrument laboratories will be utilized in the proposed facility?
- | | | | |
|----------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------|--------------------------------------|
| <input type="checkbox"/> Confocal Microscope, No. ___ | <input type="checkbox"/> Electron Microscope, No. ___ | | |
| <input type="checkbox"/> Electrophysiology/ Biophysics, No ___ | <input type="checkbox"/> Electron Spin Resonance Spectroscopy, No ___ | | |
| <input type="checkbox"/> Flow Cytometry, No ___ | <input type="checkbox"/> Laser, No. ___ | <input type="checkbox"/> Mass Spectrometry, No ___ | |
| <input type="checkbox"/> NMR, No. ___ | <input type="checkbox"/> X-ray Crystallography, No. ___ | <input type="checkbox"/> Robotics, No. ___ | <input type="checkbox"/> Other _____ |

26. Are the instrument labs existing or proposed?

Existing Proposed

27. If you have an existing instrument lab do you propose to replace the existing instrument and equipment as a result of the proposed project?

Yes No

28. Are there any special requirements for the instrument labs?
- _____
- _____



Laboratory Support:

29. What type and number (No.) of shared laboratory support space will be required in the proposed facility?

- Autoclave, No. ____ Cold Room, No. ____ Warm Room, No. ____ Computer Area, No. ____
- Computer Terminal Area, No. ____ Working Darkroom, No. ____
- Developing Darkroom, No. ____ Fluorescent Scope/Imaging Room, No. ____
- Freestanding Equipment Area, No. ____ Glass Wash Area, No. ____
- High Bench Lab Support Room, No. ____ Low Bench Lab Support Room, No. ____
- Radioactive Work Area, No. ____ Standard Ice Support Room, No. ____
- Storage Room, No. ____ Tissue Culture Lab, No. ____
- Other _____

30. What type and what quantity of equipment is to be housed in the Freestanding Equipment Area?

31. Are you using a main frame or local area network (LAN)?

- Main Frame LAN

32. Are there any special requirements for lab support space?

Vivarium:

33. Will a vivarium be required for the proposed project?

- Yes No

34. What species of animals will be housed in the facility?

- Mice Rats Hamsters Guinea Pigs Rabbits Aquatics Reptiles Birds
- Insects Cats Dogs Non-human Primates (Type) _____
- Farm Animals (Type) _____ Other _____

35. Please provide the number of animals, by species.

36. What type of space is required to support vivarium activities?



- Necropsy Surgery Procedure Room Cage wash Quarantine Area
- Sterilizer Room Isolation Locker Rooms Dedicated Loading Dock
- Feed and Bedding Storage X-ray Other _____

37. Are there any special requirements for the vivarium?

38. What bio-safety levels should be considered?
 BSL-2 BSL-3 BSL-4

Miscellaneous:

39. What other programmatic space is required for the proposed facility?

V. Functional Relationships:

40. What spaces are required to be adjacent to each other?

41. What spaces are required to be in close proximity to each other?

VI. Design Standards: Design standards are requirements placed on the design such as codes, regulations, safety standards etc.

42. Are there any design standards that are particular to the research that is to be conducted in the proposed facility?
 Yes _____ No

VII. Design Criteria and Recommendations:

43. Are there any design recommendations that you want ORF to consider in the design of the proposed facility?

44. Will a central nitrogen system be required? Yes No

NOTE: The following piped services will be provided to each module: potable cold and hot water, hot and cold industrial water, reverse osmosis water, waste, compressed air, CO₂, natural gas, and vacuum.



Hazards in Biomedical Laboratories:

45. What bio-safety levels should be considered?

- BSL-2 BSL 2/3 BSL-3 BSL-4

46. Please list biohazards that will be or anticipated to be used in the laboratories (Refer to the latest edition of CDC/NIH "Biosafety in Microbiological and Biomedical Laboratories)

BSL-2 Blood borne Pathogens, Indigenous moderate risk agents (e.g. Hepatitis B Virus, Salmonellae, Toxoplasma spp.). Please specify _____

BSL-3 Indigenous or exotic agents with a potential for respiratory transmission and which may cause serious and potentially, lethal infection (e.g. Mycobacterium Tuberculosis, St. Louis Encephalitis Virus). Please specify _____

BSL-4 Dangerous and exotic agents which pose a high individual risk of life-threatening disease, which may be transmitted via the aerosol route, and for which there is no available vaccine or therapy. Please Specify _____

- Recombinant DNA.

47. Please check hazardous chemical materials that will be used or anticipated to be used in the laboratories: (Refer to Aldrich Catalog of Chemicals or the Merck Index)

- Carcinogens Compressed Gases Corrosives
- Explosives Flammables Irritants
- Lacrimators Mutagens Oxidizers
- Stench Toxins

Please list specific chemicals of particular concern or used in significant volume.

48. Please list radioactive materials that will be used or anticipated to be used in the laboratories: (Refer to "General requirements for NIH Laboratories, Radiation Safety Branch, DS, NIH")

Low energy \exists (e.g. ^3H , ^{14}C , ^{35}S). Please list:

High energy \exists (e.g. ^{32}P , ^{90}Y). Please list:

Low energy ((e.g. ^{125}I). Please list:



Other ((e.g. ^{131}I , $^{99\text{m}}\text{Tc}$). Please list:

VIII. Budget:

49. What is the budget for the proposed facility? \$_____

XI. Schedule:

50. When do you want the proposed facility completed? _____



Program of Requirements Questionnaire For Non-Research Facilities

GENERAL

The purpose of this questionnaire is to obtain information from the customer that is necessary to produce the Program of Requirements (PRO).

I. Introduction

1. Where is the proposed facility located?

- | | | | |
|-----------------------------------------------------|------------------------------------------|----------------------------------------|----------------------------------------|
| <input type="checkbox"/> Bethesda, MD | <input type="checkbox"/> Poolesville, MD | <input type="checkbox"/> Frederick, MD | <input type="checkbox"/> Baltimore, MD |
| <input type="checkbox"/> Research Triangle Park, NC | <input type="checkbox"/> New Iberia, LA | <input type="checkbox"/> Hamilton, MT | <input type="checkbox"/> Other _____ |

2. What is the general function(s) of the proposed facility?

- | | | | |
|--------------------------------------------|---------------------------------------|--------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> Administration | <input type="checkbox"/> Cafeteria | <input type="checkbox"/> Conference Center | <input type="checkbox"/> Fitness Center |
| <input type="checkbox"/> Mail Facility | <input type="checkbox"/> Child Care | <input type="checkbox"/> Printing | <input type="checkbox"/> Library |
| <input type="checkbox"/> Logistics | <input type="checkbox"/> Public Works | <input type="checkbox"/> Security | <input type="checkbox"/> Emergency Response |
| <input type="checkbox"/> Parking Structure | <input type="checkbox"/> Other _____ | | |

3. Are there any unique or specialized functions that should be addressed in the POR?

Yes, list:

II. General Overview:

A. Background:

Program Mission:

4. Please provide brief mission and functional statement for the units to be housed in the proposed facility.

Existing Facilities:

5. Please provide a list of your current facilities by site location, building number, and floors occupied. Please provide the total net area that you currently occupy, if available.

6. How is the current space being utilized and what is its condition?

7. Will the proposed facility replace existing facilities?

- Yes No



Need for the Proposed Project:

8. Why do you need this facility?

- New Program
- Facility in poor physical condition
- Program Expansion
- Unique requirements that cannot be accommodated in existing facilities elsewhere
- Functional Obsolescence
- Other _____

B. Staffing and Organizational Structure:

Institute/Center Organization Chart:

9. Please provide an organization chart.

Staff Summary:

- 10. What will be the total number of personnel assigned to the proposed facility? Please include on board staff as well as additional personnel required.
- 11. Please provide a list of personnel by type for each organizational unit by category (on-board or additional) that will be housed in the proposed facility.

III. Site:

Site Description:

- 12. Do you have a preferred site?
 Yes; Where? _____

Environmental Mitigation Requirements:

- 13. Will the facility generate any of the following? Check all that apply and specify the approximate quantity of hazardous material that may be generated.
- Radioactive Waste _____
- Chemical Waste _____
- Medical Pathological Waste _____

IV. Activities:

- 14. What are the primary activities to be performed in the proposed facility?
-
-
-
-
-



15. What are the secondary activities to be performed in the proposed facility?

V. Space Description

Administration:

16. Administration:

- Conventional Systems Furniture Power (High Density) Files
- Secured Areas Other _____

17. Please provide the number of personnel by the following categories:

- Executives _____ Managers/Supervisors _____
- Professionals _____ Technical/Clerical _____

18. Number of private offices? _____

19. Please provide list of titles to be assigned to private offices.

20. Conference Space Required?

- Yes Number of Conference Rooms required _____ Number of persons to be accommodated _____
- No

21. Break rooms required?

- Yes Number of persons to be accommodated _____
- No

22. Do you prefer centralized copy centers?

- Yes No

22a. Do you prefer?

- Central Mail Room Central Mailbox Cluster Dispersed Mailbox Clusters

Cafeteria

23. How many persons will be served in one setting? _____

24. How many meals are to be prepared in 1 hour? _____



25. What type of kitchen equipment is proposed for the facility?

26. Please provide equipment catalog cuts if available.

Library

27. How many volumes are in your library collection? _____

Conference Center

28. Please fill out the following table

Space Name	# of Spaces	# of Persons
Conference Room(s)	_____	_____
Lecture Hall(s)	_____	_____
Auditorium(s)	_____	_____

29. What type of activities are proposed for the facility?

- Aerobic
- Dance
- Weight Lifting
- Defensive Arts
- Other _____

30. How many people can participate in a session (i.e. class capacity/session).

Aerobic	_____	Dance	_____	Weight Lifting	_____
Defensive Arts	_____	Other	_____		

Child & Infant Care

- 31. How many infants to be cared for in the proposed facility? _____
- 32. How many toddlers to be cared for in the proposed facility? _____
- 33. How many pre-school age children to be cared for in the proposed facility? _____
- 34. How many school age children to be cared for in the proposed facility? _____

Printing

- 35. What is the volume of printing that is anticipated for the facility? _____
- 36. Do you require storage for large rolls of paper? _____
- 37. Please provide a copy of catalogue cuts for printers, copiers, binders, and other printing equipment if available.



Logistics

Warehouse

38. What type of loading dock do you prefer?

- Enclosed Dock
- Flush Dock
- Open Dock

39. What type of trucks do you anticipate using the warehouse?

- Container
- Flatbed
- Pickup Truck
- Double Trailer
- Single Unit Truck
- Van
- Semi-Tractor Trailer
- Step Van
- Other _____

Self-service store

40. How many employees will the Self-Service store serve? _____

41. Please list stock and merchandise to be sold:

Vehicle Repair Garage and Wash Facility

42. What types of vehicles will be repaired in the garage?

- Trucks
- Autos
- Other _____

Public Works

43. What types of shops are proposed for the facility?

- Carpenter
- Multi-Craft
- Electrical
- Pipefitting
- Mechanical
- Sheet Metal
- Paint
- Other _____

44. What type of loading dock do you prefer to receiving and distributing supplies?

- Enclosed Dock
- Flush Dock
- Open Dock

45. What type of trucks do you anticipate using in the facility?

- Container
- Flatbed
- Pickup Truck
- Double Trailer
- Single Unit Truck
- Van
- Semi-Tractor Trailer
- Step Van
- Other _____



Emergency Response Facility

46. What type of apparatus will be parked in the facility?

- Pumper
- Ladder
- Haz-mat vehicle
- Command Vehicle
- Ambulance
- Other _____

47. What other programmatic space is required for the proposed facility?

V. Functional Relationships:

48. What spaces are required to be adjacent to each other?

49. What spaces are required to be in close proximity to each other?

VI. Unique Requirements

50. Are there any innovative features or concepts that you wish to be considered in the design and construction of your facility?

- Yes
- No

Please describe: _____

VII. Budget

51. What is the budget for the proposed facility? _____

XI. Schedule

52. When do you want the proposed facility completed? _____

53. Response to questionnaire prepared by: _____



Program of Requirements Questionnaire For Services and Support

GENERAL

The purpose of this questionnaire is to obtain information from the customer that is necessary to produce the Program of Requirements (POR).

DIVISION OF ACQUISITION SERVICES

Architecture, Engineering and Construction Contracting Branch

1. What are the procurement steps necessary for a design contract?

2. How long do you anticipate the procurement of A/E services to take?

3. What are the procurement steps necessary for a construction contract?

4. How long do you anticipate the procurement of construction services to take?

DIVISION OF PROPERTY MANAGEMENT

5. How long do you anticipate the design to take? (Number of Months)

6. How long do you anticipate the construction to take? (Number of Months)

7. Will the proposed facility require a Building Engineer's office or Facility Manager's office?
 Yes No Type _____
8. Will the proposed facility require a separate toilet, locker, shower and break area for maintenance staff?
 Yes No
9. If yes, approximate number of personnel ____
10. Will the proposed facility require maintenance storage and supply area?
 Yes No



11. Are there any other space requirements that should be considered for maintenance?

Facilities Management Section

12. Will the proposed facility require a Housekeeper's office?

Yes No

13. Will the proposed facility require a separate toilet, locker, shower and break area for housekeeping staff?

Yes No

14. If yes, approximate number of personnel ____

15. In addition to janitor's closets; will the proposed facility require a central housekeeper's storage and supply area?

Yes No

16. Are there any other space requirements that should be considered for housekeeping?

CENTER FOR INFORMATION TECHNOLOGY

Telecommunications Branch

17. Other than the normal telecommunications closets; will there be a need for space for:

Digital Switch PBX Other

DIVISION OF SUPSORT SERVICES, ORS

Mail Services Branch

18. Will the proposed facility require a central mail facility?

Yes No



- 19. Will the proposed facility require cluster mail boxes?
Yes No?
- 20. Will robot mail carts be used? Note: The use of robotic mail carts necessitates the need for at least one mail station per floor.
Yes No
- 21. Are there any other space requirements that should be considered for mail services?

DIVISION OF PUBLIC SAFETY, ORS

Crime Prevention Branch, Security

- 22. Will the proposed facility require a security office?
Yes No
- 23. Will there be a need for a security desk at the entry of the building?
Yes No
- 24. Will there be a need for CCTV?
Yes No
- 25. If the answer is yes to the question above, where should the CCTVs and monitors be located?
Exterior Interior Both
- 26. Are there any other security requirements for this facility?

DIVISION OF ENVIRONMENTAL PROTECTION

- 27. Will the facility require separate hazardous waste holding and marshalling areas for:
MPW? Yes No cal? Yes No Chemi Yes No
Radiation? Yes No
- 28. Will the facility require a compactor for general solid waste?
Yes No
- 29. Will the facility require special holding and marshalling areas for waste to be recycled?



- Yes No

30. Are there any other space requirements that should be considered for hazardous and solid waste services?

DIVISION OF LOGISTICS

Supply Branch or Shipping and Receiving Branch

31. What type of loading dock do you prefer?

- Enclosed Dock Flush Dock Open Dock

32. What type of trucks do you anticipate using the warehouse?

- Container Double Trailer Semi-Tractor Trailer
 Flatbed Single Unit Truck Step Van
 Pickup Truck Van Other _____

33. Will the proposed facility require a logistics office?

- Yes No

34. Will the proposed facility require a separate toilet, locker, shower, and break area for logistics staff?

- Yes No

35. If yes, approximate number of personnel _____



LABORATORIES

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Biology Laboratory	<u>Equipment/furniture per every two modules are as follows:</u> fume hood or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid resistant work surfaces w/shelves, refrigerator, freezer, safety shower and flammable storage cabinet (FSC).	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Biochemistry Laboratory	<u>Equipment/furniture per every two modules are as follows:</u> fume hood or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid resistant work surfaces w/shelves, refrigerator, freezer, safety shower and FSC	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide adjacent free standing equipment area for centrifuges, freezers, and vacuum pumps. Access to 4°C cold room is required. Should be in close proximity to tissue culture labs and autoclaves
Molecular Biology Laboratory	<u>Equipment/furniture per every two modules are as follows:</u> fume hood or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid resistant work surfaces w/shelves, refrigerator, freezer, safety shower and FSC. In addition provide for incubators and shakers, freezers, and dry and liquid waste storage w/plexiglas shielding for radioisotope waste.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide dark room in vicinity of Laboratory. This laboratory requires the use of a large amount of radioisotope 32P. Provide radiation work room in vicinity of laboratory.
Cell Biology Laboratory	<u>Equipment/furniture per every two modules are as follows:</u> BSC, epoxy sinks w/eyewash, drying racks, tall storage cabinet, case work with epoxy counter tops, low bench, deep floor to ceiling shelves, acid resistant work surfaces w/shelves, incubators, microscope, refrigerators and freezers, safety shower and FSC.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Should be in close proximity to autoclaves.
Electrophysiology Laboratory	<u>Equipment/furniture per every two modules are as follows:</u> Electronic racks, desk, sink, eyewash emergency shower, casework, and FSC.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Requires high pressure compress air or N ₂ . Requires very little bench space. May require special conditioning for electrical power. May also require specialized grounding.
Organic Chemistry Laboratory	<u>Equipment/furniture per every two modules are as follows:</u> fume hood/investigator, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid resistant work surfaces w/shelves, extra solvent storage, separate acid and base storage, safety shower and FSC.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide flammable storage area in the vicinity of the laboratory.
Physical Chemistry Laboratory	<u>Equipment/furniture per every two modules are as follows:</u> fume hood, epoxy sink w/eyewash, drying racks, tall storage cabinet, vacuum rack, cylinder restraints, case work with acid resistant work surfaces w/shelves, FSC, and safety shower.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide for several pieces of large equipment with special electrical and HVAC requirements. Provide for heavy floor loading and high ceiling clearance.



INSTRUMENT LABORATORIES

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Electron Microscope Laboratory Suite	Electron microscope, generator, power supply, water chiller, air compressor, and nitrogen	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide a sample preparation laboratory (biochemistry lab w/fume and hood), and dark rooms. The electron microscope must be isolated away from electromagnetic fields. The electron microscope shall be located as far as possible from elevators.
Laser Laboratory Suite	<u>Equipment/furniture per every two modules are as follows:</u> fume hood or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid resistant work surfaces w/shelves, refrigerator, freezer, safety shower and FSC	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide a sample preparation laboratory (organic chemistry lab w/fume hood).
Nuclear Magnetic Resonance Laboratory Suite	Magnet, console, terminal, and UPS	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide a sample preparation laboratory (biochemistry lab w/fume and hood), instrument room, drafting room, storage area for large liquid nitrogen and helium tanks, and computer room.
Mass Spectrometry Laboratory	Mass spectrometer, computer, and console.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide a sample preparation laboratory (chemistry lab w/fume hood)
X-Ray Crystallography Laboratory Suite	Rotating-anode generator w/area detectors, rotating-anode generator w/cameras, small molecule diffractometer & crystallization equipment. The computer room will be equipped w/2 micro processors	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	The protein purification and crystal growing room is a biochemistry laboratory.



LABORATORY SUPPORT Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Autoclave Room	Autoclave or sterilizer	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Cold Room (Chromatography)	Prefabricated unit, stainless steel wire shelves, stainless steel countertop, unistrut support, and flex-a-frame	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Equipment determines the height of the space
Warm Room	Prefabricated unit, stainless steel shelves	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Equipment determines the height of the space
Computer Area	Mainframe or microprocessor, file server, LAN equipment, monitors, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Should be centrally located
Computer Terminal Areas	Work surfaces for PCs pedestal to store personal items	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Darkroom	Photo development equipment, plastic laminate counters, shelves, roll film dryer, enlarging station, automatic developer, refrigerator, file processing sink w/chiller, silver recovery system is required	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide revolving light-tight door and safe light
Fluorescent Scope/Imaging Room	Microscopes	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Must be able to darken room, does not have to be light-tight
Free Standing Equipment Area	Freezers, centrifuges, other noise and heat generating equipment, casework w/epoxy counter tops and sink	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide supplemental cooling. Provide sound insulation between this and other spaces.
Glass Wash	Glassware washers, glassware dryers, sterilizer (autoclave), stainless steel counters w/double bowl sink, tall cabinets, overhead exhaust	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
High Bench Lab Support Room	Sink w/eye wash and high benches	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Low Bench Lab Support Room	Sink w/eye wash and low benches	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None



Radioactive Work Area	Fume hood, sink w/eye wash, emergency shower, flammable storage cabinets, and case work	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Standard Ice Support	Liquid nitrogen freezer, liquid nitrogen cylinders, wet ice machine, and dry ice box	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Tissue Culture Laboratory	BSC, epoxy sinks w/eyewash, drying racks, tall storage cabinet, case work with acid resistant work surfaces, low bench, deep floor to ceiling shelves, incubators, refrigerator, freezer, and safety shower	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Chemical Storage	Metal shelving, refrigerator, freezer, casework, epoxy counter top w/sink, and FSC	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Flammable Liquid Storage	Metal shelves, OSHA cabinets, casework, epoxy countertop w/sink	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
General Laboratory Storage	See additions	<input type="checkbox"/> Add: _____	None



LABORATORY ADMINISTRATIVE AND ANCILLARY

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Laboratory Chief's Office	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack board, and white boards	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Section Chief's Office	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack board, and white boards	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Principal Investigator's Office	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack board, and white boards	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Senior Permanent (Tenured) Scientist Office	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack board, and white boards	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Post Doctoral Fellow's Workstation	Work surfaces w/binder bins and lateral files	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Receptionist or Chief Secretary Workstation	Counter, Work surfaces w/binder bins and lateral files	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Clerical Workstation	Work surfaces w/binder bins and lateral files	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Copy Center	Copier and layout table	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Should be centrally located. Provide a Copy Center on each floor
Conference Room	Conference table, chairs, A/V equipment, white boards, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide each branch or laboratory with a conference room
Teleconference Room	Ceiling mounted video cameras, direct downward aimed document camera, projection TV monitor (front or rear projecting), control console with telephone and satellite linkage, teleconference table, chairs, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Scientific Staff Lockers, Shower, and Toilet	Lockers, benches, shower, lavatories, and water closet	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide a separate facility for each sex. Provide a scientific staff locker area for each floor.
Break Areas	Vending machines, counters, tables w/chairs, refrigerator/freezer, and microwave	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide a break area on each floor



BUILDING SUPPORT

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Building Engineer's Office	Work surfaces w/binder bins and lateral files	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Response to be made by ORF.
Lockers, Toilets, Shower, Break Area for Maintenance Staff	Lockers, benches, shower, lavatories, water closet, table, chairs, counter, refrigerator, and microwave	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide separate toilets and showers for each sex. Response to be made by ORF.
Maintenance Storage and Supply	Shelves	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Response to be made by ORF.
Housekeeper's office	Work surfaces w/binder bins and lateral files	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Response to be made by ORF.
Lockers, Toilets, Shower, Break Area for Housekeeper Staff	Lockers, benches, shower, lavatories, water closet, table, chairs, counter, refrigerator, and microwave	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide separate toilets and showers for each sex. Response to be made by ORF.
Housekeeper's Storage and Supply	Shelves	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Response to be made by ORF.
Mail Room	Work surfaces w/binder bins and lateral files, shelves, case and table, letter lock boxes, and parcel lockers	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Response to be made by DSS. Room must be secured. Must have access to loading dock
Dock Master's Office	Work surfaces w/binder bins and lateral files	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Response to be made by ORF. Must have access to loading dock
Shipping and Receiving (Loading Dock)	Dock leveler, dock shelter, dock bumpers, compactors for general waste	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Hazardous Waste Holding and Marshalling Area	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide separate holding areas for radiation waste, chemical waste, and MPW. Response to be provided by DS.



ADMINISTRATION

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Office, Executive	Executive desk, judge's chair, credenza, side chair, and small conference table with 4 chairs	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	The office will be designed to the preference of the occupant
Office, Manager/Supervisor	Desk, chair, credenza, side chair, small table with chairs, and file cabinet	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Work Station, Manager/Supervisor	Work surfaces w/binder bins, convergent work surface, lateral files, tack boards, desk chair, and side chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Office, Professional	Desk, chair, credenza, side chair, small table with chairs, and file cabinet	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Work station, Professional	Work surfaces w/binder bins, lateral files, tack boards, desk chair, and side chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Work Station, Technical/Clerical	Work surfaces w/binder bins, lateral files, tack boards, desk chair, and side chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Receptionist	Counter, work surface w/binder bins, lateral files, and secretary's chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Copy Center	Copiers, computer printers, fax machine, and layout tables	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Copy Centers shall be no larger than 10 m ² each
Conference Rooms	Conference table, chairs, A/V equipment, white boards, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Storage/File Room	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	3% of total net area
Mail Room	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Vending	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None

Note: The overall average area/person in a conventional office space is 11.2 m² and 10.6m² for systems furniture. The overall area/person for supplemental space is 2.6m². Supplemental space is conference rooms, copy centers, storage areas, etc.



CAFETERIA

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Dining	Tables and chairs. May include soiled dish carts	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Kitchen	Kitchen equipment varies based on menus and utility availability	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Includes dishwashing area
Servery	Steam tables, reach-in refrigerators, salad bar, drink dispenser, flatware and tray dispenser, glass or paper cup dispenser, cashiers stations, condiment station, dry rack shelving, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Storage	Walk-in pre-fabricated refrigerator and freezer units. Shelving and rack for dry goods and can goods storage	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None

LIBRARY

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Reading Room	Tables, chairs, study carrel, bookcases, card catalogue, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Book Stacks	Stacks	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Circulation Desk	Circulation Desk	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Work Room	Desks, chairs, layout table, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Librarian's Office	Desk, desk chair, credenza, side chairs, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Staff Lounge	Tables, chairs, vending, microwave, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Could be used as a conference room



MAIL FACILITY

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Work Room	Mail sorters, layout tables	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	The size of the work space depends on the volume of mail and equipment utilized
Security Storage	Shelves	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Lobby Reception	Counter	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Office	Desk, chair, credenza, side chair, and file cabinet	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Shipping and Receiving	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None

PRINTING

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Reception	Counter, chairs, tables	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Office	Desk, Desk chair, credenza, side chairs, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Reproduction/Copying	High volume copy machines and layout tables	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Offset Printing	Offset printers, presses, and layout tables	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Photography	Photo development equipment, counters, shelves, roll film dryer, enlarger, refrigerator, and film processing sink	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Binding	Binders and layout tables	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None



CHILD & INFANT CARE

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Toddler's Playroom w/restrooms & cot storage	Children's chairs and tables, cots, assorted toys, counters w/sink, elect. Water cooler, coat rack, and table or desk and chair for teacher. Child sized toilets and lavatories	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Nursery w/diaper change area and kitchen	Cribs, play pen, cabinets, counters w/clinical sink, and high chairs	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Pre-School Classroom w/restrooms and cot storage	Children's chairs and tables, cots, assorted toys, counters w/sink, elect. Water cooler, coat rack, and table or desk and chair for teacher. Child sized toilets and lavatories	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
School Age Classroom w/restrooms	Children's chairs and tables, cots, counters w/sink, elect. Water cooler, coat rack, and table or desk and chair for teacher.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Kitchen w/storage	Refrigerator, sink, cabinets, counters, range w/oven, and microwave	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Isolation Room w/restroom	Bed and chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Office	Desk, desk chair, credenza, side chairs, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Waiting area	Chairs, end tables, magazine racks	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Reception area	Counter and chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Staff Lounge	Chairs, end tables, magazine racks	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
General Storage	Shelves	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
All Purpose Room	Storage for large assorted toys, tables, and chairs	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Exterior Storage	Storage for playground equipment	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Outside play area	Fenced tot lots	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None



LOGISTICS

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Warehouse (General)	Pallets, shelves, and racks	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide charging station for fork lifts
Animal Food and Bedding	Pallets, shelves, and racks	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Chemical Storage	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Radiation Storage	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Self Storage Store	Counters, display counters, merchandise cases, and shelves	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Motor Pool Office/Dispatcher	Desk, desk chair, credenza, side chairs, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Vehicle Repair Garage	Hydraulic lifts, diagnostic machines, compressed air, tool cabinets, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide space to recover used motor oil and solvents
Vehicle Wash Facility	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Administrative (Office)	Work surfaces w/binder bins, lateral files, tack boards, desk chair, and side chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None



PUBLIC WORKS

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Carpenter's Shop	Circular saw, radial arm saw, band saw, jig saw, laminate machine, drill press, planner, lathe, work bench, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Electrical Shop	Test bench, overhead crane, work benches, tool carts, cable storage, hydraulic pipe bender, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Mechanical Shop	Requires large work area for laboratory equipment, overhead crane, etc	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Multi-Craft Shop	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Paint Shop	Paint spray booth, layout area for painting large items	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Pipefitting Shop	Pipe threaders, fabrication, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Sheet Metal Shop	Drill press, welding booth, fabrication, sheet metal cutters, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Materials Storage	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Material Distribution	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Material Receiving	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Roads and Grounds Storage	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Heavy Equipment Garage	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Equipment Repair	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Classroom/Training	Tables and chairs, A/V Equipment	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Staff Lockers	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	Provide toilets and showers
Lunch Room Lounge	Tables, chairs, vending, microwave, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Administrative (Office)	Work Surfaces w/binder bins, lateral files, tack boards, desk chair, and side chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None



SECURITY

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Command Center	Console	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Parking/Traffic Desk	Counter, workstations w/work surfaces w/binder bins, lateral files, tack boards, and desk chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Staff Lockers	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Staff Lounge	Tables, chairs, vending, microwave, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Briefing/Classroom	Tables, chairs, A/V Equipment	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Records	File Cabinets	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Garage	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Property Room	Shelves and lockable storage	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Arsenal	Secure cabinets and gun racks	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Interrogation	Desk and chairs	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Holding	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Administrative (Office)	Workstations w/work surfaces w/binder bins, lateral files, tack boards, and desk chair	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None



EMERGENCY RESPONSE FACILITY

Space Name	Equipment/Furniture and Requirements	Additions/Deletions to Equipment List	Remarks
Apparatus Room	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Company Quarters/Dormitory	Beds, wardrobes, chairs, tables, etc.	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Staff Lockers	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Fire Clothing	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Communications	Console	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Kitchen/Dining	TBD	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None
Classroom	Tables, chairs, and A/V equipment	<input type="checkbox"/> Add: _____ <input type="checkbox"/> Delete: _____	None





NIH Shell Program of Requirements



1. Introduction

Use the Buildings and Facilities Plan (B&F) or Congressional appropriations language as a basis for the introduction:

2. General Overview

A. Background

Need for the proposed project

A1. Program Mission

The program mission statement is provided by the IC

A2. Existing Facilities

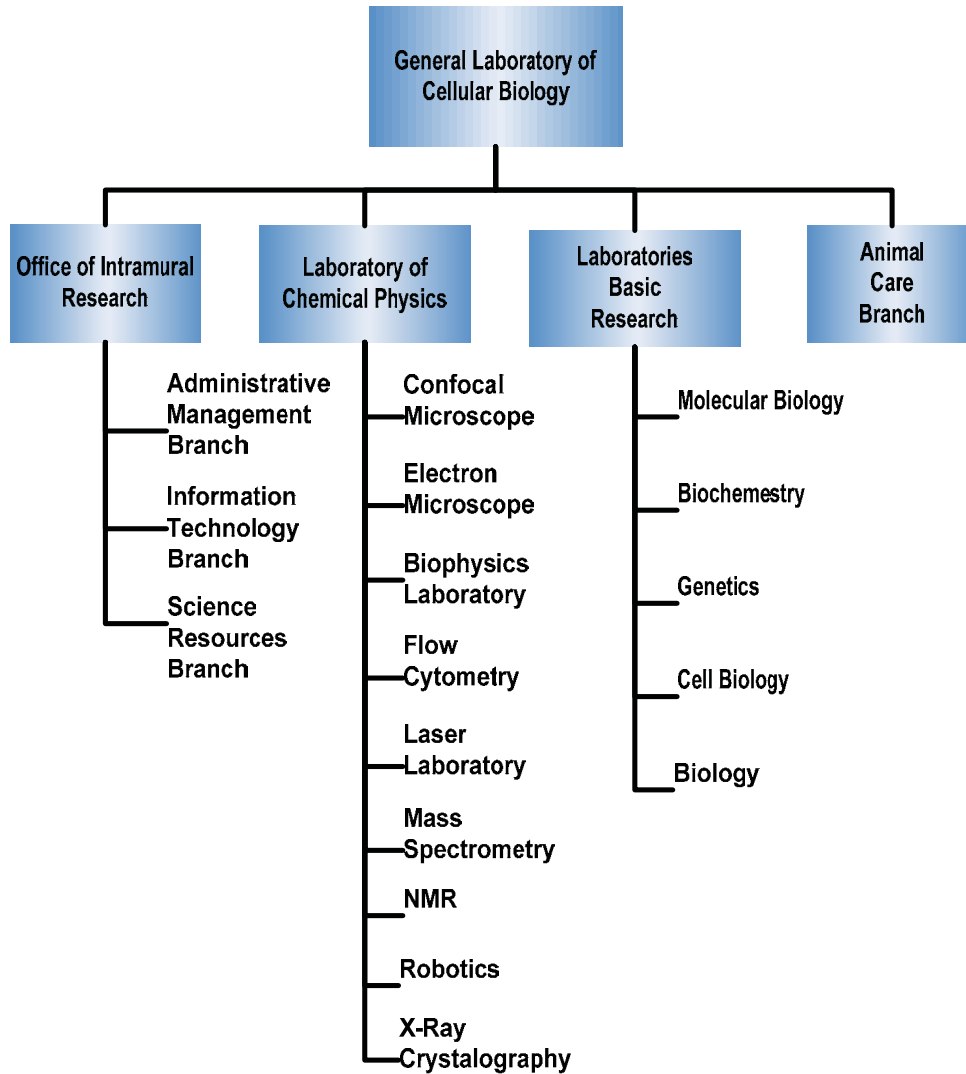
Information on existing facilities can be obtained from several sources such as the NIH Master Plan, facility assessment reports, the Division of Facilities Planning, Division of Property Management and the IC(s).

A3. Need for the Proposed Project

The need of the proposed project must be consistent with the B&F write-up and the Congressional appropriation language.

B. Staffing and Organizational Structure

B1. Task Force Organization Chart (The organization chart is provided by the IC)



(This organization chart is an example only)



B2. Staff Summary (This information is provided by the IC. The information below is an example only.)

Office of Intramural Research

1 Scientific Director
1 Deputy Director
1 Personal Secretary
1 Receptionist
4 Clerical

9 Scientific Personnel
18 Post Doctorate Fellows

Administrative Management Branch

1 Chief Administrative Officer
4 Administrative Officers
8 Administrative Technicians
2 Clerical

Laboratory of Genetics

1 Laboratory Chief
2 Clerical
1 Senior Scientist

Information Technology Branch

1 Chief Information Officer
4 Information Officers
8 Information Technicians
2 Clerical

Molecular Immunology Section

1 Section Chief
1 Senior Scientist
13 Scientific Personnel
26 Post Doctorate Fellows

Science Resources Branch

1 Chief Acquisition Officer
4 Contracting Officers
8 Contract Specialist
2 Clerical

Molecular Genetics Section

1 Section Chief
12 Scientific Personnel
24 Post Doctorate Fellows

Laboratory of Molecular Biology

1 Laboratory Chief
2 Clerical
1 Senior Scientist

Laboratory of Cell Biology

1 Laboratory Chief
2 Clerical
1 Senior Scientist

Biochemical Genetic Section

1 Section Chief
9 Scientific Personnel
18 Post Doctorate Fellows

Molecular Cell Genetic Section

1 Section Chief
1 Senior Scientist
16 Scientific Personnel
32 Post Doctorate Fellows

Molecular Modeling Section

1 Section Chief
9 Scientific Personnel
18 Post Doctorate Fellows

Laboratory of Biochemistry

1 Laboratory Chief
2 Clerical
1 Senior Scientist

Microbial Genetics and Biochemistry Section

1 Section Chief
9 Scientific Personnel
18 Post Doctorate Fellows

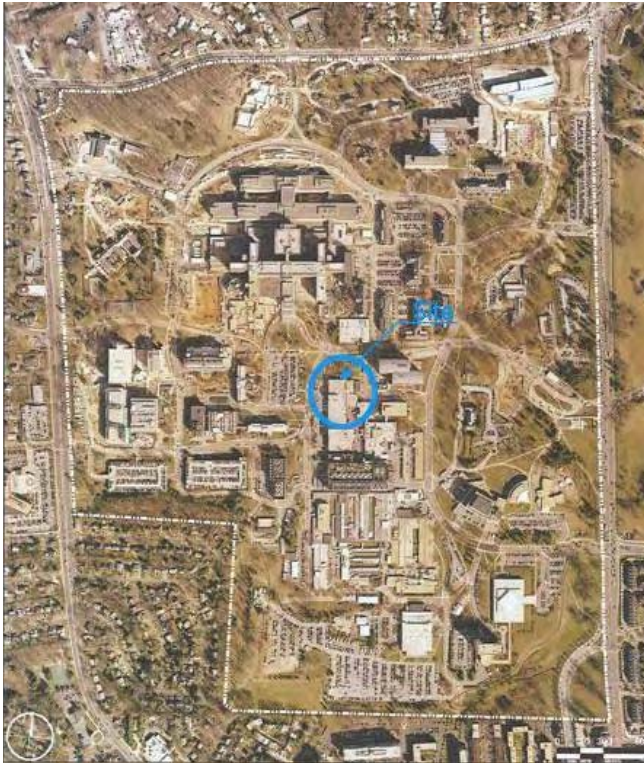
Gene Structure and Regulation Section

1 Section Chief

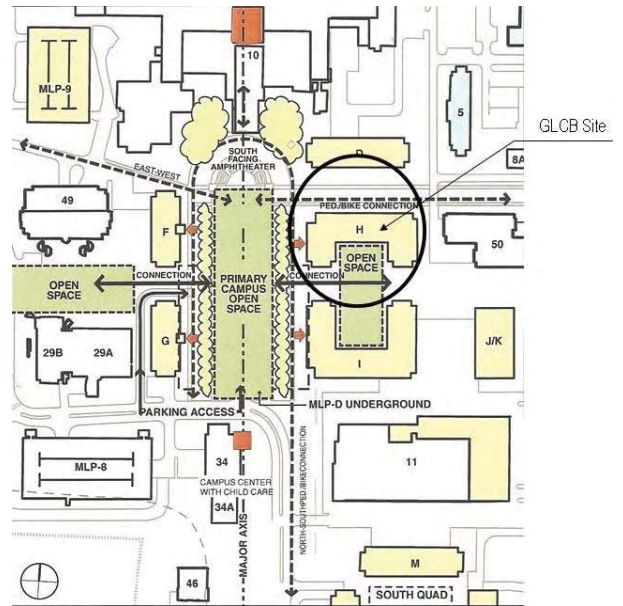
3. Site

A. Site Description

This information from the Site Selection Report and the images are scanned from the NIH Master Plan



NIH Bethesda Campus



Center Mall Section



A1. Site Size and Condition

This information is copied from the Site Selection Report.

B. Accessibility

This information is copied from the Site Selection Report.

C. Physical Features

This information is copied from the Site Selection Report.

D. Environmental Features

This information is copied from the Site Selection Report.

E. Integration with the NIH's Present and Future Plans

This information is copied from the Site Selection Report.

F. Utilities

This information is copied from the Site Selection Report.

G. Site Development Cost

This information is copied from the Site Selection Report.

H. Environmental Review

H1. Natural Resources

This information is provided by the Environmental Checklist.

H2. Pollution

This information is provided by the Environmental Checklist.



H3. Population

This information is provided by the Environmental Checklist.

H4. Human Services

This information is provided by the Environmental Checklist.

H5. Human Values

This information is provided by the Environmental Checklist.

4. Design Parameters

A. Laboratories

A1. Laboratory Activity Analysis

Copy Section 2-3-10-B of the DRM, edit as necessary in the imperative mood.

A2. Design Goals and Objectives

Copy Section 2-3-10-C of the DRM, edit as necessary in the imperative mood.

A2.1 Quality of Life

Copy Section 2-3-10-C.1 of the DRM, edit as necessary in the imperative mood.

A2.2 Natural Light:

Copy Section 2-3-10-C.2 of the DRM, edit as necessary in the imperative mood.

A2.3 Lighting:

Copy Section 2-3-10-C.3 of the DRM, edit as necessary in the imperative mood.



A2.4 Noise:

Copy Section 2-3-10-C.4 of the DRM, edit as necessary in the imperative mood.

A2.5 Vibration:

Copy Section 2-3-10-C.5 of the DRM, edit as necessary in the imperative mood.

A2.6 Interaction:

Copy Section 2-3-10-C.6 of the DRM, edit as necessary in the imperative mood.

A2.7 Efficiency:

Copy Section 2-3-10-C.7 of the DRM, edit as necessary in the imperative mood.

A2.8 Graphics/Signage:

Copy Section 2-3-10-C.8 of the DRM, edit as necessary in the imperative mood.

A3. General Laboratory Planning Parameters

Copy Section 2-3-10-D of the DRM, edit as necessary in the imperative mood.

A3.1 Modular Space Planning:

Copy Section 2-3-10-D.1 of the DRM, edit as necessary in the imperative mood.

A3.2 Flexibility:

Copy Section 2-3-10-D.2 of the DRM, edit as necessary in the imperative mood.

A3.3 Capability:

Copy Section 2-3-10-D.3 of the DRM, edit as necessary in the imperative mood.

A3.4 Expansion:

Copy Section 2-3-10-D.4 of the DRM, edit as necessary in the imperative mood.



A3.5 Planning Module for Laboratories:

Copy Section 2-3-10-D.5 and the graphic of the DRM, edit as necessary in the imperative mood.

A4 Distribution of Services to the Laboratory Module

Copy Section 2-3-10-E of the DRM, edit as necessary in the imperative mood.

A4.1 Systems Access, Organized and Integrated Right-of-Way:

Copy Section 2-3-10-E.1 of the DRM, edit as necessary in the imperative mood.

A4.2 Connection of Utilities to Laboratory Modules:

Copy Section 2-3-10-E.2 of the DRM, edit as necessary in the imperative mood.

A5. Structural Columns:

Copy Section 2-3-10-E.3 of the DRM, edit as necessary in the imperative mood.

B. Containment Laboratories

B1. Containment Laboratory Activity Analysis

Copy Section 2-5-10-A of the DRM, edit as necessary in the imperative mood.

B2. BSL3 Laboratory Design Considerations

Copy Section 2-5-10-B of the DRM, edit as necessary in the imperative mood.

C. Vivarium

C1. Vivarium Activity Analysis

Copy Section 2-4-10-B of the DRM, edit as necessary in the imperative mood.



C2. Design Goals and Objectives

Copy Section 2-4-10-C of the DRM, edit as necessary in the imperative mood

C2.1 Quality of Life and Environmental Considerations

Copy Section 2-4-10-C.1 of the DRM, edit as necessary in the imperative mood.

C2.2 Animal Well Being

Copy Section 2-4-10-C.2 of the DRM, edit as necessary in the imperative mood.

C2.3 Employee Well Being

Copy Section 2-4-10-C.3 of the DRM, edit as necessary in the imperative mood.

C2.4 Graphics/Signage

Copy Section 2-4-10-C.4 of the DRM, edit as necessary in the imperative mood

C2.5 Other Amenities

Copy Section 2-4-10-C.5 of the DRM, edit as necessary in the imperative mood

C2.6 Natural Light

Copy Section 2-4-10-C.6 of the DRM, edit as necessary in the imperative mood

C2.7 Lighting and Controls

Copy Section 2-4-10-C.7 of the DRM, edit as necessary in the imperative mood.

C2.8 Noise

Copy Section 2-4-10-C.8 of the DRM, edit as necessary in the imperative mood.

C2.9 Vibration Stability

Copy Section 2-4-10-C.9 of the DRM, edit as necessary in the imperative mood.



C3 Animal Research Facility Planning Parameters

C3.1 Ratio of Holding Rooms to Procedure Rooms

Copy Section 2-4-10-D.1 of the DRM, edit as necessary in the imperative mood.

C3.2 Animal Research Facility Support Space

Copy Section 2-4-10-D.2 of the DRM, edit as necessary in the imperative mood.

C3.3 Office and Administrative Space

Copy Section 2-4-10-D.3 of the DRM, edit as necessary in the imperative mood.

C3.4 Flexibility and Adaptability

Copy Section 2-4-10-D.4 of the DRM, edit as necessary in the imperative mood.

C3.5 Expansion/Renovation Considerations

Copy Section 2-4-10-D.4 of the DRM, edit as necessary in the imperative mood.

C3.6 Planning Module

Copy Section 2-4-10-D.6 of the DRM, edit as necessary in the imperative mood.

C4. Services and Systems

Copy Section 2-4-10-E of the DRM, edit as necessary in the imperative mood.

C4.1 Connection of Utilities to Animal Facility Space

Copy Section 2-4-10-E.1 of the DRM, edit as necessary in the imperative mood.

C4.2 Services and Systems Distribution Concepts

Copy Section 2-4-10-E.2 of the DRM, edit as necessary in the imperative mood.



C4.3 Special Considerations for the Connection of Utilities to Animal Facility Space

Copy Section 2-4-10-E.3 of the DRM, edit as necessary in the imperative mood.

5. Space Descriptions and Occupancy Requirements

A. Laboratories

A1. Biomedical Laboratories

Copy all applicable space descriptions in Section 2-3-10-G.1 of the DRM and edit as necessary in the imperative mood.

A2. Chemistry Laboratories

Copy all applicable space descriptions in Section 2-3-10-G.2 of the DRM and edit as necessary in the imperative mood.

A3. Instrument and Special Function Laboratories

Copy all applicable space descriptions in Section 2-3-10-G.3 of the DRM and edit as necessary in the imperative mood.

A4. Laboratory Support

Copy all applicable space descriptions in Section 2-3-10-G.4 of the DRM and edit as necessary in the imperative mood.

A5. Administrative, Interaction and Ancillary Space

Copy all applicable space descriptions in Section 2-3-10-G.5 of the DRM and edit as necessary in the imperative mood.

B. Containment Laboratories

Copy all applicable space descriptions in Section 2-5-10-C of the DRM and edit as necessary in the imperative mood.



C. Vivarium

Copy Section 2-4-10-G of the DRM and edit as necessary in the imperative mood.

C1. Animal Housing and Holding Areas

Copy all applicable space descriptions in Section 2-4-10-G.1 of the DRM and edit as necessary in the imperative mood.

C2 Animal Treatment and Diagnostic/Pathology Laboratory

Copy all applicable space descriptions in Section 2-4-10-G.2 of the DRM and edit as necessary in the imperative mood.

C3 Animal Surgery

Copy all applicable space descriptions in Section 2-4-10-G.3 of the DRM and edit as necessary in the imperative mood.

C4. Pharmacy

Copy all applicable space descriptions in Section 2-4-10-G.4 of the DRM and edit as necessary in the imperative mood.

C5 Radiographic Suite and Irradiator Room

Copy all applicable space descriptions in Section 2-4-10-G.5 of the DRM and edit as necessary in the imperative mood.

C6. Decontamination and Receiving

Copy all applicable space descriptions in Section 2-4-10-G.6 of the DRM and edit as necessary in the imperative mood.

C7. Cage Wash

Copy all applicable space descriptions in Section 2-4-10-G.7 of the DRM and edit as necessary in the imperative mood.



C8. Animal Research Facility Support

Copy all applicable space descriptions in Section 2-4-10-G.8 of the DRM and edit as necessary in the imperative mood.

C9. Animal Caretaker

Copy all applicable space descriptions in Section 2-4-10-G.9 of the DRM and edit as necessary in the imperative mood.

C10 Offices & Miscellaneous Space

Copy all applicable space descriptions in Section 2-4-10-G.1 of the DRM and edit as necessary in the imperative mood.

D. Building Operational Areas

Copy all applicable space descriptions in Section 2-3-10-G.6 of the DRM and edit as necessary in the imperative mood.

D1. Materials Management

Copy all applicable space descriptions in Section 2-3-10-G.7 of the DRM and edit as necessary in the imperative mood.



E. Space Summary Tables (Example only – use tables after each group of space descriptions)

E1. Office of Intramural Research

Space Name	Area/Person (m ²)	Number Persons	Net Area (m ²)	Equipment/Furniture	Height (mm)
Scientific Director	18.5	1	18.5	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400
Deputy Director	15	1	15	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400
Personal Secretary	12	1	12	Work surfaces w/binder bins, convergent work surfaces, lateral files,	2 400
Receptionist	8	1	8	Counter, work surfaces w/binder bins and lateral files.	2 400
Clerical	8	4	32	Work surfaces w/binder bins and lateral files.	2 400
Conference Room	1.86	40	74.4	Conference table, chairs A/V equipment, white boards, etc.	2 400
Sub Total		8	159.9		
Administrative Management Branch					
Chief Administrative Officer	15	1	15	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400
Administrative Officers	12	4	48	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400
Administrative technicians	10	8	80	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400
Clerical	8	2	16	Work surfaces w/binder bins and lateral files.	2 400
Conference Room	1.86	20	37.2	Conference table, chairs A/V equipment, white boards, etc.	2 400
Sub Total		15	196.2		



Space Name	Area/Person (m ²)	Number Persons	Net Area (m ²)	Equipment/Furniture	Height (mm)	Remarks
Information Technology Branch						
Chief Information Officer	15	1	15	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Information Officers	12	4	48	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Information Technicians	10	8	80	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Clerical	8	2	16	Work surfaces w/binder bins and lateral files.	2 400	
Conference Room	1.86	20	37.2	Conference table, chairs A/V equipment, white boards, etc.	2 400	
Sub Total		15	196.2			
Science Resources Branch						
Chief Acquisition Officer	15	1	15	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Contracting Officer	12	4	48	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Contract Specialist	10	8	80	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Clerical	8	2	16	Work surfaces w/binder bins and lateral files.	2 400	
Conference Room	1.86	20	37.2	Conference table, chairs A/V equipment, white boards, etc.	2 400	Conference Room
Sub Total		15	196.2			
Building Operations and Amenities						
Facilities Manager	12	1	12	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Clerical	8	1	8	Work surfaces w/binder bins and lateral files.	2 400	
Logistics Office	12	1	12	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Clerical	8	1	8	Work surfaces w/binder bins and lateral files.	2 400	
Maintenance Staff	0.3	8	2.4	Lockers and Benches.	2 400	
House Keeping Supervisor	12	1	12	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	



Space Name						
House Keeping Staff	0.3	8	2.4			
Break Area			33			
Cyber Café	1.7	40	68	Tables Chairs Concession Stand		
Mailbox				Built-in mail box units		
Security				Security Desk		
Sub Total			157.8			
Summary						
Scientific Director's Suite		8	159.90			
Administrative Management Branch		15	196.20			
Information Technology Branch		15	196.20			
Total		53	906.30			



E2. Laboratory of Molecular Biology

Space Name	Area/ Person (m ²)	Number Persons	Net Area (m ²)	Equipment/Furniture	Height (mm)	Remarks
Laboratory Chief	15	1	15	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Clerical	8	2	16	Work surfaces w/binder bins and lateral files.	2 400	
Senior Scientist	12	1	12	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 400	
Conference Room	1.86	30*	55.8	Conference table, chairs A/V equipment, white boards, etc.		* Not FTE driven.
Break Room			33	Vending machines, counters, tables w/chairs under the counter refrigerator, recycle bins, and microwave oven w/ canopy exhaust hood.		
Sub Total		4	131.8			
Biochemical Genetics Section (Biochemistry)[10 Lab Modules]						
Section Chief	12	1	12	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 850	
Scientific Personnel	16.5	10	165	<u>Equipment/furniture:</u> fume hood and/or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid proof work surfaces w/shelves, refrigerator, freezer, under-counter refrigerators, flammable liquid storage cabinet, bench top centrifuges, desk and chair, recycle bins and safety shower.	2 850	
Post Doctorate Fellows	8.25	18	148.5	"	2 850	
Free Standing Equipment Room			22.44	Centrifuges, freezers, and vacuum pumps	2 800	
Standard Ice Support			22.44	Liquid nitrogen freezer, liquid nitrogen cylinders, wet ice machine, and dry ice box.	2 800	
Warm Room			22.44	Prefabricated unit stainless steel wire shelves, stainless steel counter top, uni-strut support, and flex-a-frame	2 800	
4 ^o C Cold Room			22.44	Prefabricated unit stainless steel wire shelves, stainless steel counter top, uni-strut support, and flex-a-frame	2 850	
Computer Terminal Area			22.44	Work surfaces for PCs	2 850	



Space Name	Area/ Person (m ²)	Number Persons	Net Area (m ²)	Equipment/Furniture	Height (mm)	Remarks
General Storage			44.88		2 850	
Laboratory of Chemical Physics – Molecular Biology Branch –Section 1 [6 Modules]						
Electron Microscope Suite						
Electron Microscope Room			22.44	<u>Equipment:</u> electron microscope, generator, power supply, water chiller, air compressor and nitrogen.		Ante Room: water chiller, air compressor and Nitrogen
Sample Prep Bio-chemistry lab			33.67	<u>Equipment/furniture:</u> fume hood and/or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid proof work surfaces w/shelves, refrigerator, freezer, under-counter refrigerators, flammable liquid storage cabinet, bench top centrifuges, desk and chair, recycle bins and safety shower.	2 850	
Darkroom			11.22	Photo development equipment	2 850	
Print Darkroom			11.22	Photo development equipment plastic laminate counters, shelves, roll film dryer, enlarging station, refrigerator and film processing sink w/chiller	2 850	
Graphic/Print Layout Room			11.22		2 800	
Imaging Room			11.22		2 850	
Confocal Microscope Suite						
Confocal Microscope Room			33.67	<u>Equipment:</u> confocal microscope, computers, DVDs and laser.		
Sample Prep Bio-chemistry lab			33.67	<u>Equipment/furniture:</u> fume hood and/or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid proof work surfaces w/shelves, refrigerator, freezer, under-counter refrigerators, flammable liquid storage cabinet, bench top centrifuges, desk and chair, recycle bins, and safety shower.	2 850	
Print Darkroom			11.22	Photo development equipment plastic laminate counters, shelves, roll film dryer, enlarging station, refrigerator and film processing sink w/ chiller	2 850	
Graphic/Print Layout Room			11.22		2 850	
Imaging Room			11.22		2 850	
Sub Total			684.57		2 850	



Space Name	Area/ Person (m ²)	Number Persons	Net Area (m ²)	Equipment/Furniture	Height (mm)	Remarks
Molecular Modeling Section (Molecular Biology) [10 Lab Modules]						
Section Chief	12	1	12	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards and white boards.	2 850	
Scientific Personnel	16.5	10	165	<u>Equipment/furniture:</u> fume hood and/or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid proof work surfaces w/shelves, refrigerator, freezer, flammable liquid storage cabinet, corrosive storage cabinet, desk and chair, recycle bins and safety shower. In addition, provide for incubators and shakers, freezers, and dry and liquid waste storage w/ plexiglas shielding for radioisotope waste. Space may be needed for free standing robotic instruments.	2 800	
Post Doctorate Fellows	8.25	18	148.50	"	2 850	
Darkroom			22.44	Photo development equipment, plastic laminate counters, shelves, roll film dryer, enlarging station, refrigerator and film processing sink w/ chiller.	2 850	
Radioactive Work Room			22.44	Fume hood, sink w/eyewash, emergency shower flammable storage cabinets and casework.	2 850	
High Bench Support Room			22.44	Sink w/eyewash and high benches.	2 850	
Free Standing Equipment Room			22.44	Centrifuges, freezers, and vacuum pumps	2 800	
Standard Ice Support Room			22.44	Liquid nitrogen freezer, liquid nitrogen cylinders, wet ice machine, and dry ice box.	2 850	
General Storage			44.88		2 850	
Laboratory of Chemical Physics – Molecular Biology Branch –Section 2 [6 Modules]						
Laser Laboratory Suite						
Laser Laboratory			101.01	<u>Equipment:</u> lasers, sink, bench and curtains.	2 850	With ante room
Sample Prep Organic Chemistry Lab			33.67	<u>Equipment/furniture:</u> fume hood/investigator, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with epoxy counter tops, acid proof work surfaces w/shelves, refrigerator, freezer, flammable	2 850	



Space Name	Area/ Person (m ²)	Number Persons	Net Area (m ²)	Equipment/Furniture	Height (mm)	Remarks
Biophysics Suite				liquid storage cabinet, corrosives storage cabinet, desk and chair, and safety shower		
Biophysics Laboratory			67.34	<u>Equipment/furniture:</u> electronic racks, desk, sink, eye-wash emergency shower, flammable liquid storage cabinet, radioactive storage and casework.	2 850	
Sub Total		29	684.69			
Summary						
Laboratory Chief		4	131.8			
Biochemical Genetics Section		29	684.57			
Molecular Modeling Section		29	684.69			
Total		62	1,501.06			



E7. Laboratory of Chemical Physics

NMR Suite

Magnet Room	101.01	<u>Equipment:</u> magnet, console, terminal & UPS.	4 000
Computer Room	44.88		2 850
NMR CADD Support	22.44		2 850
Sample Prep Lab	33.67	<u>Equipment/furniture:</u> fume hood or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid proof work surfaces w/shelves, refrigerator, freezer, under-counter refrigerators, flammable liquid storage cabinet, bench top centrifuges, down draft tables, desk and chair, recycle bins, and safety shower.	

Instrument Room	44.88		2 850
Cold Room	11.22		2 850

BSL3 Laboratories

BSL3 Cell Biology Lab	67.34	<u>Equipment/furniture:</u> BSC, epoxy sinks w/eyewash, drying racks, tall storage cabinet, casework with low bench, deep shelves, acid proof work surfaces, refrigerators and freezers, and flammable liquid storage cabinet.	2 850
BSL3 Biochemistry Lab	67.34	<u>Equipment/furniture:</u> fume hood and/or BSC, epoxy sink w/eyewash, drying racks, tall storage cabinet, cylinder restraints, case work with acid proof work surfaces w/shelves, refrigerator, freezer, under-counter refrigerators, flammable liquid storage cabinet, bench top centrifuges, desk and chair, recycle bins, and safety shower.	2 850
Sub Total	392.78		



E8. Animal Care Branch

Branch Chief	15	1	15	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards, and white boards.	2 400
Veterinarians	12	2	24	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards, and white boards.	2 400
Veterinarian Technicians	10	4	40	Work surfaces w/binder bins, convergent work surfaces, lateral files, tack boards, and white boards.	2 400
Clerical	8	2	16	Work surfaces w/binder bins, work surfaces, and lateral files.	2 400
Animal Caretakers		8			
Gowning Areas w/Locker, Toilet and Shower Room	0.56	34	19.04	Water closet, shower, lavatories w/mirrors, lockers, and benches.	2 400
Gowning Areas w/Locker, Toilet and Shower Room	0.56	34	19.04	Water closet, shower, lavatories w/mirrors, lockers, and benches.	2 400
Break Area			20	Vending machines, counters, tables w/chairs, refrigerator, microwave oven with exhaust hood, drinking fountain, sinks, white boards, and lounge furniture.	2 400
Conference Room	1.86	20	37.20	Conference table, chairs A/V equipment, white boards, etc.	2 400
Sub Total			190.28		



Space Name	Area/Unit	Number of Units (m ²)	Net Area	Equipment/Furniture	Height (mm)	Remarks
Animal Housing						
Animal Room (Mice)	28	10	280	Cages or racks, change station or BSC, sink, mop racks, feed barrel, bedding barrel, space for cart, and counter space	3 000	
Animal Room (Cubical Housing)	28	5	140	Cubicles or flexible film isolators	3 000	
Animal Room (Rabbits)	28	3	84	Cages or racks, change station or BSC, sink, mop racks, feed barrel, bedding barrel, space for cart, and counter space	3 000	
Procedure Room	22.68	9	204.12		3 000	
Sub Total			708.12			
Diagnostic/Pathology Laboratory						
Diagnostic Laboratory			12.96	Countertop, s/s, raised rim, w/integral sink and splash backs, casework, refrigerator or cold room, freezer, storage gas cylinders, down draft table, fume hood, and BSC.	3 000	
Necropsy			11.88	Down draft necropsy table, counter, sink, base, trimming table and wall cabinets, refrigerator, freezer, light box, and gas scavenger	3 000	
Sub Total			24.84			
Animal Surgery						
Animal Surgical Preparation Room			11.2	Procedure table, storage cabinet, counter, sink, eye-wash, w/wall cabinets, fluid-warming cabinet central gases, control substance safe, and refrigerator.	3 000	
Operating Room			18.8	Operating table, portable anesthesia machine, instrument table, suction cart, isolated power unit, major surgical light, medical gas dispenser, gas scavenging device, x-ray illuminator, special monitoring equipment, and white board.	3 000	



Space Name	Area/Unit	Number of Units (m ²)	Net Area	Equipment/Furniture	Height (mm)	Remarks
Scrub and Gown Room			8.75		3 000	
Locker Room	0.56	10	5.6	Surgeon's scrub sink, casework, and storage cabinets.	3 000	
Surgical Work and Supply Room			13.5	Full length lockers and benches	3 000	
Recovery Room			11.2	Case work, sink, instrument washer, sterilizer, and tables	3 000	
				Cages or racks, counter w/sink, medical grade oxygen source and wall cabinet, refrigerator, and gas tank storage	3 000	
Sub Total			69.05			
Pharmacy						
Pharmacy			11.2	Drug vault, controlled access drug box, work surfaces w/binder bins & lateral files, sink with eyewash, and refrigerator	3 000	
Pharmacy Storage			14	Lockable cabinets, high density movable storage	3 000	
Sub Total			25.2			
Radiographic Suite						
Dark Room			5.76	Automatic film processor, sink, film bench and loading bins, counter top, and wall mounted film illuminators. Must be accessible to persons with disabilities.	3 000	
Radiographic Room			22.95	Radiographic and fluoroscopic x-ray unit w/table, wall mounted film illuminators, and wall mounted storage cabinet	3 000	
Sub Total			28.71			
Decontamination and Receiving						
Animal Receiving Room			11.2	Countertop, stainless steel (s/s), raised rim, w/integral sink and splash backs, casework, s/s exam table, refrigerator (domestic type), electronic animal weighing scale, and exam light.	3 000	
Quarantine Room			11.4	Self contained cubicles or flexible film isolators, exam area and sink.		



Space Name	Area/Unit	Number of Units (m ²)	Net Area	Equipment/Furniture	Height (mm)	Remarks
Sub Total			22.6			
Cage Wash						
Cage Wash Room			96	Cage rack washer, autoclave, bedding dispenser, acid neutralizing equipment, feeder bottle filler, sink, bottle washer, and dump station. Provide a pre-wash stall.	3 000	
Clean Cage Storage Room			21		3 000	
Feed and Bedding Storage			21	Pallets and deli refrigerator	3 000	
Sub Total			138			
Vivarium Support						
Landry Room			14	Commercial washer and dryer, shelves, layout table, dirty linen hamper and shelves	3 000	
Feed/Diet Preparation Room			7.5	Kitchen wall and base cabinets, sink, range, and refrigerator	3 000	
MPW, Carcass and Waste Storage			11	Walk-in Prefabricated unit with stainless steel shelves	3 000	
Sub Total			32.5			
Summary						
Animal Care Branch			190.28			
Animal Housing			708.12			
Diagnostic/Pathology Laboratory			24.84			
Animal Surgery			69.05			
Pharmacy			25.2			
Radiographic Suite			28.71			
Decontamination and Receiving			22.6			
Cage Wash			138			



F. Gross Area Allowances

The gross area should exceed the net area by a factor which provides adequate for circulation and building utilities and systems without encouraging inefficient design. (See Section 2-3-10-D.7 of the DRM for guidance.)

F1. Building Space Summary

Organization	Total Net Area (m ²)	Remarks
Office of Intramural Research	906.30	
Laboratory of Molecular Biology	1,501.06	
Laboratory of Biochemistry	1,500.67	
Laboratory of Genetics	1,664.70	
Laboratory of Cell Biology	1,677.37	
Laboratory of Biology	1,541.46	
Laboratory of Chemical Physics	392.78	
Animal Care Branch	1,239.30	
Total	10,423.64	112,202.79 nsf

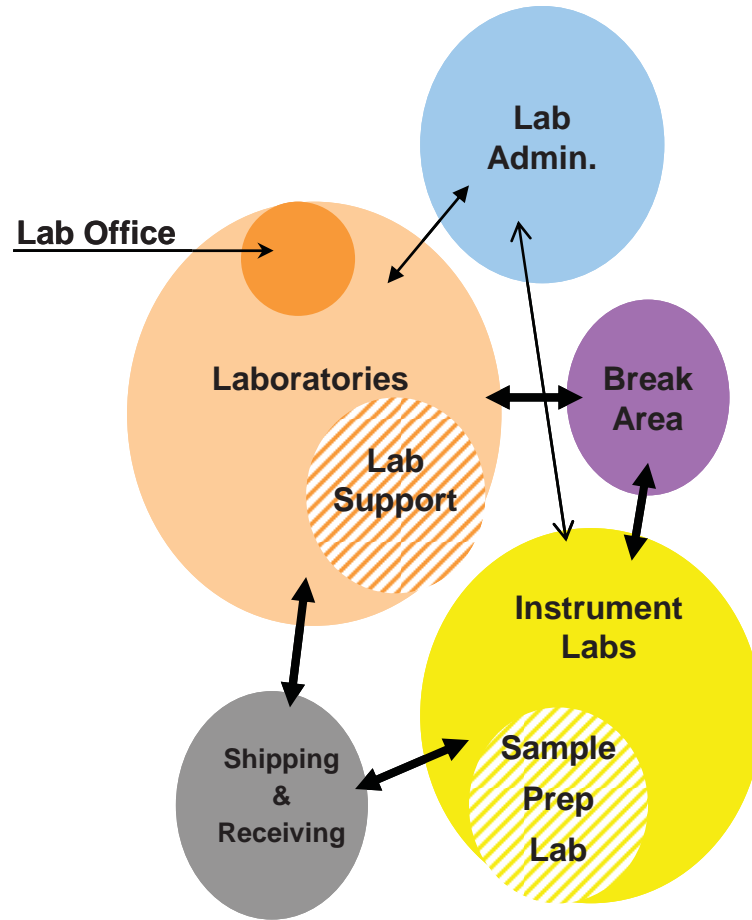
F2. Gross Area Calculations

Space	Net Area (m ²)	Grossing Factor	Gross Area (m ²)	Remarks
Office	906.30	1.33	1,205.38	
Laboratories	7,750.58	1.67	12,943.47	
Laboratory of Chemical Physics	392.78	2	785.56	
Vivarium	1,239.30	2	2478.60	
Total			17,413.01	187,438.21 gsf

The ideal gross area for the GLCB is 17,413.01 gross m². The maximum allowed 19,970. 70 gross m², which is based on the calculations below:

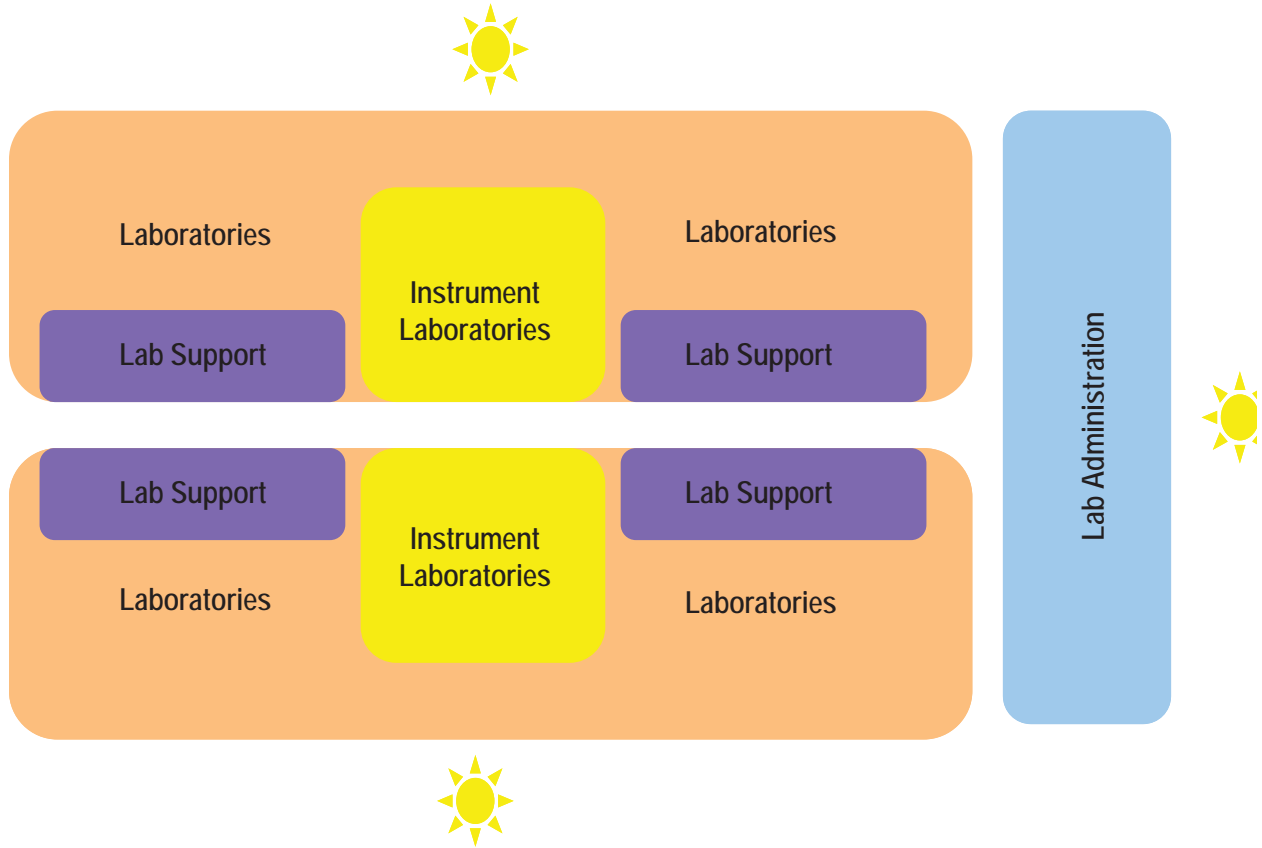
Space	Net Area (m ²)	Grossing Factor	Gross Area (m ²)	Remarks
Office	906.30	1.33	1,205.38	
Laboratories	7,750.58	2	12,943.47	
Laboratory of Chemical Physics	392.78	2	785.56	
Vivarium	1,239.30	2	2478.60	
Total			19,970.70	214,969.85 gsf

6. Functional Relationships and Concepts



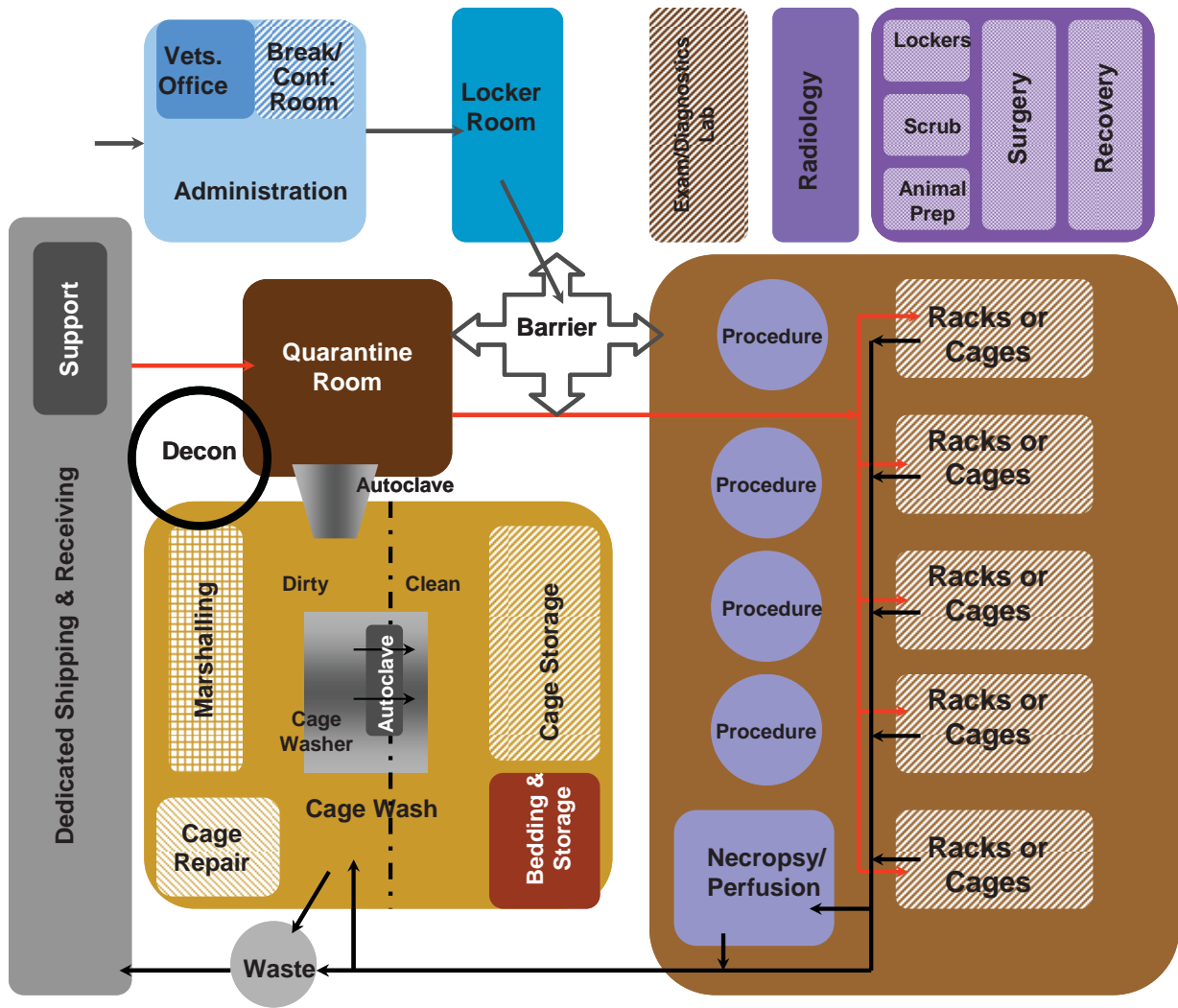
Laboratory Functional Relationship Diagram

(See Section 2-3-10-H of the DRM for guidance.)



Laboratory Floor Concept

(See Section 2-3-10-D.7 of the DRM for guidance.)



Vivarium Functional Relationship Diagram

(See Section 2-4-10-H of the DRM for guidance.)



7. Design Standards (Copy all applicable standards)

A. Applicable Federal Regulations

The design and contract documents for the GLCB shall be in accordance with all applicable Federal Regulations including but not necessarily limited to the following: Architectural Barriers Act, OSHA 29CFR 1910; The National Historic Preservation Act of 1966; The Archeological and Historic Preservation Act; Executive Order 11988 (Floodplains); Executive Order 12088 (Compliance with State environmental laws); National Capital Planning Commission (NCPC) "Master Planning Regulations", etc.

B. Applicable Departmental Regulations

The preparation of the design and contract documents for the GLCB shall be in accordance with the Volume I and Volume II of the HHS Facilities Program Manual.

C. Applicable Agency Regulations

C1. Design Policy and Guidelines

The design and contract documents for the GLCB shall be prepared in accordance to the NIH Design Requirements Manual and NIH Fire Safety Policies developed by the NIH Division of the Fire Marshal.

C2. Animal Care

The design and contract documents for the GLCB shall be prepared in accordance with the latest NIH Publication of "Guide for the Care and Use of Laboratory Animals," plus, the U.S. Public Health Service (PHS), and the American Association for Accreditation of Laboratory Animal Care (AAALAC) accreditation standards.

C3. Biosafety

The design and contract documents shall be prepared in accordance with the latest publication of "Biosafety in Microbiological and Biomedical Laboratories".

D. Applicable Local Code Regulations

The design and contract documents shall be prepared in accordance with the applicable standards of the International Building Code, National Fire Protection Association (NFPA) such as the Life Safety Code (NFPA 101), Fire Protection for Laboratories Using Chemicals (NFPA 45), and Standard for the Installation of Sprinkler Systems (NFPA 13).



E. Utility Company Regulations

Refer to local utility companies or authorities for utility coordination.

F. Industry Standards

The following industry standards are used as references: American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRE), "Quality Standard for Instrument Air" as published by the Instrument Society of America, American National Standards Institute (ANSI) A17.1, Elevator Safety Code, and National Electrical Manufacturers Association (NEMA).

8. Design Criteria and Recommendations

The official NIH design criteria are found in the NIH Design Requirements Manual. The design criteria stated below is in addition to the NIH Design Requirements Manual.

A. Civil

A1. Site Drainage and Grading

Project specific requirements not found in the DRM.

A2. Paving and surfacing

Project specific requirements not found in the DRM.

A3. Parking

Project specific requirements not found in the DRM.

A3.1 Parking Summary

X parking spaces are required. Project specific requirements not found in the DRM.

A4. Site Utilities

The site is served (not served) by all the necessary utilities. The utilities are (not) adequate to meet the demands of the facility.

A5. Landscaping

Landscaping should be consistent with that of the campus and hardness zone. Project specific requirements not found in the DRM.



B. Sustainable Design (See Section 1-10 of the DRM. The following template may be used in addition to the requirements of the DRM.)

The Federal Government through FAR 23 prescribes acquisition policies and procedures sustaining the quality of the environment through pollution control, energy conservation, identification of hazardous material, and use of recovered materials. Sustainable design shall be done in accordance with Section 1-10 of the NIH Design Requirements. At a minimum the project shall obtain a LEED Silver Certification.

B1. Energy Conservation

The following are suggested measures and strategies that will help reduce energy conservation.

B1.1 Site

Incorporate trellis planted with deciduous vines in community areas. Retain trees to shade windows

B1.2 Building Envelope

Optimize building insulation. Optimize building glazing; use low E glazing; incorporate sun control; and provide sun shading with deep sections. Minimize air filtration. Use heavy mass construction. Provide enclosed atriums between office and lab blocks. Limit heat gain by high albedo building envelope.

B1.3 Lighting Design

Maximize the benefits of natural daylight. Control the balance of electric light with sensors and dimmers. Select high-efficiency light sources and fixtures and use task lighting. Balance visual comfort with lighting efficiency.

B1.4 Building Mechanical Systems

Save energy with high efficiency HVAC equipment. Minimize reheat of mechanically cooled air. Use variable frequency drives (VFD). Use variable air volume (VAV) systems in offices. Minimize transport losses from distribution lines. Reclaim heat for hot water distribution. Evaluate full and partial load efficiencies of equipment. Provide 20 cfm/person in offices with straight VAV. Operate on outside air economizer cycle. Operate VFD with sensors in piping and duct systems. Provide minimum 12 air changes/hour in labs. Reduce sash opening to 80% on 75% of hoods.



B1.5 Controls

Optimize and schedule start and stop. Consider duty cycling temperature, demand limiting controls. Use enthalpy economizer and temperature setbacks.

B2. Indoor Air Quality

The following are suggested measures and strategies that will help improve indoor air quality.

B2.1 Source Control

Eliminate potential contaminants at the source. Prevent contaminant entry into the building. Design for no smoking. Test for radon. Require full systems commissioning. Consider increase stack to protect intakes from re-entrainment. Place intakes away from roadways and garages. Negatively pressurize loading areas to positive building.

B2.2 Source Isolation

Separate potential sources of contamination from the air-stream. Select low VOC emission materials and finishes. Reduce sources of microbial contamination. Test large material assemblies for impact to indoor air quality. Flush out building prior to occupancy.

B2.3 Source Dilution

Utilize ventilation and filtration to reduce contaminant concentration. Provide ASHREA 30% pre-filters and 95% final filters. Limit use of duct liners. Consider scrubber on lab exhaust. Eliminate volatile amines for corrosion inhibition. Install wet off-gassing materials before dry "sink" materials. Install and balance system properly.

B3. Recycling

The following are suggested measures and strategies that will help reduce waste by recycling:

B3.1 Raw Material Composition

Raw material used in the project should be non-toxic, renewable, salvaged, and sustainable source. The recycle content of the material should be considered. The raw materials should be selected locally, if possible.



B3.2 Production Process

Materials should be selected based on the amount of energy and water used. The designer should minimize waste by carefully dimensioning materials. Major components should be design for disassembly and material reuse

B3.3 Packing and Shipping

Local manufacturers and efficient shipping methods should be used as much as practical. The designer should specify that packaging use minimal, reusable or recycle materials. The designer's technical specifications should require a management plan for handling hazardous materials.

B3.4 Installation and Use

The designer shall evaluate life cycle impacts of materials and systems; product durability, repair potential and low maintenance. The designer shall evaluate chemical emissions on installation or maintenance. The designer and the Government will balance environmental performance with cost and durability. Modular design minimizes construction waste and shall be employed at every opportunity.

B3.5 Resource Recovery

Materials and equipment shall be salvageable, recyclable, biodegradable, or part of a manufacturer's take back program. Site waste should able to be shredded into mulch. The designer's technical specifications should establish minimum recycle content levels.

B4. Management and Operations

The following are suggested measures and strategies that will help improve the management of sustainable design. Protect trees during construction. Use pervious site materials where practical. Protect existing water sources from erosion or contamination. Maximize use of sheet flow. Use site for storm water retention and filtration. Use low maintenance native species to reduce the use of fertilizers.

Lab modules should be interchangeable. Develop flexible modular space plans to accommodate change in labs with minimum of waste and disruption. Develop equally flexible mechanical, electrical and plumbing infrastructure. Interstitial space allows addition and changes of lab services from outside the lab. Use equipment that does not use CFC's and HCFCs. Improve building efficiency with sharing laboratory support spaces.



C. Architectural

C1. Aesthetics

Project specific requirements not found in the DRM.

C2. Exterior Materials

Project specific requirements not found in the DRM.

C3. Acoustical Controls

Project specific requirements not found in the DRM.

C.4 Accessibility

The building and site shall be fully accessible to persons with disabilities in accordance with the Architectural Barriers Act.

D. Structural

For structural design criteria use the NIH Design Requirements Manual or project specific requirements not found in the DRM.

E. Heating Ventilation & Air Conditioning

For HVAC design criteria use the NIH Design Requirements Manual or project specific requirements not found in the DRM.

F. Building Automation Systems

For Building Automation Systems design criteria use the NIH Design Requirements Manual or project specific requirements not found in the DRM.

G. Plumbing

For plumbing design criteria use the NIH Design Requirements Manual or additional requirements not in the DRM

H. Fire Protection

For fire protection design criteria use the NIH Design Requirements Manual or project specific requirements not found in the DRM.



I. Electrical

For electrical design criteria use the NIH Design Requirements Manual or project specific requirements not found in the DRM.

J. Communications/Telephone and Data

For communications/telephone and data design criteria use the NIH Policies & Guidelines or project specific requirements not found in the DRM.

K. Miscellaneous

K1. Security: (The following may be used as a template, but clear it with the Division of Security)

NIH facility projects shall be planned, designed, and constructed in accordance with the most current issuance of the Interagency Security Committee (ISC) Security Design Criteria for New Federal Buildings. The criteria should be applied using a decision-based approach tailored to each building. The building's specific security requirements should be based on a facility-specific risk assessment, done at the earliest stages of planning for a multi-disciplinary project team to use to plan the security measures. The ISC Security Design Criteria for New Federal Office Buildings and Major Modernization Projects is a living document. Criteria will change as a result of ongoing research and rapid technological development. An ISC working-group will review and update the Criteria at least once per year. HHS formally adopted the September 29, 2004 issuance as policy. It shall be the policy of the Department to utilize the latest issuance of this document where appropriate. Users should also visit the GSA websites for relevant new information. A copy of the ISC Security Design Criteria can be obtained from NIH security representatives, from the Departmental Physical Security Program Manager, GSA sources or the GSA building technology security website at <http://www.oca.gsa.gov/mainpage.php> (site registration is required).

In addition to ISC Criteria the facility should be designed for three levels of security. The first level of security is the entry to the facility and access through. The second level of security is access to the vivarium. The third level of security is access to the animal holding rooms within the vivarium. In order for personnel to access or leave the facility they must have a security card key. This security process is carried out in the vivarium and animal holding areas. Visitors to the facility must report to the security staff stationed in the lobby. Visitors will not be allowed to enter the vivarium. Animals will not be allowed outside the vivarium for security reasons.

Passive measures of security (defensible space) should be incorporated in the design such as: Traffic patterns that can be controlled with a minimum of access points during off-duty



hours in a facility staffed 24-hours a day. Provide proper site layout, lighting and landscaping to meet security requirements.

K2. Safety: (Use as a template)

Hazardous Waste Management: The facility should comply with all regulatory requirements concerning the storage and disposal of hazardous materials. It is the intention of NIH to protect personnel, visitors and the community from hazardous materials and to be environmentally conscious.

K2.1 Hazards in Biomedical Laboratories (Use as a template verify hazards in questionnaires)

It is critical that the design be sensitive to the multiple hazards commonly encountered in the biomedical laboratories, i.e., airborne, radioactive, chemical, etc. It is important that the program and design at the earliest stages incorporate architectural and engineering features that will aid in controlling risks to safety and health of the research staff.

The following hazardous materials and agents are commonly found in NIH biomedical laboratory operations:

Hazardous biological materials that are etiological agents (produce infectious diseases), oncogenic viruses (induce cancer), and research using recombinant DNA.

Hazardous chemical materials that are: carcinogens (induce cancer), toxic (acrylamide, concentrated sulfuric [H₂SO₄] and hydrochloric [HCL] acids, benzene, toluene, etc.), sensitizers, flammables (alcohols [EtOH and MeOH], ether, etc.), explosives, corrosives, unstable/reactives, irritants, compressed gases, and oxidizers.

Radiation: ionizing radiation (radio-isotopes).

Hazardous physical agents such as: ultraviolet light, radiation, lasers, heat stress, cold stress, hand-arm vibration, noise, radio frequency/microwave radiation, static magnetic fields, light and near-infrared radiation.

It is the designer's responsibility to select architectural and engineering features which will assist in safely accommodating these materials and agents.

K3. Operation & Maintenance (Use as a template)

The choice of materials, finishes and system should be chosen for ease of maintenance and operations and cost. Systems, materials and controls employed by the Division of Property Management should be used where practical.



K3.1 Waste Management *(Use as a template)*

NIH intends to handle waste in a safe, cost effective, and expedited manner. The waste management system should eliminate the use of unnecessary floor space for storage, the potential for odors and the quality of life for the occupants of the facility.

9. Budget *(See Section 2-1, Volume 1 of the HHS Facilities Program Manual for guidance)*

A. Facility Cost Estimate

A.1 Land Acquisition

Provide land cost if applicable.

A.2 Design

Provide design cost.

A.3 Construction

Provide cost per square foot escalated to mid point of construction; include local indexing and construction contingency; total building estimated cost; site preparation and utility hookup cost; etc.

A.4 Equipment

Provide equipment cost.

A.5 Other

Provide other cost

B. Related Cost Estimates

B.1 Special Studies

Provide cost for special reports such as geotechnical report, decontamination report for demolition etc.

B.2 Pre-Project Planning

Provide cost for Pre-Project-Planning to determine the Project Definition Rating Index (PDR); program of requirements, site evaluation report, etc.



B.3 Activation

Provide cost for commissioning, cost for relocation from other facilities that will be paid by operating funds provided by the participating ICs.

B.4 Special Purpose Equipment

Provide cost for special purpose equipment as technical, medical, or scientific equipment that is needed to operate a laboratory, a clinical research patient care unit, an animal care facility, or is specific to a single purpose and not generally suitable for other purposes. Examples of such equipment include incubators, electric ovens, sterilizers, vacuum and pressure pumps, centrifuges, water baths, cabinets, cupboards and shelving for laboratory supplies, workbenches for microscopes, sinks for mixing of chemicals and disposing of same, movable apparatus for laboratory animals, and electrical and gas appliances. Special-purpose equipment may be classified as either fixed or moveable equipment. A special purpose laboratory in some cases may be considered as special purpose equipment. A special purpose laboratory, in the context of special purpose equipment, could include a fully prefabricated structure meant to be installed within an existing building space.

All fixed equipment installed as part of the original construction project shall be funded from the B&F appropriation. It is noted that some equipment may qualify as both fixed equipment and special-purpose equipment. If this equipment is included as part of the original construction process, it is to be considered fixed equipment and funded from the B&F account. Moveable equipment may be funded from the B&F appropriation only when specifically authorized by law.

10. Schedule

Provide a schedule for the design and construction of the project:

Pre Design	months
Design	months
IFB	months
Construction	months
Activation & Occupancy	months



SECTION 2-6 SITE SELECTION

2-600	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

2-6-00 POLICY

The purpose of this section is to provide guidance on evaluating and selecting sites for planned new facilities, which may or may not be part of an existing facility complex. This section is applicable to all proposed construction projects, including proposed lease-purchase facilities.

2-6-10 PROCEDURES

At the inception of a project, one of the earliest decisions that must be made is the location of the site. Several sites are usually evaluated to determine the best location for a project. In order to assist the OPDIV in making a decision on the best site, evaluation criteria are developed. The criteria will help document recommendations on the site that should be selected for the project. All the proposed sites should be evaluated using the same criteria. An analysis of each site should be performed based on the established criteria. The analysis will provide a description of the site as well as discuss how the site relates to the criteria. Once the analysis is complete an evaluation matrix is developed to compare the sites. The analysis and evaluation should be in the form of a report.

2-6-20 GUIDANCE AND INFORMATION

A. LAWS, REGULATIONS AND EXECUTIVE ORDERS

Among the laws, regulations, and executive orders applicable to the site evaluation/selection process are the following.

1. Executive Order 12072 - "Federal Space Management of Federal Space," Dated August 16, 1978. - Proposed sites and facilities selected and developed for Federal agencies should consider the effective support of program missions as well as economies associated with efficient facilities management and administration. In the case of proposed development located in urban areas, the Federal agency is also required to coordinate the proposed development with any local, state, and regional plans directed at providing economic and social benefits within the urban metropolitan region.
2. Executive Order 12372, "Intergovernmental Review of Federal Programs," Revised April 8, 1983. - This Executive Order requires Federal agencies to undertake coordinated planning on an intergovernmental basis with local, regional, and State agencies for Federal actions involving construction and acquisition use and disposal of Federal real property.
3. National Environmental Policy Act of 1969. (42 USC 4321 et seq.). - The document sets forth the policy and mandatory considerations, including reports, on the planned facility's impact on the human environment.
4. National Historic Preservation Act of 1966 (16 USC 470 et seq) and Implementation Procedures Contained in Federal Register Vol. 35, No. 23, February 3, 1970, Department of the Interior, National Park Service "National Register of Historic Places." 36 CFR 800 - This document requires



evaluation of the effect the proposed facility may have on properties which may be eligible for listing in the National Register of Historic Places, and requires that the Advisory Council on Historic Preservation be notified and given reasonable opportunity to comment with regard to the undertaking. See Section 3-3, Archeological and Historic Preservation.

5. Uniform Relocation Assistance and Land Acquisition Policies Act of 1970. (42 USC 4601 et seq.) - This law sets forth the policy for fair and equitable treatment of persons displaced as a result of Federal and Federally assisted programs.

B. SITE SELECTION CRITERIA

1. Site Size and Condition

- a. Size: The site should be of sufficient size to accommodate the construction of the project with the associated landscaping and provide external circulation for pedestrians, service vehicles and emergency apparatus. The site size should be as close to the master plan's projected capacity and not be too large for the intended program. The size of the ideal site should be expressed in hectares.
- b. Condition: The site should be free of blight, dense vegetation, and structures that require demolition.
- c. Configuration: The site should be configured to accommodate the program requirements. Sites with "dog legs" and pipe stems should be avoided, unless there is adequate land to construct the project. Irregular shaped sites should be carefully evaluated.

2. Accessibility

- a. Vehicular Access: The site should have access to and the ability to accommodate vehicular traffic and parking.
- b. Service Access: The site should have access to and the ability to accommodate service vehicles such as trucks and semi-tractor trailers. The site should be able to accommodate a service apron and the necessary loading docks.
- c. Pedestrian Access: The site should be linked to existing walkways.
- d. Public Transportation²: In urban areas the site should be accessible by public bus service, and/or rapid rail service.

3. Physical Features

- a. Topography: The topography of the site should be as level as possible with positive drainage. Sites with slopes over 15% should be carefully evaluated to determine if they can meet the program needs and if the facility can be constructed economically.
- b. Surface Water: Flood plains and wetlands should be avoided.
- c. Amenities: Mature trees, ground cover, natural beauty, etc., are considered an asset for the site.
- d. Views and Vistas: Panoramic vistas and pleasant views from the site to urban areas, architecture and/or natural beauty are considered an asset. The opportunity to create a pleasant view of the site or the proposed structure from the surrounding areas is also considered an asset.

² Not applicable to undeveloped areas



4. Environmental Features

- a. Noise: The site should not be in close proximity to sources of noise such as highways, power plants, and service areas.
- b. Air and Water Quality: The site should not be in close proximity to sources of air or water pollution.
- c. Solid Waste Disposal: Solid waste disposal services should be economically available to the site.
- d. Hazardous Waste Disposal: Hazardous waste disposal capability should be economically available to the site.
- e. Hazardous Waste Contamination: The site should be free of hazardous materials.
- f. Historic Characteristics: The historic and archeological features of the site should be considered.

5. Integration with the Community's Present and Future Plans

- a. Land Use: The land use of the site should be compatible with the surrounding local land use.
- b. Master Plan: If applicable the proposed use of the site shall be in compliance with the approved OPDIV master plan.

6. Utilities: The site should be evaluated as to the availability and adequacy of the utilities as well as the potential to run utilities to the site in an economically feasible manner.

- a. Water: Adequate water service, supply or storage should be available for domestic and fire fighting needs. Adequate water pressure at the site should be available for fire fighting.
- b. Storm Drainage: The site should have adequate surface run off or underground storm sewers. The proposed facility should not be impacted by storm drainage from other sites "up stream" nor should the facility impact other sites "down stream".
- c. Sanitary Waste Disposal: In developed areas adequate sanitary sewer should serve the site. In undeveloped areas the site should have access to onsite waste disposal systems or the site should have the capability to develop an onsite sewage treatment system.
- d. Natural Gas³: In urban areas the site should be served by natural gas.
- e. Electric and Communications: The site should be served by electrical power and communications systems.

7. Site Development Cost

- a. Site Clearing: The cost of clearing and grubbing the site should be minimal.
- b. Site Grading: The cost for grading the site should be minimal.
- c. Site Improvements: The cost of bringing roads and utilities to the site should be minimal. The cost for developing on site water and sewage treatments systems should be evaluated.
- d. Relocation of Infrastructure: The cost of relocation of infrastructure should be minimal.

³ Not applicable to undeveloped areas.



C. USE OF TO THE NIH MASTER PLANS TO EVALUATE POTENTIAL SITES

The NIH master plans are valuable tools in evaluating potential sites and it is advisable to select a potential site in accordance with the approved master plan. Choosing a site in accordance with the master plan avoids delay due to environmental reviews. The master plan is accompanied by an environmental impact statement; therefore, the environment issues are addressed.

1. Existing Site Conditions: The existing site condition part of the master plan consist of maps and information about: existing building uses, existing site topography characteristics, existing hydrology, existing subsurface soils, existing building conditions, existing building functional suitability, existing transit systems, existing historical and archaeological areas, existing major utility corridors, and issues and constraints. Existing conditions is background information helps evaluate the current features of the proposed sites as well as their potential and constraints. The aerial photograph show the physical features of the proposed sites and gives a snap shot view of the constraints and opportunities of each proposed site.
2. Master Plan Proposals: Master Plan proposals regulates the growth and land use of the campus. It establishes new circulation patterns and new infrastructure. This part of the master plan consist of maps and information about: illustrative master plan, site sections, land use, building use, site development capacities, sector plans, reuse/demolition, roadway improvements, service access, and public transit. This information is vital to the evaluation of sites for proposed projects because it establishes the framework within the master plan for site selection.
3. NIH Site Planning Guidelines: NIH site planning guidelines are the bulk regulations similar to the ones found in local zoning ordnances. It provides for building setbacks, building heights and building envelops. This part of the master plan provides general on architectural character.

D. SITE EVALUATION MATRIX

The use of a site evaluation matrix is very helpful in evaluating several sites at one time. The matrix shown in Exhibit X2-6-A is an example of a matrix in evaluating potential sites.



Site Evaluation Matrix

Rating Factors: Excellent = 4; Good = 3; Fair = 2; Poor =1; Unacceptable = 0

Weight Factors: Essential = 4; Important = 3; Desirable = 2; and Not Important = 1

1. Site Size and Condition					
a. Size	4	E=16	E=16	P=4	P=4
b. Condition	3	F=6	F=6	F=6	F=6
c. Configuration	3	E=12	E=12	E=12	E=12
2. Accessibility					
a. Vehicle Access	2	E=8	E=8	E=8	E=8
b. Service Access	4	F=8	E=16	E=16	F=8
c. Pedestrian Access	3	E=12	E=9	E=12	F=6
d. Public Transportation	1	E=4	E=4	E=4	E=4
3. Physical Features					
a. Topography	2	E=8	E=8	E=8	E=8
b. Surface Water	3	E=12	E=12	E=12	E=12
c. Amenities	2	E=8	E=8	P=2	G=6
d. Views and Vistas	2	E=8	E=8	P=2	G=6
4. Environmental Feature					
a. Noise	3	G=9	F=6	P=3	E=12
b. Air and Water Quality	4	G=12	F=8	P=4	E=16
c. Solid Waste Disposal	1	G=3	E=4	E=4	G=3
d. Hazardous Waste Disposal	1	G=3	E=4	E=4	G=3
e. Hazardous waste Contamination	1	E=4	E=4	E=4	E=4
f. Historic Characteristics	2	E=8	E=8	E=8	E=8
5. Integration w/NIH's Future Plans					
a. Land Use	4	E=16	E=16	E=16	E=16
b. Master Plan	4	E=16	E=16	E=16	E=16
6. Utilities					
a. Water	4	E=16	E=16	E=16	E=16
b. Storm Drainage	2	E=8	E=8	E=8	E=8
c. Sanitary Waste	4	E=16	E=16	E=16	E=16
d. Natural Gas	1	E=4	E=4	E=4	E=4
e. Electric /Communications	4	E=16	E=16	E=16	E=16
7. Site Development Cost					
a. Site Clearing	4	P=4	P=4	P=4	P=4
b. Site Grading	4	E=16	E=16	E=16	E=16
c. Site Improvements	4	E=16	E=16	E=16	E=16
d. Relocation of Infrastructure	4	E=16	P=4	E=16	E=16
		285	283	255	270



SECTION 2-7: DEFINITION AND MEASUREMENT OF SPACE

2-7-00	Policy
10	(Reserved)
20	Guidance and Information
30	(Reserved)

2-7-00 POLICY

The purpose of this section is to provide uniform definitions of space and the measurement of space for computing net and gross areas of HHS facilities. Planning and programmatic documents for new facilities contain maximum net and gross area limits. This section shall be used in determining if proposed design concepts conform to those limits. Any exceptions to the provisions of this section must be approved in writing by OFMP.

Because such space as stairwells, elevator shafts and lobbies, mechanical equipment rooms, and permanent corridors are counted as gross but not net square meters, the gross areas of new HHS laboratory and health care facilities commonly range from one and one-half to two times as high as their net areas. The ratio between gross and net space is much smaller for staff quarters and, with certain exceptions for apartment buildings. Space limits for quarters units are normally expressed in gross square meters.

This section only addresses net and gross space; the standard categories used in planning and programming documents and related budget justifications. However, it should be noted that additional potential categories also may be used in facilities documents. Some HHS OPDIVs include "net assignable" or "departmental gross" space categories in planning and programming documents. In addition, space utilization information is developed for the General Services Administration on an "occupiable" space basis.

2-7-20 GUIDANCE AND INFORMATION

A. GROSS AREA

1. Gross areas of floors, "crawl" space, interstitial space, and equipment penthouses are counted at the following rates:
 - a. All areas 1,980 mm high or higher are counted on a 100 percent basis.
 - b. All areas between 1,220 mm and 1,980 mm in height are counted on a 50 percent basis.
 - c. All areas that are less than 1,220 mm in height are excluded from the gross area computations.
2. Covered walkways, bridges, canopied areas, covered building entrances, trellis-type entrances, and other covered but unenclosed areas are counted on a 50 percent basis. Fully enclosed bridges between buildings are counted on a 100 percent basis.
3. Normal building overhangs, unroofed courtyards or plazas, bay windows extending outside the building line, catwalks providing access to equipment, mezzanines in the maintenance or central supply department which utilize open metal grating and are used for storage purposes only, cooling towers, other unroofed equipment, and unfinished attics in quarter's units are not counted as gross area.



4. Measurements used in the computations shall be taken from the outside face of the exterior walls, disregarding such architectural projections as cornices, buttresses, and roof overhangs. Stated differently, the normal thickness of the exterior wall is included in the gross area.
5. In determining whether the gross area of a floor is computed on a 100 percent or 50 percent basis, the height is taken as the average distance from the surface of the floor to the underside of the structural beams or girders supporting the floor or roof above.
6. The height of crawl space is taken as the average distance between the surface of the earth or finished floor and the bottom of the predominant framing members (normally, the joists or trusses). It is expected that girders, pipes, or ducts may occasionally protrude below this height.
7. When areas are represented as crawl space for gross area computation purposes, either in the 1,220 mm to 1,980 mm high (50 percent) category or the less than 1,220 mm high (excluded) category, it is expected that the depth of footings, lack of finishing, etc., will support the position that the areas will be used for access purposes only.
8. Interstitial space is defined as a space created by placing a deck above the ceiling system and below the floor above for purpose of housing utility systems.
9. New construction shall not include the following building appurtenances in the total gross area. However, this area shall be included in the real property space inventory.
 - a. Mechanical penthouses (equipment protection only), utility chases/pipe tunnels, and other special equipment enclosures (e.g., emergency sewage holding tanks, air intake plenums, cooling towers, etc.).
 - b. Loading docks, emergency entrances, covered entrances and drive through.
 - c. Space associated with energy efficient envelope designs, seismic details, and/or innovative construction techniques (i.e., extra thickness in arctic walls/floors/roofs, seismic bracing, and double walls required by modular construction when two unit modules are attached together) including vestibules and arctic entries not to exceed 10 square meters per entrance.

B. NET AREA

1. The terms net space or net area refer to those portions of the facility available for use for program operations and for supply storage, building maintenance/operation (e.g., boiler rooms, electrical power plant rooms, or shops), and other necessary support functions. These areas are specifically delineated in the planning and programming documents (e.g., areas include a 12 net square meter office, or a 10 net square meter outpatient examination room), but do not include space such as plumbing chases or electrical closets.
2. The sizes of net areas represented on design drawings or actually constructed are computed by measuring from the inside of the permanent exterior wall to the near side of permanent walls separating the area from stairwells, elevators, mechanical rooms, permanent corridors, or other portions of the building not categorized as net space in the program of requirements document. No deductions shall be made for space occupied by structural columns; interior partitions; radiators; heating, ventilation and air-conditioning (HVAC) convector units; or for baseboard heating



units within the area, however, deductions shall be made for large duct and elevator shafts passing through it.

C. UNITS OF MEASUREMENT

Unless otherwise provided by law, HHS is required to use, to the extent economically feasible and practical the metric system (system international) of measurement in Federal Government procurement, grants, and other business-related activities in accordance with “Executive Order 12770 Metric Usage in Federal Government Programs”; 15 USC 6, Weights and Measures and Standard Time; and P.L. 94-168, The Metric Conversion Act, Dec. 23, 1975. See also HHS GAM Chapter 8-25, HHS Metric Program and 41 CFR 102-76.25(c).

D. INTERSTITIAL SPACE

HHS programs require buildings to be designed with flexibility to meet varying project requirements (both short and long term) due to ever changing program needs. These requirements may be accomplished by the design and use of interstitial space. Interstitial space is counted in the gross area calculations based on the height of the space as previously defined. A systematic design approach to the use of interstitial space is essential. Past experiences, where HHS facilities have been designed with interstitial space, have shown that all advantages are lost if the design and construction phases are not controlled to provide carefully laid out utility systems.

Interstitial space designs should address each of the following areas and provide viable solutions for any deficiencies or conflicts which may be identified: structural systems, floor to floor heights, interstitial access, fire and life safety, utilities, schedules and cost estimates. OPDIVs are encouraged to develop standards and guidelines for the design and utilization of interstitial space.

E. GROSSING FACTORS

Grossing factors are important in developing budgets for construction and determining planning efficiencies. The cost of a building is not based on the net area but on the gross area of the building. Grossing factors are multipliers applied to net area to plan and determine gross area. Grossing factors are based on internal circulation patterns, interior partitions, exterior walls, utility distribution, mechanical equipment configuration, etc. The following table synthesizes ranges of grossing factors used for HHS facilities and space.



<u>Functional Area</u>	<u>Grossing Factors</u>
Administration/Office	1.25 -1.33
Cafeteria	1.33
Credit Union	1.33
Hospitals	
Inpatient Services	
Acute Care Nursing	1.50
Nursery	1.45
Intensive Care; Surgery; Labor/Delivery	1.55
Substance Abuse; Psychiatric Nursing	1.25
Diagnostic Services	
Laboratory	1.30
Radiology – Diagnostic Imaging	1.45
Ambulatory Services	
Emergency and Urgent Care; Ambulatory Care	1.35
Community Health	1.20
Dental Clinic	1.30
Pharmacy	1.25
Physical Therapy; Respiratory Therapy	1.30
Dialysis Treatment	1.25
Administrative Services	
Administration	1.25
Health Records	1.20
Employee Facilities; Education and Consultation	1.15
Public Facilities	1.15
Support Facilities	
Medical Supply	1.15
Building Services; Property and Supply	1.10
Dietetics Unit	1.20
Housekeeping and Linen	1.05
Facilities Management	1.15
Clinical Engineering	1.15
Research Laboratory	1.54 – 2.00
Special Purpose (Instrument) Laboratory	1.50
Animal Research Facilities	1.80 – 2.00



SECTION 2-8: UNITS OF MEASUREMENT

- 2-8-00 Policy
- 2-8-10 Procedures
- 2-8-20 Guidance and Information
- 2-8-30 Reporting Requirements

2-8-00 POLICY

The purpose of this section is to provide NIH guidance on the unit of measurement requirements for the design and construction NIH facilities and for preparation of various reports provided in support of organizational departmental initiatives and requirements. The use of the appropriate unit of measurement is a requirement. The unit of measurement shall be dependent on the type of facility design, report and contract type.

2-8-10 PROCEDURES

A. NEW

1. All new facility design projects shall use Metric units. Metric units shall be used regardless of project size.

B. RENOVATIONS AND ADDITIONS

1. All facility renovation and addition design projects shall be based on the measurement for which it was originally designed or constructed.
2. If the facility was designed in English all renovations and additions shall be in English units.
3. Metric units shall be used for buildings renovations and additions originally designed and constructed in metric units.

C. LEASE

1. All lease facility design projects shall use English units in accordance with ANSI/BOMA Z65.1.

D. REAL PROPERTY COUNCIL REPORT

1. The Real Property Council Report shall be provided in English units. Refer to the GSA 2007 Guidance for Real Property Inventory Reporting guidance document for additional information.

2-8-20 GUIDANCE AND INFORMATION

A. LAWS AND REGULATIONS

1. The Metric Conversion Act of 1975 (later amended by the Omnibus Trade and Competitiveness Act of 1988)
2. Executive Order 12770 - Metric Usage in Federal Government Programs, July 25, 1991
3. Savings in Construction Act of 1996
4. GSA 2007 Guidance for Real Property Inventory Reporting- This guidance document prescribes the use of English units.



2-8-30 REPORTING REQUIREMENTS

A. REAL PROPERTY COUNCIL REPORT

1. The Real Property Council Report shall be provided in English units

NIH Facilities Development Manual



Chapter 3 Planning & Design Considerations



SECTION 3-1: FACILITY MASTER PLANNING

3-1-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

3-1-00 POLICY

The purpose of this section is to assist HHS and its Operating Divisions in the utilization and long-range planning of HHS sites and facilities. Master planning helps HHS define the physical resources needed to maintain or advance OPDIV missions and goals and support the execution of HHS-wide programs. The master planning process assists Operating Divisions in determining and coordinating site improvements to achieve a functional, attractive, and comprehensive design for HHS sites and facilities. The plan aids Operating Divisions in day-to-day facility decision-making while accommodating changing circumstances and new OPDIV priorities, some of which may not be identifiable when the plan is initially formulated. Master Plans, to remain useful, are required to be updated approximately every five years but may be amended sooner as unanticipated circumstances are dictated.

Master plans are required on all sites, installations and/or campuses owned and/or occupied by HHS employees that contain at least two independent buildings, or two different activities with the exception of direct leased facilities.

3-1-10 PROCEDURES

- A. Applicability of Master Planning - Master planning procedures are normally appropriate for all HHS direct Federal or lease/purchase construction projects or site acquisitions that will eventually lead to more than one principal building, structure or activity on a site. This includes sites shared with other government agencies or with private firms. This typically does not apply to direct leased facilities.
- B. Existing Sites - Master Plans should be developed for existing HHS sites that contain more than one building. The plan should reflect both the special needs of the site and the impact of HHS activities (current and planned) on the surrounding community and the environment.

3-1-20 GUIDANCE AND INFORMATION

Some of the laws and regulations applicable to the master planning process as it applies to the HHS facilities planning program are listed below. Note: The Clean Air Act and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, impose additional facilities-specific requirements.

A. Laws And Regulations

1. National Environmental Policy Act of 1969 (42 USC 4321 et seq) - This law prescribes the consideration Operating Divisions must give to the impact of the Master Plan on the human environment.
2. Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR parts 1500-1508) - The CEQ regulations outline certain practices and procedures Federal agencies must follow in implementing NEPA during their master planning processes.



3. National Historic Preservation Act of 1966 (16 USC 470 et. seq.) and Implementation Procedures Contained in Federal Register Vo. 35, No. 23, February 3, 1970, Department of the Interior, National Park Service "National Register of Historic Places" - This document requires evaluation of the effect the Master Plan may have on historic properties listed or eligible for listing in the National Register of Historic Places, and requires that the Advisory Council on Historic Preservation be notified and given reasonable opportunity to comment with regard to the undertaking.
4. Executive Order 12372, "Intergovernmental Review of Federal Programs," Amended April 8, 1983 - This Executive Order requires Federal agencies to undertake coordinated planning on an intergovernmental basis with local, regional, and State agencies for Federal actions involving construction and acquisition use and disposal of Federal real property.
5. Uniform Relocation Assistance and Land Acquisition Policies Act of 1970 (42 USC 4601 et seq.) - This law sets forth the policy for fair and equitable treatment of persons displaced as a result of Federal and Federally-assisted programs.
6. National Capital Planning Commission (NCPC) - "Master Plan Submission Requirements" - All HHS sites in the National Capital Region (which includes the District of Columbia; Montgomery and Prince George's Counties in Maryland; Arlington, Fairfax, Loudoun, and Prince William Counties in Virginia; and all cities now or hereafter existing in Maryland or Virginia within the geographic area bounded by the outer boundaries of the National Capital Region) are subject to the NCPC Master Plan Submission Requirements.

B. Organizational Responsibilities

1. Operating Division

- a. Responsible for development and updates of Master Plans.
- b. Designates operating OPDIV representatives as members of the Master Plan review and evaluation team.
- c. Develops long-range goals, objectives, and program plans used as a Master Plan guide.
- d. Integrates environmental considerations in the responsible Operating Division official's decision-making process, including environmental documents as part of the Master Plan document.

2. HHS Capital Investment Review Board

- a. Provides policy oversight to the HHS Operating Divisions in the preparation of facility Master Plans.
- b. Authorizes the release of Draft Master Plans for review and comment.
- c. Approves Final Master Plans.

C. Contents Of Master Plans

The Master Plan is an integrated series of documents that present in graphic and narrative form the present composition and planned physical development of an HHS site containing more than one building, structure, or activity. Master Plans analyze and document the form and function of HHS sites, individual site and building requirements and interrelationships among activities.

1. General – The Master Plan should

- Reflect thorough planning,
- Establish a comprehensive and coordinated approach to physical development of the site,



- Ensure regulated growth and land use,
- Permit flexibility of use, and
- Provide for future expansion to meet long-range program goals without disrupting the efficiency of the plan or adversely impacting the environment.

2. Master Plan Requirements - Master Plans should address each of the following areas and provide viable solutions for any deficiencies or conflicts, which may be identified:
 - a. Program Requirements - Establish planning premises and the Master Plan goals and objectives. Define the specific concepts and standards for future development.
 - b. Region and Location - Describe the regional setting in terms of existing and future land use patterns, transportation systems, utility services, population on and off site, economy, and cultural assets. Also indicate current land use and zoning of adjacent areas.
 - c. Boundary and Topographic Data - Include boundaries and acreage for existing and proposed surveys as appropriate.
 - d. Site Utilization - Show general land use by type and the areas allocated to each function for both existing and proposed conditions. Address requirements for open space.
 - e. Improvements - Show existing to-remain (i.e. not demolished) and proposed buildings, structures, and other improvements such as roads, parking areas, heliports, refuse handling areas, etc.
 - f. Circulation - Indicate the internal road network, access points, parking facilities, pedestrian and bicycle movement systems, public transportation, and service access flow. Evaluate traffic impacts of proposed development and propose transportation management strategies to minimize impacts. Material flow should also be delineated (e.g. deliveries and trash disposition), as appropriate.
 - g. Landscaping - Indicate general concepts for open space and green areas, and the location and extent of existing and proposed landscaping.
 - h. Security, Fire, Life Safety, and Accessibility - Proposed building site location and planning should consider security, safety, and fire protection. Factors to be considered include, but are not limited to, combustibility, occupancy and attendant hazards, proximity of fire fighting resources, ease of access, climate and topography. Special consideration should be given to the security criteria, such as setbacks, explosive safety quantity distances, safety, and accessibility of facilities for occupants as well as visitors.
 - i. Utilities - Show all utilities including solid and hazardous waste handling and disposal plans. Indicate proposed utility upgrades and new utilities necessary to support proposed development. It is preferable that utilities be located underground where practicable. In addition, where possible, utility distribution systems should be located to facilitate ease of access and future land use. Utility capacity in excess of five years should be evaluated on a life cycle cost basis.
 - j. Environmental Impacts - Analyze the potential impacts of all of the above on the environment, including natural resources, historic properties, waste management, etc.
 - k. Existing Resources - Determine the major natural and man-made elements that affect potential development, such as the physical features of the site, climate, environmental features, utilities, historic/archaeological features, natural amenities and visual quality, constraints, and opportunities. This includes environmental conditions (e.g., slopes, drainage patterns, wetlands, floodplains, wildlife, water quality, noise, etc.).



- l. Development Plan - Illustrate the proposed development of the site over the next 20 years, including the disposition of existing buildings, the infrastructure, new construction, and other improvements.
- m. Energy Conservation - Establish energy conservation strategies and policies as they relate to siting and design of buildings, transportation practices, and renewable energy resources.
- n. Site Development Standards - Establish campus development guidelines and design standards. Include specific site element recommendations such as building density, setback, and height restrictions or buffer requirements. The plan should address the order of magnitude of building scale and orientation.
- o. Implementation - Illustrate phasing strategies for the implementation of the Master Plan over the next 20 years. Operating Divisions are also encouraged to develop a Capital Improvements Plan (CIP) element for each Master Plan that addresses sequencing and phasing of construction requirements. The CIP should forecast and schedule future capital facility needs to ensure that capital improvements are available when required based on needs identified in the Master Plan. The six-year CIP should be reassessed on an annual basis.
- p. Interrelationship - Describe the relationship of the Master Plan to applicable local, regional, state, and federal development plans and policies. Address off-site improvements to support on-site development.

3-1-30 REPORTING REQUIREMENTS

A. Master Plan Submittals

Master Plans are developed by Operating Divisions, generally with the assistance of an outside contractor. The plans typically are developed in two phases, as described below.

1. Draft Master Plan - The Draft Master Plan is a complete planning document containing all of the information required of a Master Plan, including draft environmental documentation. The document is reviewed internally by OPDIV staff and the HHS Capital Investment Review Board (CIRB) prior to its distribution to outside agencies and the general public for review.
2. Final Master Plan - A Final Master Plan report shall be prepared upon completion of all internal HHS reviews and public reviews, if required. The OPDIV's environmental determination, consisting of either a determination of categorical exclusion, a Finding of No Significant Impact resulting from an Environmental Assessment, or an Environmental Impact Statement and Record of Decision should accompany the final plan. Master Plans normally require, at a minimum, the preparation of an Environmental Assessment.

B. MASTER PLAN APPROVAL

Because of the future programmatic and funding implications, the OPDIV head and the HHS Capital Investment Review Board (CIRB) shall approve Master Plans.



SECTION 3-2: ENVIRONMENTAL IMPACT ANALYSIS PROCEDURES

3-2-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)
X3-2-A	Sample Environmental Assessment Criteria Check List (NIH)
X3-2-B	Sample Categorical Exclusion Criteria Checklist (NIH)
X3-2-C	Sample NEPA Flow Chart (NIH)

3-2-00 POLICY

The National Environmental Policy Act (NEPA) of 1969 (42 USC 4321 et. seq.), as amended, establishes policy and requirements governing all Federal Departments and agencies with respect to protecting the environment. In addition, HHS General Administration Manual, [GAM, Part 30 - Environmental Protection - February 2000](#) supplements specific requirements established by NEPA and by the associated implementing regulations promulgated by the Council on Environmental Quality (CEQ) (40 CFR 1500-1508). NEPA requires all Federal Departments and agencies to take into account all potential environmental consequences of their activities prior to initiation of these activities. Specifically, Section 102(2)(c) of NEPA requires all agencies of the Federal Government to include an environmental impact statement "in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment."

3-2-10 PROCEDURES

All projects must have an Environmental Review when pursuing a major Federal action, unless they qualify for a categorical exclusion from this requirement. 'Categorical exclusion' refers to a category of actions, which do not individually or cumulatively have a significant effect on the human environment and therefore, are excluded from the requirement for an environmental assessment or an environmental impact statement. See HHS GAM [Chapter 30-20-40](#). Note, each OPDIV is responsible for developing its own procedures to meet the NEPA requirements in accordance with GAM 30-20-50. All construction is included in the environmental review process. CEQ regulations require each Department to establish criteria for determining categorical exclusions from such reviews. Each HHS OPDIV must determine those actions that qualify as categorical exclusions. The OPDIV categorical exclusion should be followed for the environmental review of construction actions. Generally, the agencies should prepare an Environmental Assessment (EA), in accordance with the sample checklist provided as Exhibit X3-2-A, for each proposed action not categorically excluded. As a result of the EA, prepare either a Finding of No Significant Impact (FONSI) or an Environmental Impact Statement (EIS). An example Categorical Exclusion Criteria Checklist (developed for NIH) is provided as X3-2-B.

A. ENVIRONMENTAL REVIEW PROCEDURES

An OPDIV/STAFFDIV must conduct environmental reviews with respect to all proposed actions that are subject to an environmental statute or Executive Order, which do not fall under categorical exclusion type 1, 2, or 3. See HHS GAM [Chapter 30-20-50](#).



3-2-20 GUIDANCE AND INFORMATION

A. ENVIRONMENTAL LAWS AND EXECUTIVE ORDERS

Listed below are some of the major environmental laws that deal with potential environmental effects from the HHS facilities construction program. A more complete list of applicable laws and executive orders is contained in HHS, GAM Chapter 30-00-20.

1. The National Environmental Policy Act of 1969 (NEPA) (42 USC 4321 et. seq.). A sample NEPA flowchart is provided as Exhibit X3-2-C.
 - a. establishes a comprehensive policy for protection and enhancement of the environment by the Federal government,
 - b. creates the CEQ, and
 - c. directs Federal agencies to carry out the policies and procedures of the Act.
2. The Safe Drinking Water Act (42 USC 300f et seq.) authorizes Environmental Protection Agency (EPA) to determine if an action which will have an environmental effect on a sole or principal drinking water source would also constitute a significant hazard to a human population and, if so, to prohibit such an action.
3. The Clean Air Act (42 U.S.C. 7401 et seq) requires EPA to review and comment on a Federal agency action which would create a significant environmental impact.
4. The Endangered Species Act (16 USC 1536) directs Federal agencies to conserve endangered and threatened species and their critical habitats.
5. The National Historic Preservation Act of 1966 as amended (16 USC 470 et seq.) directs heads of Federal agencies to preserve cultural heritage, particularly with respect to sites on/or eligible for listing on the National Register of Historic Places.
6. The Archeological and Historic Preservation Act (16 USC 469 a-1 et seq.) directs Federal agencies to preserve significant scientific, prehistorical, historical and archeological data.
7. The Coastal Zone Management Act (16 USC 1456 et seq.), directs Federal agencies to conduct activities consistent with an approved State coastal zone management program.
8. The Wild and Scenic Rivers Act (16 USC 1278) directs Federal agencies to consider and preserve the values of wild and scenic areas in the use and development of water and land resources.
9. Toxic Substance Control Act (15 USC 2601, et. seq.) requires agencies to develop plans to insure ultimate safe disposal of toxic substances.
10. Solid Waste Disposal Act (42 USC 6901, et seq.) sets responsibilities with the originator for proper handling and disposal of solid wastes.
11. Executive Order 11990 May 24, 1977, directs heads of Federal agencies to avoid
 - a. The long- and short-term adverse impacts associated with the destruction or modification of wetlands and
 - b. Direct or indirect support of new construction in wetlands whenever there is a practical alternative.



12. Executive Order 11988 May 24, 1977, directs Federal agencies to take action to avoid the occupancy or modification of floodplains and to avoid direct or indirect support of development in floodplain areas whenever there is a practical alternative.
13. Executive Order 12088 October 13, 1978, directs Federal agencies to comply with local state and Federal pollution control standards for facilities operation. This means that HHS facilities and sites may potentially be subject to numerous State and other environmental laws.

B. ENVIRONMENTAL DOCUMENTATION

General - In order to identify the extent of required documentation, an Environmental Review must be conducted. For environmental issues that are not categorically excluded, then an Environmental Assessment (EA) shall be done to determine the need for either a FONSI or EIS. In preparing the assessment, it is necessary to identify clearly the environmental effects and the changes that would occur if the action were taken. Construction actions on occasion may require different approaches for developing environmental information. It is not unusual to have a construction action underway, e.g., in the early budgeting and planning stages, and not have site selection finalized. Therefore, on construction projects the EA may be prepared at different stages by sources such as a Planning Consultant, Architect/Engineer or non-government agency. (See sample Environmental Assessment Criteria Checklist, Exhibit X3-2-A).

1. Finding of No Significant Impact (FONSI) - For the purposes of NEPA, a FONSI documents an agency judgment that a proposed construction action not categorically excluded from NEPA requirements will not significantly affect the quality of the human environment. A FONSI must meet the criteria described in HHS GAM Section 30-50-45 and, in addition:
 - a. Include a list of agencies and persons to whom distributed;
 - b. Briefly present why the proposed action will not significantly affect the human environment, including the EA or a summary thereof; and
 - c. Be made available to the public and other interested parties including, when appropriate, publication in the Federal Register of a notice announcing its availability, consistent with 40 CFR 1506.6(b) and 1501.4 (3) (2).
2. Environmental Impact Statement (EIS)
 - a. General - The agency head or his/her designee responsible for carrying out a specific action is responsible for preparation of the EIS associated with the construction action.
 - b. Public Interface Requirements - The HHS OPDIV should be aware of the extensive Public Notice and other requirements associated with EIS preparation under 40 C.F.R. 6.400. See HHS GAM Section 30-50-70 for detailed procedures and requirements.
 - c. EIS Format/Contents - The format and content of the EIS shall conform with 40 C.F.R. 6.200 and the requirements of 40 CFR 1502. If a proposed action will also affect a cultural or natural asset (as defined in the related acts), the statement shall incorporate the material required by the applicable related acts. Specific details and related information for the prescribed format and contents of an EIS is contained in HHS GAM Section 30-50-65, and applicable HHS/OPDIV Environmental Regulations.
3. Record of Decision - When an OPDIV/STAFFDIV reaches a decision on a proposed action after preparing an EIS, the responsible official shall prepare a concise public record of decision which includes:
 - a. The decision;



- b. All alternatives considered, specifying the alternative or alternatives, which were considered to be environmentally preferable;
- c. A discussion of factors, which were involved in the decision, including any essential considerations of national policy, which were balanced by the organization in making its decision and a statement of how those considerations entered into its decision;
- d. A statement of whether all practicable means to avoid or minimize potential environmental harm from the alternative selected have been adopted, and if not, why they were not;
- e. A description of mitigation measures that will be undertaken to make the selected alternative environmentally acceptable;
- f. A discussion of the extent to which pollution prevention is included in the decision and how pollution prevention measures will be implemented; and
- g. A summary of any monitoring and enforcement program adopted for any mitigation measures.



Proposal to ... (brief description of the proposed action)
 NIH ENVIRONMENTAL ASSESSMENT CRITERIA (Updated January 18, 2001)

I.	USE OF NATURAL RESOURCES			
	This set of criteria is concerned with the accessibility of nonrenewable natural resources such as land, mineral, and fuels, which are constantly renewed but in which short-term or local shortages might occur.			
	CRITERIA Does the project:	IMPACT		DESCRIPTION OF ENVIRONMENTAL IMPACT
		YES	NO	
(1)	change traditional use of the land parcel (by rezoning, etc.)?			
(2)	alter use of other land by related development of stores, roads, or site changes?			
(a)	generate new stores?			
(b)	cause new roads?			
(c)	cause new parking?			
(3)	use land for purposes unsuitable to its physical characteristics?			
(4)	include the use of wetlands (swamps, marshes, etc.)?			
(5)	include construction in a floodplain?			
(6)	include the use of significant agricultural lands?			
(7)	block access to known mineral deposits?			
(8)	increase fuel and mineral consumption in state by more than 1% annually?			
(9)	decrease the volume of water in a lake, river, water table, reservoir, etc.?			
(10)	change traditional use of a body of water?			
(11)	divert from local and state land use planning?			



II.	POLLUTION			
	<p>This set of criteria is concerned with the processes which generate pollution. These include the introduction of pollutants into the environment, changes in the flow of energy through the environment, and changes in the composition of environments through the augmentation or deletion of substances which are naturally present. The criteria are also directly concerned with the production and one-time use of materials and the proper disposal of wastes.</p>			
	CRITERIA Does the project:	IMPACT		DESCRIPTION OF ENVIRONMENTAL IMPACT
		YES	NO	
(1)	increase identifiable air pollution levels from a new emission source or from existing sources?			
(2)	increase identifiable ambient air pollution levels through a major increase in the number of or use of automobiles, trucks, etc.?			
(3)	exceed city or state health standards for exhausts from fume hoods?			
(4)	involve:			
(a)	dredging or swamp drainage?			
(b)	construction of a waste treatment plant?			
(c)	discharge of untreated human waste directly into a lake, river, etc.?			
(5)	overload existing waste treatment plants due to new loads (volume, chemicals, toxicity, etc.)?			
(6)	cause soil erosion (after completion of construction phase) or leaching of foreign substances (such as salt) into the soil?			
(7)	allow seepage of contaminants into the water table?			
(8)	increase the stress placed upon an identified earthquake fault?			



II. POLLUTION - (Continued)				
	CRITERIA Does the project:	IMPACT		DESCRIPTION OF ENVIRONMENTAL IMPACT
		YES	NO	
(9)	create an identifiable change in aquatic life by discharge of hot water?			
(10)	decrease the percolation on over one acre of land?			NIH will adhere to the Erosion and Sediment Control Guidelines and Stormwater Management Guidelines issued by the Maryland Department of the Environment.
(11)	cause storm water runoff onto the land owned by others?			
(12)	produce noises considered offensive to a human population, i.e., over 55 decibels (dB) A-weighted L_{dn} - day/night average sound levels with a 10-dB penalty applied to nighttime (10 p.m. to 7 a.m.) activities at the property boundary? produce cumulative adverse noise effects in conjunction with existing noise sources?			
(13)	create sounds which result in changes in behavior patterns of animals and/or humans (high/low noise frequencies)?			
(14)	introduce new sources of hazardous/toxic wastes			
(15)	introduce new sources of radiation?			
(16)	cause shock waves and/or vibration (after construction phase)?			
(17)	change the direction and wind velocity as to affect the local population (i.e., high-rise building)?			
(18)	cause a new, large volume of production of non-recycled items?			



II. POLLUTION - (Continued)				
	CRITERIA	IMPACT		DESCRIPTION OF ENVIRONMENTAL IMPACT
	Does the project:	YES	NO	
(19)	result in the non-recycling of recyclable items such as laboratory glassware, animal cages and office paper?			
(20)	generate solid wastes which cannot be properly disposed of by existing facilities?			
(21)	dispose of solid wastes in polluting landfills, wells, caves, etc.?			
(22)	require storage of wastes pending technology for safe disposal?			
(23)	fail to comply with Federal, State and local requirements for waste handling, transportation or disposal methods?			



Proposal to ... (brief description of the proposed action)
NIH Environmental Assessment Criteria (Updated January 18, 2001)

III.	POPULATIONS This section of the criteria addresses changes in human, animal, and plant populations.	NOTE: In this part of the criteria, the affected area is defined as being greater than 160 acres in size.		
	CRITERIA Will the action cause:	IMPACT YES NO		DESCRIPTION OF ENVIRONMENTAL IMPACT
(1)	a 5% change in the density of the local population?			
(2)	health, education and/or welfare services to be altered?			
(3)	social service needs to change by altering populations's age pattern (new schools, etc.)?			
(4)	a change in the transient population by 5%?			
(5)	a scientific alteration (genetic engineering) of the structure of genetic material in a living organism directed at human or other populations?			
(6)	local, state or federal standards pertaining to population densities or conservation of plants and animals to be violated?			



IV.	<p>HUMAN SERVICES</p> <p>As society has evolved, traditional self-sufficient human communities have given way to dense populations which are dependent upon the development and application of technology. Man's highly complex, technological environments are maintained by a variety of services, ranging from the provision of the basic necessities of food and water to a complex system of economic exchange. These services are largely interdependent and their complexities must be considered.</p>	NOTE:		In this part of the criteria, the affected area is defined as being less than 160 acres in size.
	<p style="text-align: center;">CRITERIA</p> <p>Could the action disrupt:</p>	<p style="text-align: center;">IMPACT</p> <p style="text-align: center;">YES NO</p>		<p style="text-align: center;">DESCRIPTION OF ENVIRONMENTAL IMPACT</p>
(1)	food supplies for 48 hours?			
(2)	water supplies for over 48 hours?			
(3)	electrical power for 48 hours?			
(4)	heating supplies (natural gas, heating oil) for over 48 hours?			
(5)	or deprive population of housing for over 48 hours?			
(6)	removal of sewage for more than 12 hours?			
(7)	removal of solid waste (trash) for more than seven (7) days?			
(8)	existing health service response in case of a disaster?			
(9)	mail, radio, telegraph, telephone, or television service for over two (2) weeks?			
(10)	transit service for more than two (2) weeks?			



IV. HUMAN SERVICES - (Continued)				
	CRITERIA	IMPACT		DESCRIPTION OF ENVIRONMENTAL IMPACT
	Does the action use more than 5% of:	YES	NO	
(1)	remaining electrical capacity?			
(2)	remaining water?			
(3)	available capacity of the sewage treatment system (branch lines, mains, plants)?			
(4)	available capacity of trash disposal system (collection, incinerator plant, landfill)?			
(5)	available heating fuel (gas, coal, or heating oil)?			
	Does action decrease:			
(1)	food delivery system by removal of retail food stores, etc., by 5%?			
(2)	area's domestic housing by demolition, closing, etc., by 5%?			
(3)	use of existing transit systems (bus, train, etc.) by more than 5%?			
(4)	accessibility to routine health services by altering point of service delivery?			
	Will action:			
(1)	increase the patient load of the area's routine health care services by more than 5%?			
(2)	change the availability of social services by opening or closing facilities?			



IV. HUMAN SERVICES - (Continued)				
	CRITERIA	IMPACT		DESCRIPTION OF ENVIRONMENTAL IMPACT
	Will the action:	YES	NO	
(3)	increase or decrease the number of social services recipients by more than 5% (by unemployment)?			
(4)	increase the annual volume of telephone, telegraph, or mail by more than 5%?			
(5)	eliminate employment sources for 10% of the population?			
(6)	change school enrollment by more than 5%?			

V. HUMAN VALUES				
The fifth set of criteria is directed toward human values concerning the quality of the environment which are generally agreed upon to the extent that they are stated in statutes or regulations.				
	CRITERIA	IMPACT		DESCRIPTION OF ENVIRONMENTAL IMPACT
	Will the action:	YES	NO	
(1)	encroach upon any historical, architectural, or archaeological cultural property?			
(2)	affect any endangered species?			
(3)	violate local, state, or federal standards on aesthetics, odor, or noise?			



Proposal to ... (brief description of the proposed action)
NIH Environmental Assessment Criteria (Updated January 18, 2001)

V. HUMAN VALUES - (Continued)				
	CRITERIA	IMPACT		DESCRIPTION OF ENVIRONMENTAL IMPACT
	Will the action:	YES	NO	
(4)	use criteria, methods, or practices that would discriminate on the basis of race, color, religion, gender, national origin, age, disability, or sexual orientation?			
(5)	effect the environmental, human health, economic and/or social status of minority and/or low-income communities?			
(6)	exclude the opportunity for the public, including minority communities and low-income communities, to have adequate access to public information relating to human health or environmental planning, regulations, and enforcement pursuant to the Freedom of Information Act, the Sunshine Act, and the Emergency Planning and Community Right-to-Know Act?			
(7)	preclude the affected communities access to meetings, crucial documents and notices and opportunities for input during the planning process to identify potential effects and mitigation measures?			



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Proposal to ... (brief description of the proposed action)

CATEGORICAL EXCLUSION CRITERIA CHECKLIST

I.	CATEGORY #1 -- General Exclusions Subject to a review for extraordinary circumstances, NIH will not perform an environmental review of actions excluded by regulation from NEPA review. NIH will also not perform an environmental review of actions categorically excluded from NEPA review in DHHS GAM Chapter 30.	NOTE: If the answer to any of the questions in Category #1 is "YES", the action <u>may</u> be categorically excluded from further NEPA review.		
	CRITERIA	YES	NO	EXPLANATION
(1)	Does a law or statute grant an exception, unless precluded by an OPDIV/STAFFDIV regulation?			
(2)	Have the courts found that the action does not require environmental review?			
(3)	Does the action implement actions outside the territorial jurisdiction of the United States and are such actions excluded from review by Executive Order 12114?			



<p>II.</p>	<p>CATEGORY #2 -- Functional Exclusions</p> <p>The following actions are normally excluded from NEPA review, subject to a review for extraordinary circumstances.</p>	<p>NOTE: If the answer to any of the questions in Category #2 is "YES", the action <u>may</u> be categorically excluded from further NEPA review.</p>		
	<p>CRITERIA</p> <p>Does the proposed action fall under any of the following categories:</p>	<p>YES</p>	<p>NO</p>	<p>EXPLANATION</p>
(1)	<p>Routine administrative and management support, including legal counsel, public affairs, program evaluation, monitoring, and individual personnel actions?</p>			
(2)	<p>Information technology management</p>			
(3)	<p>Education and training grants and contracts except projects involving construction, renovation and/or changes in land use?</p>			
(4)	<p>Grants for administrative overhead support?</p>			
(5)	<p>Grants for social services except projects involving construction, renovation, and changes in land use?</p>			
(6)	<p>Liaison functions?</p>			
(7)	<p>Maintenance, except for properties on or eligible for listing on the National Register of Historic Places?</p>			
(8)	<p>Statistics and information collection and dissemination?</p>			



II.	CATEGORY #2 (continued) Functional Exclusions	NOTE: If the answer to any of the questions in Category #2 is "YES", the action may be categorically excluded from further NEPA review.		
	CRITERIA Does the proposed action fall under any of the following categories:	YES	NO	EXPLANATION
(9)	Adoptions of regulations and guidelines pertaining to the above activities?			
(10)	Routine administrative and management support, including budget and finance, planning, procurement of supplies and services, management and oversight of grants and other funding instruments, legal counsel, public affairs, program evaluation, travel, and human resources management.			
(11)	Maintenance, including repairs necessary to ensure the operation of existing facilities, grounds maintenance, and the decontamination of laboratory or other space and equipment.			
(12)	Acquisition of space by lease and modifications of leases, when the use of the space will comply with all applicable Federal, State, and local laws, including all environmental protection and zoning laws, and lease extensions and terminations.			
(13)	Relocation of employees into existing Government-owned or Government-leased space.			
(14)	Facility planning and design.			



II.	CATEGORY #2 (continued) Functional Exclusions	NOTE: If the answer to any of the questions in Category #2 is "YES", the action <u>may</u> be categorically excluded from further NEPA review.		
	CRITERIA Does the proposed action fall under any of the following categories:	YES	NO	EXPLANATION
(15)	Construction, or construction pursuant to a lease, of 12,000 square feet or less of occupiable space.			
(16)	Interior construction and renovation of NIH facilities.			
(17)	The acquisition, sale, release, disposal, abandonment, closure, or transfer of real or personal property, provided that the action does not violate applicable Federal, State, or local laws, including historical preservation laws.			
(18)	Acquisition of equipment and the repair or replacement of NIH-owned equipment.			
(19)	Acquisition, installation, maintenance, and operation of utility and communications systems, data processing cables, and similar electronic equipment.			
(20)	Packaging, storage, and disposal of hazardous substances, including low-level radioactive, medical, and chemical waste materials generated by intramural research activities, provided that the waste is packed, stored, and disposed of in compliance with all applicable Federal, State, and local laws.			



II.	CATEGORY #2 (continued) Functional Exclusions	NOTE: If the answer to any of the questions in Category #2 is "YES", the action <u>may</u> be categorically excluded from further NEPA review.		
	CRITERIA Does the proposed action fall under any of the following categories:	YES	NO	EXPLANATION
(21)	The identification, collection, testing, and distribution of chemicals, drugs, biologicals, plants or plant derivatives, microorganisms, and/or cell cultures for use in the research, diagnosis, and/or treatment of human diseases.			
(22)	Research and training activities that are conducted in NIH facilities: By or under the supervision of NIH employees; under the Stevenson-Wydler Technology Innovation Act of 1980, as amended, 15 U.S.C. 3701 et seq.; or in accordance with 45 CFR part 9.			
(23)	The issuance of revocable licenses, use permits, and easements allowing outside parties to use NIH facilities.			
(24)	Filing for, obtaining, licensing, enforcing, and protecting intellectual property rights arising from NIH-conducted or NIH-supported research or other activities.			
(25)	Actions taken to comply with requirements of applicable legislation or regulations (e.g., meet emissions requirements established pursuant to Clean Air Act).			



II.	CATEGORY #2 (continued) Functional Exclusions	NOTE: If the answer to any of the questions in Category #2 is "YES", the action <u>may</u> be categorically excluded from further NEPA review.		
	CRITERIA	YES	NO	EXPLANATION
(26)	The preparation and submission of proposals for legislation, or major recommendations or reports to Congress on proposals for legislation, that, based on reasonable judgment, will not establish or modify programs that will have a significant effect on the quality of the human environment.			
(27)	The awarding, renewal, suspension, termination, or discontinuance of: Collaborative research agreements, including Cooperative Research and Development Agreements (CRADA) established under the Stevenson-Wydler Technology Innovation Act of 1980, as amended, 15 U.S.C. 3701 et seq.; contracts; cooperative agreements; grants; and interagency agreements entered into by the NIH pursuant to the Economy Act, 31 U.S.C. 1535. For those contracts, cooperative agreements, grants, and interagency agreements that involve construction of more than 12,000 square feet of occupiable space, recipients of NIH funds must certify that they are in compliance with all Federal, State, and local environmental laws and must, as prescribed by NIH, perform all environmental reviews required by NEPA, including preparing environmental assessments and, if necessary, environmental impact statements, and submit these documents to the NIH for review, approval and adoption.			



II.	CATEGORY #2 (continued) Functional Exclusions	NOTE: If the answer to any of the questions in Category #2 is "YES", the action <u>may</u> be categorically excluded from further NEPA review.		
	CRITERIA	YES	NO	EXPLANATION
(28)	All actions undertaken in preparing for and conducting litigation.			
(29)	The collection, processing, retention, evaluation and dissemination, including publication, of data and other information, including the acquisition and management of resources necessary to carry out those functions.			
(30)	Proposing and adopting guidelines.			
(31)	Traffic management measures, including the installation and operation of traffic control and safety devices and actions designed to control or reduce the number of motor vehicles coming onto the NIH Bethesda campus.			
(32)	Actions taken to respond to public health emergencies.			



III.	<p>CATEGORY #3 -- Program Exclusions</p> <p>The DHHS procedures on environmental review of agency actions authorize the establishment of a categorical exclusion for programs within an agency that will not have a significant effect on the human environment. Actions taken by the following NIH organizations and their components normally are excluded from NEPA review, subject to a review for extraordinary circumstances. Actions taken by any successor organizations to those listed will also be categorically excluded. Actions taken by organizations of NIH not listed in this category may be included in other categories of excluded actions.</p>	<p>NOTE: If the answer to any of the questions in Category #3 is "YES", the action may be categorically excluded from further NEPA review.</p>		
	CRITERIA	YES	NO	EXPLANATION
(1)	Center for Information Technology			
(2)	Center for Scientific Review			
(3)	Fogarty International Center			
(4)	Office of Administration			
(5)	Office of Communications			
(6)	Office of Equal Opportunity			
(7)	Office of Education			
(8)	Office of Community Liaison			
(9)	Office of Loan Repayment and Scholarship			
(10)	Office of Human Resources Management			
(11)	Office of Financial Management			
(12)	Office of Technology Transfer			
(13)	Office of Program Coordination			
(14)	National Library of Medicine			



IV.	CATEGORY #4 -- Extraordinary Circumstances Consistent with CEQ's regulations, environmental review is required for all NIH actions involving extraordinary circumstances. Following are examples of extraordinary circumstances that may apply to specific NIH actions.	NOTE: If the answer to any of the questions in Category #4 is "NO", the action <u>may be partially</u> excluded from further NEPA review.		
	CRITERIA	YES	NO	EXPLANATION
(1)	Greater scope or size than other actions included within a category.			
(2)	A threatened violation of a Federal, State, or local law established for protection of the environment or for public health and safety.			
(3)	Potential effects of the action are unique or highly uncertain.			
(4)	Potential effect on a protected or ecologically sensitive area of land, like a wetland or floodplain.			
(5)	Possible impact on property that is listed or eligible for listing on the National Register of Historic Places or that is otherwise of scientific, cultural, or historic importance or interest.			
(6)	Possible impact on endangered or threatened species.			
(7)	Use of especially hazardous substances or processes for which adequate and accepted controls and safeguards are unknown or not available.			
(8)	Substantial and reasonable controversy exists about the environmental effects of the action.			

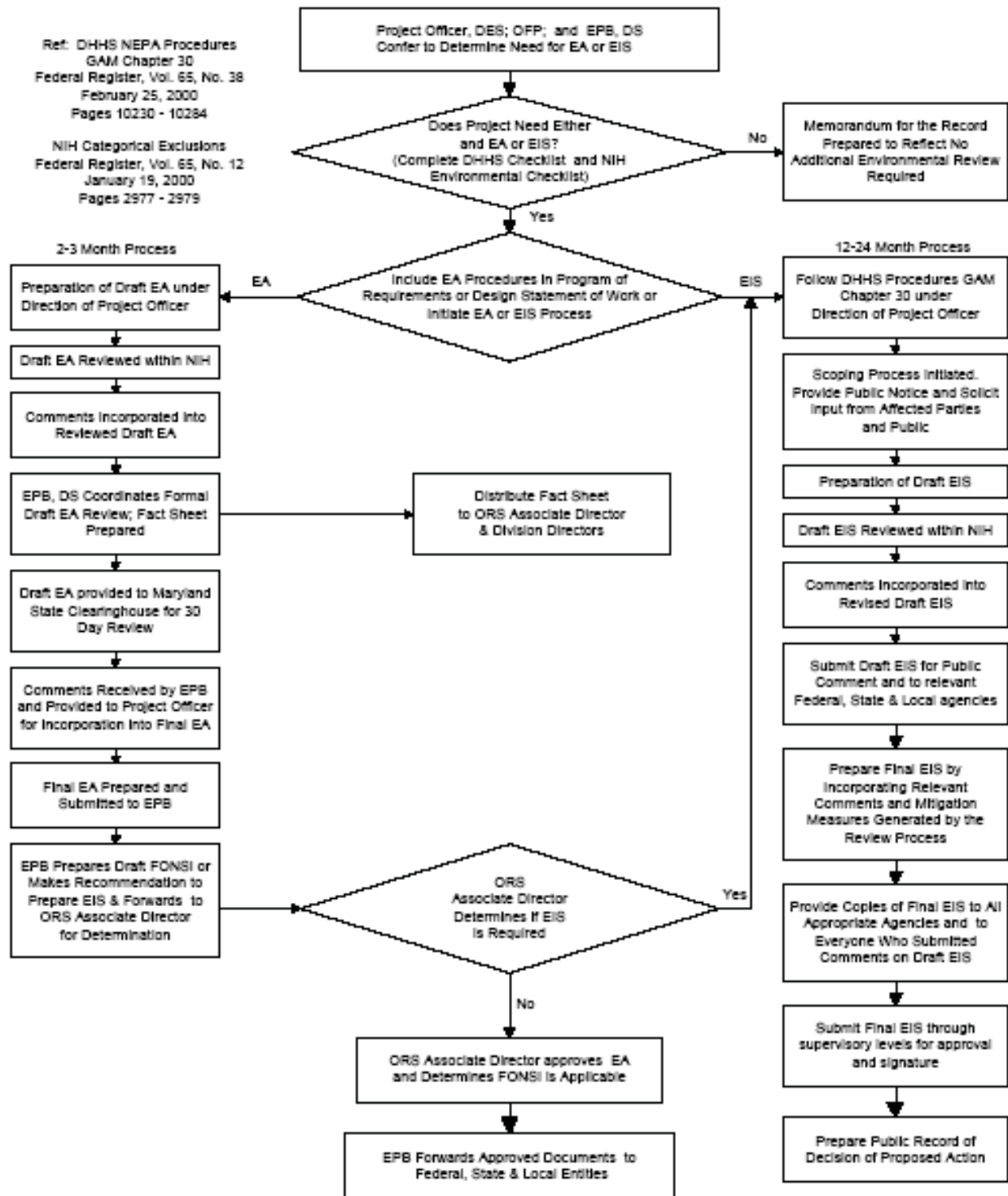


V.	Summary	NOTE: If the answer to any of the questions the Summary is "YES", the action <u>may</u> be <u>partially</u> excluded from further NEPA review.		
	CRITERIA	YES	NO	EXPLANATION
(1)	Does the proposed action produce environmental effects with respect to only a few, but not all, of the environmental acts?			
(2)	Is a previously conducted environmental assessment (EA) or environmental impact statement (EIS) broad enough to satisfy the NEPA requirements for the current proposed action?			
(3)	Is the proposed action a response that must be implemented within thirty (30) days to an emergency health situation?			
(4)	Does the law require the proposed action to be taken within thirty (30) days?			
	After substantive review (by first completing the attached NIH Environmental Assessment Criteria checklist) can it be determined that the program or proposed action normally:			
(5)	Will NOT significantly affect the human environment (as defined by NEPA)?			
(6)	Will NOT affect an asset (as defined in the applicable environmental statute or Executive Order) regardless of location or magnitude of the action?			



National Environmental Policy Act (NEPA)

revised January 10, 2001







SECTION 3-3: HISTORIC AND ARCHEOLOGICAL PRESERVATION

3-3-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)
X3-3-A	Sample 106 Report, NIH George Freeland Peter Estate
X3-3-B	Sample Memorandum of Agreement, NIH Building 6

3-3-00 POLICY

HHS facility projects shall comply with Section 106 and Section 110 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR 800. Each Federal agency is required to identify potential National Register of Historic Places (NRHP) eligible properties in accordance with Section 110, which it owns, or otherwise controls and must nominate such potentially eligible properties to the NRHP. Prior to the approval of the expenditure of any Federal funds, the HHS OPDIV shall take into the account the effect of an undertaking on any district, site, building, structure object that is included or eligible for inclusion into the NRHP. The State Historic Preservation Officer or Tribal Historic Preservation Officer and Advisory Council on Historic Preservation shall be provided an opportunity to comment with regard to such undertaking.

3-3-10 PROCEDURES

A. NATIONAL REGISTER CRITERIA FOR ELIGIBLE PROPERTIES

The criteria for evaluating a property's eligibility for listing in the National Register are as follows. The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and

1. that are associated with events that have made a significant contribution to broad patterns of our history; or
2. that are associated with the lives of persons significant in our past; or
3. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. that have yielded, or may be likely to yield, information important in prehistory or history. [36 CFR 60.4]

B. ELIGIBILITY DETERMINATIONS

HHS agencies, in consultation with the State Historic Preservation Officer [SHPO] (or, in the event the Secretary of the Interior has determined that a specific Indian Tribe(s) may assume the functions of the State Historic Preservation Officer with respect to tribal lands on which the property is located, the Tribal Historic Preservation Officer [THPO]), shall apply the National Register Criteria for Eligibility to each property to determine if the property(ies) is (are) eligible for the NRHP. Where a federally recognized Indian tribe has not assumed the responsibilities of the SHPO on tribal lands, consultation with the Indian



tribe regarding actions occurring on such tribe's lands or effects on such tribal lands shall be in addition to and on the same basis as consultation with the SHPO.

If the SHPO/THPO fails to respond within 30 days of receipt of a request for review of a determination of eligibility, the agency official may either proceed to the next step in the process based on the finding or determination or consult with the ACHP in lieu of the SHPO/THPO. If the designated HHS agency official determines any of the National Register criteria are met and the SHPO/THPO agrees, the property shall be considered eligible for the National Register. If the OPDIV Federal Preservation Coordinator determines the criteria are not met and the SHPO/THPO agrees, the property shall be considered not eligible.

If the OPDIV Federal Preservation Coordinator and the SHPO/THPO do not agree, or if the ACHP or the Secretary of the Interior (Secretary) so request, the OPDIV Federal Preservation Coordinator shall submit a Nomination Form to the Department of the Interior requesting the Keeper of the National Register (Keeper) to make a decision concerning eligibility. If an Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to a property off tribal lands does not agree with the OPDIV Federal Preservation Coordinator's determination of eligibility, it may ask the ACHP to request the agency official to obtain a determination of eligibility. In the event a request for NRHP eligibility determination is submitted to the Keeper, no action may be taken until the Keeper responds or until 45 days have passed, whichever occurs first. Consultation with the ACHP can be conducted simultaneously. If the Keeper finds the property ineligible for the NRHP, the cultural identification process is complete.

C. DETERMINATION OF EFFECT ON HISTORIC PROPERTIES

The OPDIV Federal Preservation Coordinator will make a determination of potential effect on the historic property. The affects on historic properties are *no effect, no adverse effect, and adverse effect*. A finding of no adverse or adverse effect requires consultation with the SHPO and the ACHP. An example of a section 106 report is provided as exhibit X3-3-A. In some cases, a simple memorandum may be sufficient. A finding of an adverse effect will require a memorandum of agreement (MOA) with the SHPO. The MOA usually will have stipulations that the agency agrees to accomplish in order to mitigate the adverse effect(s) on historic property. An example of such an MOA is provided as exhibit X3-3-B. The OPDIV Federal Preservation Coordinator will coordinate the Section 106 process between the SHPO, the Advisory Council and the HHS. The OPDIV Federal Preservation Coordinator will negotiate and execute (within his or her authority) memorandums of agreements with the SHPO and the Advisory Council.

Any project that adversely affects HHS historic property must be designed in accordance with the Secretary of the Interior's Rehabilitation Guidelines. A registered architect must prepare the plans and specifications of the projects.

Note that all projects in the National Capital Region that are required to be reviewed by the National Capital Planning Commission must have a "determination of effect on historic property and the SHPO must have concurred with the determination before the Commission will act on the project.

D. HISTORIC REVIEWS

A historic review is an examination and analysis of potential effects on the property which might occur as a result of the proposed HHS construction action. A historic property may be affected whenever one or more of the following changes occur:



1. Physical characteristics are altered such as by re-grading of site, provision of handicapped access, changing any significant features of the property, remodeling, renovating, restoring, rehabilitating, repairing or any maintenance of the property that is not consistent with the Secretary's standards for the treatment of historic properties and applicable guidelines, and/or demolition of any buildings or any other portion of the property(ies).
2. The physical setting is altered such as extensive changes to nearby districts, sites or buildings.
3. The property is moved.
4. The use of the property is changed.
5. The level of activity occurring at the property changes.
6. The property becomes neglected which causes its deterioration.
7. The transfer, lease, or sale of property out of Federal ownership.

E. ARCHEOLOGICAL DATA

1. Construction Contract Specifications - HHS construction contracts involving excavation should include appropriate specifications to avoid excess claims in the event notification and recovery procedures associated with archeological data are required.
2. Notification - If continuing with the planned construction will bring about the irretrievable loss of significant scientific, archeological, historic or prehistoric data, the HHS OPDIV shall inform the Secretary of the Interior. If the Secretary does not respond within 60 days, the review is complete. If the Secretary offers to pay for the recovery of the data, he/she shall have at least six months to affect recovery.
3. Recovery - If a proposed action involves a Federal construction project or a federally licensed project, and the action will result in the irretrievable loss of scientific, archeological, or historic data, up to one percent of the project construction costs may be used to recover the data.

See 43 CFR 10.4 for requirements concerning inadvertent discovery of Native American remains or objects on Federal and tribal land under the Native American Graves Protection and Repatriation Act.

3-3-20 GUIDANCE AND INFORMATION

A. APPLICABILITY

1. Historic Preservation - Each proposed HHS construction action must be reviewed in order to determine whether it will affect a property that is on or may be eligible for the NRHP. This determination must be made by the HHS OPDIV Head or OPDIV Federal Preservation Coordinator. It is recommended that such determinations be made as early as possible in the planning and budgeting process.
2. Archeological Data Recovery - Since heavy construction equipment used for site excavation, etc., could destroy the construction site's soil stratigraphy, (which archeologists need in order to date and understand the context of any significant objects or artifacts that might be present), as well as affect the significant objects or artifacts themselves, an archeological survey of the site and reasonable portion of the surrounding Area of Potential Affect (typically 15-30 meters beyond the site's boundaries) should be undertaken as early as possible in the planning process. In any event, it is the responsibility of the HHS OPDIV involved to include proper construction specifications



for identification and contextual analysis recovery of artifacts. Potential for time delays and extra costs associated with artifact recovery should also be recognized in the process.

3. Native American Graves Protection and Repatriation Act: These regulations develop a systematic process for determining the rights of lineal descendants and Indian tribes and Native Hawaiian organizations to certain Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony with which they are affiliated. These regulations also pertain to the identification and appropriate disposition of human remains, funerary objects, sacred objects, or objects of cultural patrimony that are: (i) In Federal possession or control; or (ii) In the possession or control of any institution or State or local government receiving Federal funds; or (iii) Excavated intentionally or discovered inadvertently on Federal or tribal lands. See 43 CFR 10.4 for guidance.

B. ROLES AND RESPONSIBILITIES

1. Federal Preservation Officer: Section 110 of NHPA requires that each Federal agency designate a qualified official to coordinate the agency's preservation activities under NHPA.
2. State Historic Preservation Officer: State Historic Preservation Officers (SHPOs) administer the national historic preservation program at the State level, review National Register of Historic Places nominations, maintain data on historic properties that have been identified but not yet nominated, and consult with the OPDIV during the Section 106 review. SHPOs are designated by the Governor of their respective State or territory. The OPDIV seeks the views of the SHPO when identifying historic properties. The OPDIV also consults with SHPOs when developing Memorandums of Agreements (MOA).
3. The Advisory Council on Historic Preservation: The Advisory Council on Historic Preservation (Council) is responsible for commenting to the Agency Official on an undertaking that affects historic properties. The Council is an independent federal agency, established under NHPA.
4. Department of the Interior/National Park Service: The National Park Service (NPS) has no specifically stipulated role in the Section 106 process, but it performs a variety of pertinent functions, including the following: functions as a major land-managing agency; acts as a steward for historic areas in the National Park System; administers the Historic Preservation Fund grants-in-aid program, National Historic Landmarks program, Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), and the Certified Local Governments program; maintains the National Register of Historic Places; provides technical information and guidance; specifies standards for preservation-related activities that are often referenced in Section 106 agreement documents; and reviews State historic programs.
5. Keeper of the Register: The Keeper of the Register (Keeper) is an employee of the NPS and makes the final determination of eligibility for inclusion into the Register

SAMPLE 106 REPORT

BUILDING 16 (George Freeland Peter Estate)

Nature of the Undertaking

Building 16 is currently used as residence for international scientists and offices for the Fogarty International Center. The Peter House was built as the residence of George Freeland Peter in 1930 and is typical of the estates that were constructed along Rockville Pike. The building's historic features are intact; however, the windows have deteriorated and the building's mechanical and electrical systems are totally inadequate to support the administrative functions now housed in the facility. NIH proposes to replace exterior windows, mechanical and electrical systems.

Historic Significance

Synopsized History

The George Freeland Peter Estate is an example of the estates that were constructed along Rockville Pike in the early 20th century and is noteworthy for the role it now plays in the medical research community that now surrounds it. The land on which the estate is located was the site of Dr. Armistead Peter's summer home, "Winona", which stood at least until 1919. After Dr. Peter's death, his heirs divided the property into four parts. George Freeland Peter received parts of the tracts called "Huntington" and "Clagett's Purchase", known as lot #2, which contained 47+ acres of land.

George Freeland Peter

George Freeland Peter was noted in Episcopal Church hierarchy as the rector of St. James, assistant rector at St. Mark's and the associate rector at the Epiphany Episcopal Churches in Richmond, VA, and latter as the Chancellor of the Washington Cathedral. He was educated at a number of institutions, including Oxford University (United Kingdom), Columbian College (now George Washington University), the General Seminary (New York City), and Hampden-Sidney College. Upon graduation, he entered the Episcopal Church hierarchy in Washington, DC, and quickly rose in its ranks.

The Architect

The architect for the Peter Estate was Walter G. Peter, FAIA. He was the older brother of George Freeland Peter. He was born in 1868 into a prominent family in the Washington, DC area, and he was raised in the Peter family house, Tudor Place in Georgetown. Tudor Place is considered one of the most important monuments of domestic architecture in the Washington metropolitan area. Walter received his architectural education at the Massachusetts



Institute of Technology. Upon graduation in 1890, he joined the noted Washington architectural firm of Hornblower and Marshall, where he worked for a number of years as a draftsman.

In 1888, Walter G. Peter formed a partnership with William J. Marsh. During the 28 years of its existence, the firm of Marsh and Peter was responsible for such important commissions as the First Church of Christ Scientist, the Evening Star Building, the Walter Reed Hospital, the D.A.R. Administration Building, and the Convent of the Visitation. He was also the architect for several large residences in the Washington metropolitan area. In addition, they designed the Charles Corby estate now part of Georgetown Preparatory School. Following Marsh's death in 1926, Peter continued to practice alone. It was during this latter period of his career that he designed the Stone House for his brother.

Walter G. Peter was a Fellow of the American Institute of Architects, served on the boards of several local charitable organizations, and was a member of many prestigious clubs. He died in 1945.

Architectural Description

The Peter House is a fine example of the Colonial Revival Style, a style suited for domestic architecture, which swept the entire country at the beginning of the 20th century. The architecture is eclectic. Looking to history to establish their roots, Americans often borrowed the house types and ornaments that characterized the colonial buildings. The Peter House was built in 1930 and is typical of the estates that were constructed along Rockville Pike.



The Stone House is a two-story structure with basement and attic laid out in an "I" shape plan. It is a masonry and steel structure with wood framed partitions. The exterior of the house is uncoursed ashlar blocks of locally quarried blue stone, with corner quoins and wood trim. The house features steep slate roofs that are accented with pediment dormers.

The Stone House is both massive and elegant in its architectural character. The house appears to be symmetrical in massing with a center main mass flanked by two wings. The wings are connected to the main mass by a lower section where the roofline drops and second floor windows are dormers. The fenestration reflects the function of the house and is balanced by the symmetrical massing of the house.

The house is approached from the west off Center Drive. The west elevation is the front of the house. The house appears to be symmetrical except for the connectors. The north connector features a service door and two narrow 4 over 4 windows. The north wing is somewhat larger than

the south wing and projects further out to the west. The south elevation of the north wing on the west side of the house features a bay window on the first floor. The west elevation features a robust Georgian portico with a richly carved entablature supporting a segmented arch, supported in turn by two fluted columns. The wood panel door is flanked by fluted pilasters and surmounted by a fanlight. Three attic pediment dormers punctuate the roof of the main block. The second floor features three 8 over 8 windows set in jack arches that are aligned with the attic dormers. In between the window at the center there are two narrow 4 over 4 windows. On the first floor the entry is flanked by two 8 over 8 windows set in jack arches that are also aligned with the attic dormers. The north and south wing west elevations are essentially the same featuring gable ends that terminate with a chimney in the center. Both the first and second floors have two 6 over 6 window symmetrically aligned with two quarter circle windows at the top of the gable end.

The east elevation features a two-story portico that is composed of four two story Corinthian columns that support a blank frieze and pediment with oculus. The entrance is Georgian in character, consisting of a broken segmental arch pediment and fluted pilasters. The wood panel door is flanked by traceried sidelites and capped by a rectangular transom with a modified fanlight motif. On either side of the entrance, there is a narrow 4 over 4 double hung wood window. To either side of the portico there are two windows, still in the main mass of the elevation; each set into a segmental arch. Tripartite in configuration, the windows are composed of a center section that is an 8 over 8 double hung sash, flanked by narrow 2 over 2 windows. Lacking segmental arches, the second-floor windows are otherwise identical to those on the first floor. The north and south wing east elevations are different; however, they both feature gable ends that terminate with a chimney in the center. Both wings on the second floors have two 6 over 6 windows with two quarter circle windows at the top of the gable ends. The south wing features a large bay window with a copper roof on the first floor and the connector on the south wing features a 6 over 6 double hung window surmounted by a circle top window set in a stone arch. This window is flanked on both sides by a narrow 4 over 4 double hung windows. The first floor of the north wing features three 6 over 6 double hung windows.

The south wing features a large verandah that opens onto a formal garden. The central axis of the garden is framed with boxwood and holly, and delineated at its focal point by a fountain and a curved stonewall. An ornamental iron rail, providing a terrace for the second floor sitting room surmounts the verandah's flat roof, supported by ten columns. The north wing originally housed the kitchen and service areas for the house. Due to a one-story section that extends across the width of the wing, the north wing is slightly larger than the south wing.

The plan of the house reflects the colonial influence seen in the exterior design. The doors on the east and west elevations open into a central reception hall that extends the full width of the house, connecting to another wide hall that runs the length of the main mass along the west wall of the building. Pairs of fluted columns define the intersection of these two halls. A suspended stair with a curvilinear stair railing and finely turned balusters serves as the focal point of the north reception area. A parlor and dining room flank the central reception hall and are entered through double wood paneled doors with intricately carved surrounds. The fireplace mantels and ceiling moldings also display excellent craftsmanship executed in the colonial revival style.

The wings contain service stairs and several rooms each. The south wing is completely open and provides for assembly seating. The north wing holds the kitchen, butler's pantry, elevator, men's lounge, office and a library. The library, office, and butler's pantry all retain some of their original features, such as mantelpieces, moldings, and cabinets.



The second floor contains seven bedrooms most with private baths, sitting rooms, and servant's quarters which all open off a long narrow central hallway. These rooms are currently used as scholar's studies or administrative offices. Movable, temporary partitions have been added to provide privacy screens for the scholars sharing single spaces. One room to the north wing has been converted into a kitchen. The attic has been partitioned into offices.

The interior of the house was sympathetically rehabilitated in the early 1960s, following alterations made to the structure when NIH initially occupied it. All moldings and mantelpieces were repaired and rooms, which have been dramatically partitioned, were returned to their original configurations. In 1989, the first floor of the house was redecorated to accentuate its colonial revival character.

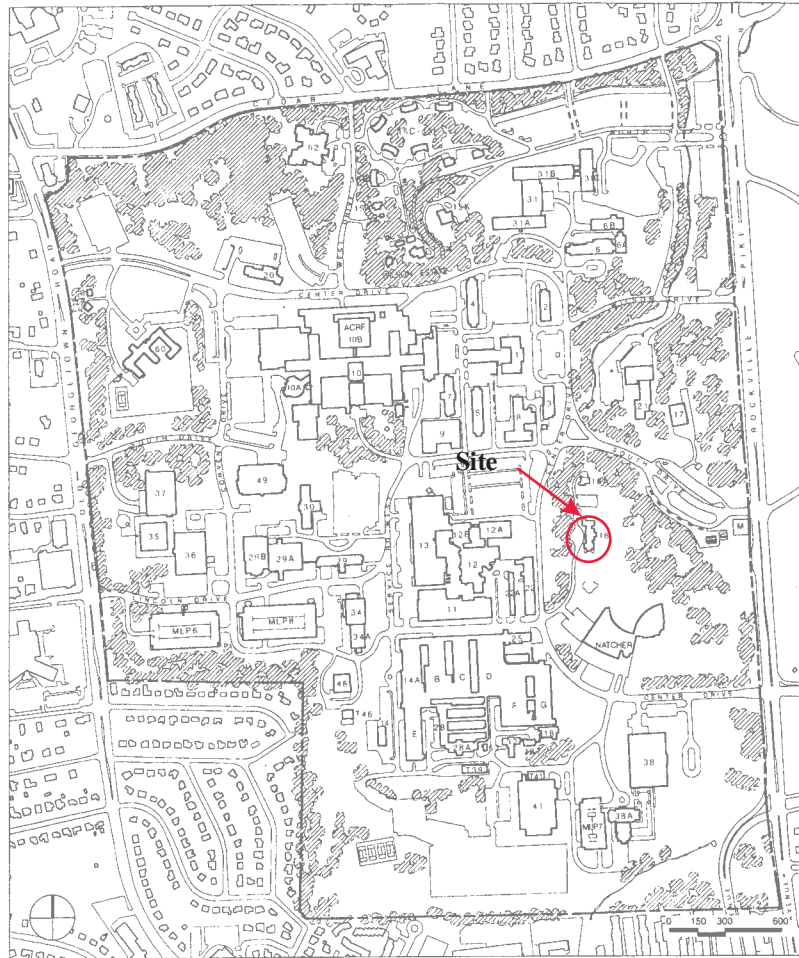
Statement of Eligibility for the National Register of Historic Places

The Peter Estate is eligible for listing on the national register of Historic Places under Criteria B and C at the local level of significance. The Peter Estate is significant in American history and architecture; possesses integrity of location, design, setting, materials, workmanship, and feeling; is associated with events associated with the lives of persons significant in our past; designed by a master; and embodies the distinctive characteristics of a type of country estate found in the Washington Suburban Area.

Determination of Affect

I have reviewed the plans for the undertaking and I have determined that there is no adverse affect on historic property.

NIH Federal Preservation Officer





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SAMPLE MEMORANDUM OF AGREEMENT

Submitted to the Advisory Council on Historic Preservation, Pursuant to 36 CFR 800.6(a)
February 1998

Whereas the National Institutes of Health (NIH) has determined that the existing mechanical systems in Building 6 (National Cancer Institute) are functionally obsolete and cannot be economically maintained or rehabilitated;

Whereas the NIH has determined that the existing laboratory configuration cannot support today's state-of-the-art biomedical research;

Whereas the NIH proposes to replace the functionally obsolete mechanical system with a new state-of-the-art mechanical system;

Whereas the NIH proposes to demolish the interior of Building 6 and construct new laboratories to support today's NIH biomedical research needs.

Whereas NIH has determined that the construction of the new mechanical system will have an effect on Building 6, a contributing resource of the NIH Historic Core District, properties eligible for the National Register for Historic Places, and has consulted with the Maryland State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 USC 470f); and

NOW, THEREFORE, NIH and the Maryland SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

Stipulations

NIH will ensure that the following measures are carried out:

1. **DEMOLITION:** NIH may proceed with demolition of the interior of Building 6.
2. **RECORDATION:** Prior to the demolition of the interior of Building 6, NIH will record Building 6 to the outline form of the Historic American Building Survey (HABS) standard. All documentation must be complete and accepted by the U.S. Department of the Interior, National Park Service, HABS/HAER Office prior to demolition. Copies of this documentation will be provided to the Maryland SHPO.
3. **DESIGN REVIEW:** NIH shall ensure that the design of the new mechanical system is compatible with the historic and architectural qualities of Building 6 and the NIH Historic Core District in terms of scale, massing, color, and materials, and is responsive to the recommended approaches to new construction set forth in the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (U.S. Department of the Interior, Na-



tional Park Service, 1992), and that the design and specifications for the project are developed in consultation with the Maryland SHPO.

- A. NIH will submit project plans to the Maryland SHPO for review and comment at the schematic, design development and contract document phases.
- B. Major changes during construction that will affect the architectural character and features of the plans for the Building 6 rehabilitation approved under the terms of this MOA must be submitted to the Maryland SHPO for review and comment.

4. AMENDMENTS: Should NIH determine that the terms of the MOA cannot be met or believes that the MOA needs to be modified to change a stipulation or add or delete stipulation, NIH shall request an amendment in accordance with 36 CFR Section 800.5(e)(5). If the SHPO determines that the provisions of the MOA are not being satisfactorily met, the SHPO shall immediately notify NIH and request that they consult to consider terminating, amending, or preparing an amendment to the "Agreement".

5. DISPUTE RESOLUTION: Should the Maryland SHPO object within 30 days to any plans or actions proposed pursuant to this agreement, NIH shall consult with the Maryland SHPO to resolve the objection. If NIH determines that the objection cannot be resolved, NIH shall request the recommendation of the Advisory Council on Historic Preservation (Council). Any Council recommendation provided in response to such a request shall be taken into account by NIH in accordance with 36 CFR 800.6 (c) (2) with reference only to the subject of dispute; NIH's responsibility to carry out all actions under this agreement that are not the subject of the dispute remain unchanged.

Execution of this Memorandum of Agreement and implementation of its terms evidence that the NIH has afforded the Council an opportunity to comment on the undertaking and its effects on historic properties, and that NIH has taken into account the effect of the undertaking on historic properties.

By: _____ Date: _____
Federal Preservation Officer, NIH

Concurrence: _____ Date: _____
Associate Director for Research Facilities, NIH

By: _____ Date: _____
Maryland State Historic Preservation Officer

Accepted by: _____ Date: _____
Advisory Council on Historic Preservation



SECTION 3-4: DESIGN GUIDELINES

3-4-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

3-4-00 POLICY

HHS buildings shall be designed and constructed to best meet the functional, safety, security, and environmental needs of the programs they house. A safe and healthy work environment is the crucial objective in the design of HHS facilities. The requirements listed in this section are the minimum OPDIV requirements to meet this objective.

The purpose of this section is to provide general design guidance to the OPDIVs to assist them in developing design criteria for projects. Over the years several OPDIVs have developed design criteria to provide guidance to A/Es and to ensure the quality of design and construction of HHS facilities. Design Criteria generally represents a body of knowledge gathered from many sources within the OPDIV, Department, Federal / State / local entities and the private sector. The purpose of design criteria is to provide guidance to A/E and OPDIV staff in the preparation of HHS contract (construction) documents and to promote excellence in the process of planning, programming, design, and construction of HHS facilities.

3-4-10 PROCEDURES

Design criteria reflect the collective corporate knowledge and wisdom of the OPDIV's design professionals based on history and experience that is benchmarked against best practices within the industry. OPDIVs are encouraged to use industry design criteria that are readily available for ordinary buildings that are common in the practice of architecture and engineering. Highly specialized buildings may, to an extent, require development of project unique design criteria. However, even in these specialized facilities there will be design features and elements that can be generic in nature. Using generic design criteria to avoid customizing individual spaces, functions, and operations will save taxpayer money.

3-4-20 GUIDANCE AND INFORMATION

The overarching design guidelines described below are intended to establish general performance objectives for HHS buildings and facilities. The OPDIV Project Officer should ensure that project specific objectives are identified when the design Statement of Work (SOW) is developed. The A/E should be responsible for determining how to achieve specified objectives.

A. ENVIRONMENTAL AND FUNCTIONAL NEEDS

HHS buildings shall provide an environment in which occupants can do their work with maximum efficiency at the optimum level of comfort, taking the following factors into consideration.

1. Arrangement of Space. Space relationships within buildings shall be planned to optimize the functions being performed by the occupant. Interaction areas should be provided within the building to promote informal discussion between scientists / occupants.
2. Access for Persons with Disabilities. Refer to the Section 3-6, entitled "Accessibility Requirements for Persons with Disabilities" in this Chapter.
3. Illumination. Natural and artificial illumination shall be sufficient to meet requirements of the tasks performed by the occupants.



4. **Thermal Environment.** The thermal environment shall be such as to provide healthy working conditions for the occupants and proper climatic conditions for the work being performed. Provision of flexibility and suitable control is necessary.
5. **Acoustical Environment.** New buildings and alterations shall be planned and designed to minimize noise that disturbs occupants unduly or interferes with their ability to do their work. An adequate level of privacy shall be provided so that occupants can perform their tasks effectively with minimum outside disturbance. The level of privacy required will vary depending on the tasks involved.
6. **Maintenance and Operation.** Designs shall be based on user needs and maintenance capabilities and shall satisfy the functional requirements for efficient operation of the facility. Materials and products shall be durable, easily maintained, and appropriate for the intended use.
7. **Harmony with Environment.** Special attention should be paid to the arrangement of streets and public space of which the building is a part. Within budgetary and site limitations, designs should include generous development of well-landscaped, inviting, people-oriented space.
8. **Regional Character.** Buildings should reflect the architectural character of the locale. Local building ordinances and zoning practices should generally be followed. Consistent with applicable Federal procurement requirements, the use of materials and products indigenous to the locale of the project should be given preference.

B. SAFETY, HEALTH AND SECURITY

HHS buildings shall provide an environment that is safe and healthful for occupants, and that offers them maximum protection during emergencies or disasters.

1. **Structural Adequacy.** Design of buildings shall be adequate for the functions to be performed and the loads imposed by building equipment, occupants, and their activities.
2. **Protection against disaster.** Design shall provide minimum exposure to fire, earthquake, or other natural disaster, and shall provide egress and refuge for all people, including the disabled, in an emergency.
3. **Security.** For information relating to facility security refer to the Section 3-7, entitled "Facility Security" in this Chapter.
4. **Accident Prevention Design.** Design shall be the result of safety analyses and shall address unsafe conditions that cause injury, illness, or property damage.
5. **Health Hazards.** Materials and products with known or suspected properties that are hazardous to the health of occupants and installers shall be avoided. Only materials that are free of lead and asbestos shall be used in HHS buildings. This includes materials such as paint, adhesives, sealers, sealants, floor tiles, etc.
6. **Repair, Renovation, and Alterations.** Design shall be accomplished to reduce or eliminate hazardous exposure through astute selection and use of materials and methods. Prior to any renovation or demolition project, the design should identify any existing hazardous building constituents (e.g., asbestos, lead). If materials containing lead or asbestos are present, the contractor shall be required to submit relevant management and abatement plans as part of their proposal for HHS approval and send notification letters to the State regarding asbestos removal prior to initiating work.



C. ECONOMY

HHS buildings shall be designed at the most reasonable cost in terms of combined initial and long-term expenditures, without compromising other project requirements.

7. **Site Adaptation.** In many, if not most instances, a site has already been selected before design begins; however, OPDIV design professionals should, where possible, have a part in the selection. The design of the building shall be sited economically and efficiently.
8. **Efficient Utilization.** The ratio of net usable to gross area should be as high as possible (without wasted space) consistent with program objectives as stated in the POR. The design shall comply with the HHS Space Utilization Rate (U/R) Guidelines.
9. **Economical Materials.** Materials, products, and systems of proven dependability shall be used in the design or alteration of buildings. Materials shall be as economical as possible, in terms of combined initial and long-term cost and consistent with program objectives. To the extent possible, standard commercially available products shall be used.
10. **Energy Efficiency.** The National Energy Conservation Policy Act (PL 95-619), as amended by the Energy Policy Act of 1992 (PL 102-486), and including all applicable Executive Orders, set out and reinforces long-standing requirements for energy conservation in Federal facilities. It is HHS Policy in response to these mandates to foster cost-effective energy management practices to ensure the efficient use of energy, while maximizing the ability of the OPDIV to accomplish its mission and maintaining the health and safety of HHS employees and visitors.
11. **Life Cycle Cost (LCC) Analysis.** LCC shall be performed on all projects as required by OMB Circular A-11 for capital assets. The analysis shall consider the overall estimated costs of each program alternative over the life of the program. In assessing LCC the assumed life of a new facility shall be 50 years. In addition, during design value engineering shall be done to determine the most cost-effective, long-term solutions for the selected program alternative. See also Section 3-8.
12. **Maintenance, Operation, Repair, and Replacement Costs.** Buildings shall be designed, and materials selected, to minimize the cost of maintenance and repair.
13. **Foster Maximum Competition.** Buildings shall be designed and building materials, components, and systems incorporated into the design so as to foster maximum competition among suppliers and contractors.
14. **Project Administration.** Projects shall be planned and scheduled to ensure effective and efficient design.

D. COMPLIANCE WITH CODES AND STANDARDS

In accordance with 40 U.S.C. 3312, each HHS building shall be constructed or altered, to the maximum extent feasible, in compliance with one of the nationally recognized model building codes and with other nationally recognized codes, including mechanical and electrical codes, fire and life safety codes, and plumbing codes. Due consideration shall be given to all State and local zoning laws as if the project were not being constructed or altered by a Federal agency. The Government and its contractors shall not be liable for the cost of issuing permits or performing inspections. The Contracting Officer shall insert a clause in every design and construction contract solicitation notifying prospective contractors of the statutory provisions of 40 U.S.C. 3112 (f) and (g).



E. HEALTH CARE FACILITIES

The National Institutes of Health (NIH) Design Requirements Manual (DRM) provides detailed design requirements and guidance for Biomedical Laboratories and Animal Research Facilities. Although not specific for the design of health care facilities, the DRM is applicable and required for the commonly shared utility systems (e.g., electric and HVAC) supporting the hospital that is located in buildings with research laboratories and offices. The DRM also makes general reference to medical, research, clinic, and laboratory functions; utility system requirements; and health care facilities. Nonetheless, to address the unique needs of health care that are not addressed in the DRM, architects and engineers, working on projects for NIH health care facilities reference specific health care facility design requirements and guidelines and abide by regulations promulgated by the following:

- a. American National Standards Institute (ANSI)
- b. American Society of Healthcare Engineers (ASHE) Health Facility Commissioning Guidelines
- c. American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
- d. Centers for Medicare and Medicaid Services (CMS)
- e. Facility Guidelines Institute (FGI) Guidelines for Design and Construction of Health Care Facilities
- f. National Electric Code (NEC)
- g. National Fire Protection Association (NFPA)
- h. Other codes, standards and guidelines applicable to health care facilities that provide equivalent or superior design criteria

In addition, hospital-specific policies and procedures (e.g., proactive risk assessments such as ILSM, CRA and maintainability) and surveillance of activities to reduce the risk of harm to occupants are implemented during all phases of design and construction.



SECTION 3-5: COMMISSIONING

3-5-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

3-5-00 POLICY

In accordance with HHS policy, NIH will develop, implement and maintain a commissioning procedure for all new and renovated facilities that meet or exceed the HHS Capital Investment Review Board threshold (\$10M). The NIH may determine that other facilities should be commissioned based on the complexity and nature of the facility.

Commissioning is the process of making sure all building systems are working before occupants move in. It involves making sure all systems are: installed properly and perform according to design; cost effective; meet the users' needs; adequately documented and well understood by operators. Commissioning serves to accomplish the following goals:

- Reduced number of deficiencies at completion.
- Lower utility costs attributable to efficiently operating systems.
- Lower maintenance costs due to properly trained maintenance crew.
- Higher productivity of the building occupants because of properly balanced ventilation system.
- Design for maintainability.
- Reduced outages and downtimes due to better diagnosis of failures.
- Well documented and successful system tests.
- All building systems perform in accordance with the design requirements.

3-5-10 PROCEDURES

A. NIH Commissioning Philosophy and Requirements:

NIH requires Commissioning (Cx) for all projects. The level or scope of commissioning for any single project shall be determined by the complexity of the project. The NIH Model Commissioning Guide, to be published in 2007, will contain complete, detailed commissioning requirements. Commissioning is a comprehensive process for ensuring that:

- All building systems are installed and perform according to the design intent.
- Systems are efficient, cost effective and meet the user's operational needs.
- The installation is adequately documented.
- The operators are adequately trained.

The requirements in the NIH Model Commissioning Guide cover each phase of the project from the planning phase through warranty for all types and sizes of buildings, occupancies, and systems. They apply to new buildings, as well as renovations and expansions. NIH Cx requirements shall occur parallel to established conventions ensuring design and construction quality. Cx shall provide monitoring and review of these conventional processes, and add supplemental processes for additional assurance of optimal performance.

Cx entails coordinating the efforts of the various parties involved in the design, construction, use, and operation of a facility to achieve an optimal facility. It is more comprehensive than conventional construc-



tion phase quality control activities such as construction observation, start up, and testing, adjusting and balancing. NIH Cx focuses on the dynamic systems in the facility, such as the mechanical, electrical, plumbing, fire protection, and security systems. Although Cx is performed on some static systems, the need for Cx is more substantial on the dynamic systems. Other DRM requirements can often assure an adequate level of construction quality for the static elements.

The Cx activities shall be included in the project schedule. Effective planning and a strong commitment to maintenance of a detailed, integrated project schedule will shorten the impact Cx has on the project duration. Planning and budgeting for Cx shall begin at the onset of a project. A Government selected independent third party commissioning authority (CA) is required and shall be funded by the project. The CA facilitates and assists other parties in the Cx process but does not direct work or approve/accept materials, systems or equipment. The CA makes recommendations to the appropriate party who directs work, approves or disapproves work, etc. The scope and budget of development managers (DM), A/E's, construction managers, construction contractors and all other entities involved with the project will be impacted by Cx.

Maintenance, safety and institute personnel, and others will also be involved in the Cx and will need to plan adequate resources from the beginning of the process. Roles and responsibilities are outlined below. Although the NIH Model Commissioning Guide provides de-tailed roles and responsibilities of the individual members of the project team, it is important for the A/E to be aware of the roles and responsibilities of different parties involved in the Cx process.

A.1 Cx Process during Different Project Phases:

The following information highlights some of the critical roles and responsibilities of different parties involved in the Cx process during different project phases. This is not a comprehensive list but only meant to make parties aware conceptually:

Programming Phase: During the programming phase, the project team, including facility users, outlines the functional requirements of the facility and documents the scope of Cx. Cx sequence shall include:

- Inclusion of Cx requirements in all project related contracts.
- Inclusion of credentials related to Cx in selection criteria.
- Inclusion of Cx in the project budget.
- Documentation of project requirements in a format that is transferable to the Cx documentation.

Conceptual Design Phase: During the conceptual design phase, the project team, including facility users, forms the basis of design (BOD) and room data sheets (RDS), and begins Facility Guide. Cx sequence shall include:

- CA appointment.
- CA development of the initial Cx Plan.
- CA review of the BOD and RDS, and participation in Facility Guide.

Schematic Phase: During the schematic phase, the concepts of the project are developed to the point of schematic and single line drawings. The Cx sequence shall include:

- Identification of the Cx team and onset of participation in the Cx process.
- CA performance of the following:
 - o Conducts the Cx kick off meeting,
 - o Reviews schematic designs and design criteria, and



- o Produces preliminary versions of Cx specification sections.
- Naming conventions to be used on project equipment established and or directed by operators.

Construction Documents Phase: During the construction documents phase, detailed design is accomplished and the contract documents are prepared for bidding. This phase may consist of multiple sub-phases. Cx sequence shall include:

- A/E response to all schematic phase comments, development of Systems Matrix in concert with developing the specification and submittal of draft specification electronically.
- Operators review and comment on Systems Matrix and other documents.
- CA development and completion of specifications on Cx requirements, completion of Cx plan and design phase version of the Facility Guide, review of other construction phase submittals, and development of a summary document that will track the Cx process.
- CA development of Cx precedent diagrams to reflect Cx tasks and how to most effectively sequence systems turn over to minimize the Cx impact on the schedule.
- CA development of the design phase version of the Facility Guide.
- A/E update of the BOD.
- A/E response to all design review comments including Cx comments.

Bidding Phase: During the bidding phase installation or construction is competitively bid and contractors/subcontractors are selected. Cx sequence shall include technical support provided by CA.

Construction Phase: During the construction phase of the project, the facility is built. Systems and equipment are installed and started. Contractor provides submittals, does testing, etc. Contractor/Vendors conduct equipment specific training. Cx sequence shall include:

- Designation of a Cx Coordinator (CxC) by all major subcontractors and operators to represent them in the Cx process.
- Cx kick off meeting conducted by CA.
- Incorporation of Cx tasks in detailed project schedule and presentation of an updated schedule at each Cx progress meeting by the contractor.
- CA review and comment on shop drawings and other submittals, inspections and attendance of meetings, and production of detailed project specific pre-functional and functional testing procedures.
- Supplementation of the pre-functional procedures developed by CA with contractor-provided submittals, and contractor-provided training plan for review by CA and operators.
- CA and operators' review and approval of start up protocol.
- Submittals of Operations and Maintenance (O&M) portions of the Facility Guide and Temporary Conditioning Plan by the contractor for review by A/E, CA, and operators.
- Witnessing of close in inspections by operators, CA, and PO.
- Recordation of all nameplate data by the contractor.
- Training provided by the contractor.
- Design Intent and Systems Overview Training by the A/E with assistance from CA.

Acceptance Phase: During the acceptance phase, the facility and its systems and equipment are inspected, tested, etc. Most of the formal training occurs during this phase, generally occurring after the construction phase is complete. The A/E and contractor finalize "as built" record documentation. Approved functional completion marks the end of this phase. Cx sequence shall include:

- Establishment of trending and monitoring as applicable for systems by the contractors.
- Spot check start-ups and balancing by CA and the operators.



- Functional Operational Systems Test (FOST) directed/conducted by CA, in which most parties also participate to some degree, primarily for initial samples. Continued activity with FOST performing repetitive samples by CA and operators.
- FOST documentation by CA, recommendations of acceptance as applicable, and up-date of FOST status on Cx summary document.
- Development and performance of commissioned systems training by CA.
- Completion of record documentation and submittal for approval by the contractor and A/E.
- Remedies issuance to issues that caused failure of FOST's and CA retests by the contractor.

Endurance Test Phase: During the endurance test phase, equipment is run continuously, monitored and trended. This phase is applicable to critical occupancies such as BSL-3, vivaria, data centers, and other areas as directed by the Project Officer. Cx sequence shall include:

- CA ensures monitoring is in place and functional throughout this period.
- Use the space by occupants to confirm functionality.
- Proper operation of the facility throughout this period.

Warranty Phase: The warranty phase includes the early occupancy of the building through the end of the warranty period, and at least into the opposite season from when it was initially tested. The contractor performs warranty service, corrects deficiencies, and finalizes record documentation to reflect actual conditions at the end of the warranty period. The operators work with the CA and the A/E to fine tune the facility to meet actual occupancy. Cx sequence shall include:

- Onset of warranty upon completion of the acceptance phase.
- Submittal of final Cx report by CA, and addition to Facility Guide important lessons learned, changes made, etc.
- Maintenance of log of warranty calls which tracks diagnosis and resolution by contractor.
- Operator initiated warranty calls, as necessary.
- Record documentation is updated, as necessary.
- Performance of opposite season testing by CA.
- Documentation of issues and problems with the facility by the operators.
- Occupants' use of the facility.

Renovations or modifications to the facility, if done, in conformance to the limitations dictated in the Facility Guide.



SECTION 3-6 ACCESSIBILITY REQUIREMENTS FOR PERSONS WITH DISABILITIES

3-6-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

3-6-00 POLICY

This section sets forth policy and procedures for complying with the Architectural Barriers Act of 1968, 42 USC 4151-4156, also commonly referred to as Public Law 90-480, and as defined in the Federal Management Regulation (FMR) §102.76.60 through 102.76.95. The Architectural Barriers Act applies to any facility constructed, altered, leased, or financed with federal funds that is intended for use by the public or may result in employment of persons with disabilities.

If the construction or alteration commences, or the lease is entered into after May 8, 2006, the facility shall meet the Architectural Barriers Act Accessibility Standard, defined as Appendices C and D, 36 CFR 1191, ABA Chapters 1 and 2, and Chapters 3 through 10.

If the construction or alteration commences, or the lease is entered into before May 8, 2006, the facility must meet the Uniform Federal Accessibility Standards.

If plans and specifications for the construction or alteration of a facility were completed or substantially completed on or before May 8, 2006, the facility is permitted to meet the Uniform Federal Accessibility Standards provided the construction or alteration commences by May 8, 2008.

The Architectural Barriers Act Accessibility Standard and the Uniform Federal Accessibility Standards are available at the [United States Access Board website \(http://www.access-board.gov\)](http://www.access-board.gov).

3-6-10 PROCEDURES

A. ASSESSING COMPLIANCE

1. All projects shall be reviewed for compliance with the applicable standard during the review of contract drawings and specifications (for all design phases), and again at the time of the final on-site inspection of the completed facility.
2. The review of contract drawings and specifications and/or inspection during construction at serves the following purposes:
 - a. It provides assurance that project plans are being reviewed closely for adherence to prescribed requirements at appropriate design stages.
 - b. It provides documentation in the project file that the facility meets mandatory requirements, or that the contract drawings reflect certain omissions or deviations from the standards.
 - c. It serves as a guide to take corrective action by the project architect in instances where the contract drawings do not conform completely to the standards.
 - d. Where historic properties may be adversely affected, early consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation is advisable, to avoid delays in the design process.
3. To meet the record keeping responsibilities of FMR §102-76.95, it is recommended that the applicable portions of the standard be used as a checklist. A completed copy of the checklist should be placed in the project file when the design documents are completed and a second completed



checklist when construction is completed. A notation in the left margin of "Y" (yes), "N" (no) or "NA" (not applicable) opposite each item in the checklist is sufficient.

B. EXCEPTIONS:

1. Exceptions for specific facilities as defined in FMR §102-76.60 are:
 - a. Privately owned residential facilities unless leased by the Government for subsidized housing programs, and
 - b. Any facility on a military reservation designed and constructed primarily for use by able-bodied military personnel.
2. Exceptions when the costs of alterations to meet accessibility are disproportionate to the costs of the overall alterations are defined in FMR §102-76.70 through 102-76.85. Documentation shall be maintained in the project file demonstrating the basis of the disproportionate costs and the extent to which the standard is incorporated into the project.

C. WAIVERS

1. HHS and its OPDIVS cannot grant waivers to the requirements. The Administrator of General Services has the authority to waive or modify the standards in FMR § 102-76.65(a) on a case-by-case basis if the agency head submits a request for waiver or modification and the Administrator determines that the waiver or modification is clearly necessary.
2. All requests for waivers, supporting documentation, and notification of final action on requests shall be placed in the project file. Accessibility requirements cannot be waived in HHS facilities that are accredited by the Joint Commission on Accreditation of Healthcare Organizations.

3-6-20 GUIDANCE AND INFORMATION

- A. The Architectural Barriers Act (ABA) of 1968, 42 USC 4151 – 4156, establishes accessibility requirements for facilities designed, built, altered or leased with Federal funds.
- B. The Americans with Disabilities Act (ADA) of 1990 (42 USC 12204), establishes accessibility requirements for employment, public services, public accommodations and telecommunications. The Act does not directly cover Federal or federally funded facilities, which remain under the Architectural Barriers Act (ABA).
- C. 42 USC 4152 of the Architectural Barriers Act authorizes the Administrator of the General Services Administration (GSA), in consultation with the Secretary of the Department of Health and Human Services (HHS), to prescribe standards for the design, construction and alteration of buildings (other than residential structures, Department of Defense (DOD) and Postal facilities) to ensure accessibility by persons with disabilities.
- D. The U.S. Access Board issued the guidelines for both the Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) requirements as the combined document, "The ADA and ABA Accessibility Guidelines for Buildings and Facilities" June 23, 2004. The guidelines issued by the U.S. Access Board are not legally enforceable but serve as baselines for meeting ADA and ABA accessibility requirements. Under the ABA, the "Uniform Federal Accessibility Standards" remained the applicable standard until GSA (along with DOD, HUD and USPS) issued new enforceable standards based on the U.S. Access Board's guidelines. With respect to the ADA, the guidelines issued by DOJ in 1991 remain the applicable enforceable standard.
- E. GSA issued the FMR §102-76 Design and Construction on November 8, 2005 containing the updated standard in Subpart C, Architectural Barriers Act effective May 8, 2006.



SECTION 3-7: FACILITY SECURITY

3-7-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

3-7-00 POLICY

The purpose of this section is to establish HHS policy for incorporating security features in the design of HHS facility projects (leased and federally-owned). HHS facility projects shall be planned, designed, and constructed in accordance with the most current issuance of the Interagency Security Committee (ISC) Security Design Criteria for New Federal Office Buildings and major Modernization Projects, except hospitals and clinics.

By Executive Order 12977, dated October 19, 1995, President William Clinton established the Interagency Security Committee (ISC) mandating that representatives from 17 Agencies and several Federal offices participate. The Department of Health and Human Services is one of the Agencies specified by the President for membership.

3-7-10 PROCEDURES

The intent of the ISC Security Design Criteria for New Federal Office Buildings and Major Modernization Projects is to apply the security design criteria on a building-by-building basis. The criteria should be applied using a decision-based approach tailored to each building. The building's specific security requirements should be based on a facility-specific risk assessment, done at the earliest stages of planning for a multi-disciplinary project team to use to plan the security measures.

3-7-20 GUIDANCE AND INFORMATION

On May 30, 2001, the ISC issued their first Security Design Criteria for New Federal Office Buildings and Major Modernization Projects. It contains physical security design and construction criteria and standards for Federal buildings and facilities. It was developed to ensure that security becomes an integral part of the planning, design and construction of new Federal office buildings and major modernization projects. The criteria apply to new construction of office buildings, including build-to-suit lease construction, to be occupied by Federal employees in the United States. When prudent and appropriate, the criteria also apply to major modernization projects and projects not meeting the foregoing definitions.

The ISC Security Design Criteria for New Federal Office Buildings and Major Modernization Projects is a living document. Criteria will change as a result of ongoing research and rapid technological development. An ISC working-group will review and update the Criteria at least once per year. HHS formally adopted the September 29, 2004 issuance as policy. It shall be the policy of the Department to utilize the latest issuance of this document where appropriate. Users should also visit the GSA websites for relevant new information. (Add link.)

A copy of the ISC Security Design Criteria can be obtained from OPDIV security representatives, from the Departmental Physical Security Program Manager, GSA sources or the GSA building technology security website at <http://www.oca.gsa.gov/mainpage.php> (site registration is required).





SECTION 3-8: VALUE ENGINEERING

3-8-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

3-8-00 POLICY

This section describes NIH policy and procedures for value engineering (VE) in Architectural/Engineering (A/E) and construction contracts for federally-owned HHS real property assets. VE is mandatory for projects where the construction cost is \$1 million or greater. (See OMB circular A-131.) All projects developed using Design-Build that are procured using full and open competition and are awarded based on a best value selection process are exempt from further VE. HHS requires an independent VE analysis by a specialized consultant or Government personnel for projects with a total project cost of \$ 10 million or more.

The NIH designated Value Engineering Coordinator (VEC) coordinates NIH's VE activities. The VEC shall receive formal Society of American Value Engineering (SAVE) approved training in value engineering. The Contracting Officer, in consultation with the VEC, is responsible for determining which contracts are subject to VE and for accepting or rejecting VE proposals.

A. DEFINITIONS

Life Cycle Cost (LCC) - The sum of all costs over the useful life of a building, system or product including the costs of design, construction, acquisition, operation, maintenance, re-pairs, disposal and salvage (resale) value, if any, using present worth costs. For evaluating proposed capital investment projects, the modes of analysis to be used include:

- a. Total Life Cycle Costs
- b. Net Savings
- c. Saving-to-Investment Ratio
- d. Payback Period
- e. Internal Rate of Return

Value Engineering (VE) - The formal technique by which contractors may (1) voluntarily suggest methods for performing more economically and share in any resulting savings or (2) be required to establish a program to identify and submit to the Government methods for performing more economically without reduction in program requirements or quality. Value engineering attempts to eliminate anything that increases acquisition, operation, or support costs, without impairing essential functions or characteristics. VE involves an organized effort to analyze alternative approaches for provision of systems, equipment, facilities, services, and supplies for the purpose of achieving the essential functions at the lowest life cycle cost consistent with required performance, reliability, quality, and safety.

Value Engineering Change Proposal (VECP) - A proposal developed by a construction contractor under a value engineering clause in its construction contract that typically involves sharing in any resulting savings. The proposal normally involves changes in the drawings and specifications directed at reducing the construction costs or life cycle costs without impairing the project's essential functions or characteristics.

Value Engineering Proposal (VEP) - As used in this section, a VEP in connection with an A/E design contract, is a proposal for change developed by the A/E design firm, employees of the Federal Govern-



ment, or a specialized VE consulting firm. The proposal is similar to the VECF described above and is generally performed on a partially completed facility design. However, it is noted that there is no cost sharing of projected savings during the de-sign phase.

Base Year - The base year is the first year of the Value Engineering study period.

Funds Invested - Estimates should include salaries and overhead expenses of value engineering, training costs for contracting for value engineering services, value engineering proposal development and implementation costs, and any other costs directly associated with the VE program.

Present Worth (PW) - The time-equivalent value of past, present, or future cash flows as of the beginning of the base year.

Net Savings - The net savings is the time-adjusted savings less time-adjusted costs taken over the study period.

1-8-10 PROCEDURES

A. VALUE ENGINEERING IN DESIGN CONTRACTS

General - Federal Acquisition Regulations (FAR) Part 48 requires the Contracting Officer to include a VE clause in solicitations and contracts for A/E services whenever the Government requires and pays for a specific VE effort in A/E contracts.

Projects Requiring HHS Capital Investment Review Board Approval and a total project cost of \$ 10 Million or More - OPDIVs shall obtain independent VE analysis from a specialized consultant or Government personnel. The specialized consultant must be an independent party from the project A/E.

Projects with a construction cost of \$ 1 million or greater - NIH may accomplish value engineering through the A/E contractor, a specialized independent consultant, or Government personnel at the discretion of the VEC and the Contracting Officer. Regardless of who performs VE, the value engineering analysis shall be done at the end of schematic design phase or no later than the midpoint of the design development phase to be effective. In addition, the VE team shall include a certified value specialist team leader and A/E professionals with VE training and experience.

1. When projects meet the thresholds for VE, the VEC should proceed as follows:
 - a. In conjunction with the Contracting Officer, determine the scope of VE analysis to be undertaken, considering the size and type of the project, and document to the contracting file.
 - b. If being accomplished by Government personnel, appoint a VE team. The VE team shall consist of members with expertise in the areas or disciplines to be reviewed for the project.
 - c. Upon completion of analysis, file a VE report.
 - d. Maintain copies of VE proposals and supporting documentation in the contracting file.
2. The following information shall be included in each VEP whether done by the A/E, specialized consultant or Government personnel:
 - a. Description and Comparison - A description of the difference between the existing and proposed design, the comparative advantages and disadvantages of each, a justification when an item's function is being altered, the effect of the change on system or facility performance, and any pertinent objective test data. This may include but is not limited to sketches, calculations, models, etc.
 - b. Specifications - A list and analysis of design criteria or specifications that must be changed if the VEP is accepted.
 - c. Project Cost Impact - A separate detailed estimate of the impact on project cost of each VEP, if accepted and implemented by the Government.



- d. Implementation Costs - A description and estimate of costs the Government may incur in implementing the VEP, such as design change cost and test and evaluation cost.
- e. Life Cycle Costs - A prediction of any effects the proposed changes may have on life cycle cost. Cost comparisons shall assume a 30-year building life.
- f. Schedule Impact - The effect the VEP will have on design or construction schedules.

B. VALUE ENGINEERING IN CONSTRUCTION CONTRACTS

General - FAR Part 48 requires the contracting officer to include a VE clause in construction solicitations and contracts when the contract amount is estimated to be \$100,000 or more, unless an incentive contract is contemplated or the agency has granted an exemption. The Contracting Officer may include a VE clause in construction contracts of lesser value, if the Contracting Officer sees the potential for significant savings.

1. As a minimum each VECP submission from the contractor shall include the documentation required under FAR Part 48.
2. The OPDIV will review and objectively evaluate each VECP, and document the contract file with the rationale for acceptance or rejection of the VECP. If a VECP is accepted, the Government and the contractor shall share the savings, as prescribed in FAR Part 48.
3. The NIH is responsible for establishing guidelines for processing VECPs consistent with FAR Part 48 requirements.

1-8-20 GUIDANCE AND INFORMATION

The payment for VE services performed by non-governmental employees is an authorized expense of project design funds. These services must be separately priced in the A/E contract and are not included in the six percent fee limitation for the A/E design services. VE services will be quantified in terms of "level of effort" rather than as a deliverable.

Below is a list of the primary Federal regulations governing value engineering for HHS projects:

1. OMB Circular A-131, Value Engineering
2. FAR, Part 48
3. 10 CFR 436 subpart A - Life Cycle Cost methods and criteria contained in the Federal Energy Management Program (FEMP) rules.

3-8-30 REPORTING REQUIREMENTS

OMB Circular A-131, "Value Engineering," requires that NIH/HHS maintain data on the VE program. The VEC shall maintain records on the number of VECPs received from construction contractors, the number of VEPs prepared on design contracts and the amount of potential savings accepted by the Government within each of these categories. This information will be compiled and provided to the Division of Planning and Construction, OFMP, OS to fulfill the annual reporting requirements to the Office of Management and Budget.





SECTION 3-9: PARTNERING

3-9-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

3-9-00 POLICY

The purpose of this section is to encourage “Partnering” as a best practice on HHS construction projects for federally-owned real property assets. Each OPDIV shall consider developing and implementing a partnering procedure for all new and renovated facilities that meet or exceed the Capital Investment Review Board threshold.

Partnering is designed to create an agreement between the Government and Contractor to work cooperatively as a team, to identify and resolve problems and to achieve mutually beneficial performance and result goals. The expected benefits are achievement of contract goals, lower contract administrative costs, improved problem solving, and fewer conflicts. Participants in the Partnering process must include the Contracting Officer, project officer, designer (architect / engineer), and contractor; but may also include end user(s), upper management, consultants, and major subcontractors.

Partnering Agreement(s) must be consistent with all applicable FAR requirements and the controlling Government contract. Partnership agreement(s) do not waive the Government’s or the Contractor’s responsibilities under “contract disputes” provision and process required by FAR 33.2 and the HSAR, Subpart 333.2.

3-9-10 PROCEDURES

A. PARTNERING

The Partnering process shall be clearly defined in the solicitation for bids that advertise for the procurement of the Project. This process is based upon the expectation of a mutual commitment between Government and industry to work cooperatively as a team to identify and resolve problems and to facilitate successful contract performance. The process is designed to be mutually beneficial, providing the OPDIV with quality services, on time and at a reasonable price, while allowing the contractor to operate efficiently and earn a fair profit. Partnering requires the parties to look at and to formulate actions that promote their common goals and objectives. It is a relationship that is based upon open and continuous communication, mutual trust and respect, and the replacement of the “us versus them” mentality of the past with a “win-win” philosophy. Partnering also promotes synergy, creative thinking, pride in performance, and the creation of a shared vision for success. Partnering agreements are more than just signatures and handshakes. They represent a willingness and a commitment to resolve differences in a structured and constructive manner. Although formal Partnering is most effective for large construction procurements, the same philosophy and process can be applied successfully on a smaller scale by the OPDIVs.

B. THE FOUR PHASES OF PARTNERING

The four phases of partnering are:

1. Communicating with Industry. The solicitation will contain a clause informing offerors of the



Government's requirement to use partnering on the contract.

2. Making the Commitment to Partner. This requires willingness and support of senior management to empower participants with the required responsibility and authority to make binding decisions. OPDIV Senior Managers should lead the partnering process by reinforcing the team approach to contract administration, breaking down barriers, actively participating in the resolution of issues escalated to their level, and championing the process. There is an initial investment of participant time to make the process work, as well as some cost in conducting the initial workshop.
3. Conducting the Workshop and Developing the Partnering Agreement. The purpose of the workshop is to build a Contractor/Government team and create momentum that will drive the partners toward successful accomplishment of mutual goals and objectives throughout the contract term. Recommended elements of the initial Partnering Workshop include:
 - a. Introduce the partnering concept – share experiences, concerns, etc.
 - b. Build relationships - Team building exercise.
 - c. Set team Goals - What are we jointly trying to achieve through a partnering agreement?
 - d. Establish accountability - How will we accomplish this?
 - e. Establish an evaluation process - What are the issues involved in helping us to realize our goals? What metrics can we track to tell us if the contract is effective and our goals are being met?
 - f. Establish the process to resolve conflicts - How will we resolve disputes to avoid hurting each other?
 - g. What are the specific kinds of disputes that we can think of now?
 - h. Develop a conflict escalation procedure.
 - i. Put it in writing - Develop the Partnering Agreement, signed by all key contractors and contract administration personnel.

All future working meetings are conducted and guided by the principles and procedures established during the workshop and incorporated in the drafting of the initial Partnering Agreement.

4. Making it Happen. After development of the Partnering Agreement, it is critical that all actions taken are consistent with the Partnering Agreement objectives. At the periodic progress meetings, checks can be made to gauge how everyone feels about the value of the partnering agreement. If necessary, a follow up workshop may be held to refocus the team on the process and educate new stakeholders.

3-9-20 GUIDANCE AND INFORMATION

OPDIVS are encouraged to consult the Construction Industry Institute best practice on partnering for developing their own partnering model: SP17-1 In Search of Partnering Excellence RS 102-1 Model for Partnering and IR102-2 Partnering Toolkit.



SECTION 3-10 CLINICAL CENTER COMPLEX (CCC) INTERIM LIFE SAFETY MEASURES (ILSM) AND CONSTRUCTION RISK ASSESSMENT (CRA)

3-10-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

3-10-00 POLICY

This Section provides instructions for anyone involved with managing design, construction or maintenance projects located in Clinical Center Complex (CCC): (Buildings 10 and 10B, Mark O. Hatfield Clinical Research Center (CRC), and the INVIVO (NMR) Addition).

A. APPLICABILITY

This procedure applies to all construction and maintenance support projects located in the Clinical Center Complex. These requirements are in addition to NIH Policy Manual 1370-Fire and Life Safety Building Permit Process <http://www1.od.nih.gov/oma/manualchapters/management/1370/main.html> or Exhibit X5-7-A and other applicable requirements in NIH's Facility Development Manual (FDM).

B. RESPONSIBILITIES

- The Project Officer (PO) or other party assigned to manage a project in the CCC is responsible for preparing and forwarding an electronic [Project Notification Form](#) (PNF) to the Office of Research Facilities (ORF) [Project Notification Team](#) (PNT) (Global e-mail address here).
- The PNT which includes: the Clinical Center (CC) Hospital Epidemiology Service (HES), CC Office of Facilities Management (CCOFM), ORF Division of Technical Resources (DTR), CC Maintenance Unit and Facility Managers, Office of Hospital Physical Environment (OHPE) and the Division Fire Marshall (DFM) provide Interim Life Safety Measures (ILSM) and Construction Risk Assessments (CRA) for each project as applicable.
- ORF OHPE leads the PNT effort and is responsible for coordinating development of Interim Life Safety and Construction Risk Assessment Measures to be incorporated into the design and construction of projects and maintenance activities in the CCC.
- OHPE is also ORF's primary point of contact and consultant for Joint Commission (JC) matters.
- ORS DFM is responsible for issuing project specific ILSM requirements.
- The PNT jointly develop project specific Construction Risk Assessment requirements.
- The PO is responsible for incorporating [ILSM and CRA Contract Clauses](#) and specific guidance from the PNT into the design and construction of each project or maintenance action.
- ORF DTR is responsible for providing ILSM training to POs, contractors and maintenance staff prior to work being performed in the CCC.
- ORF DTR also maintains training records and evaluates program effectiveness.
- ORF OHPE, ORF DTR and ORS DFM are responsible for reviewing design, construction and maintenance projects for ILSM compliance.
- See the Flow Chart Exhibit X3-10-A for abbreviated organizational ILSM and CRA responsibilities



3-10-10 PROCEDURES

A. PROJECT ASSIGNMENT PROCESS

1. PO receives project assignment and meets with the customer to develop the Scope of Work (SOW), Independent Government Estimate (IGE) (total estimated project cost), and a Project or Acquisition Plan to support the Request for Contract Action (RFCA). The PO works closely with the ORF Office of Acquisitions (OA) in developing the RFCA.
2. PO completes and forwards the PNF electronically to the PNT for ILSM and CRA guidance.
3. OHPE via the PN Team reviews and completes the PNF evaluation and returns it via e-mail to the PO with a completed CRA evaluation. If additional information is required, a meeting is scheduled by OHPE. As part of the PNT effort, DFM reviews the PNF and determines the project specific ILSM requirements, if applicable, that must be incorporated into the project. DFM returns the completed notification form to the PO via e-mail.
4. PO reviews and incorporates the ILSM and CRA requirements identified on the PNF into the Request for Contract Action (RFCA) for the Architect-Engineering (A-E) Contract.

B. DESIGN PROCESS

1. PO in consultation with the Contracting Officer (CO) determines the A-E procurement method .
2. PO ensures the A-E Statement of Work (A-E SOW) incorporates the Clinical Center Complex (CCC), Building 10, CRA and ILSM Clauses into the design and construction documents.
3. PO schedules pre-design kick-off meeting and invites representatives from OHPE, CCOFM, HES, IC, DFM, DTR and other stakeholders as warranted by the complexity and nature of work. (Stakeholders review requirements at meeting and provide technical support as required).
4. PO assures that the A-E reviews the ILSM Construction Work Site Requirements (provided by PNT) and the CRA Risk Assessment Evaluation (identified by OHPE in the CRA evaluation document) to include adequate details in the construction contract documents. The A-E shall also add other CCC documents to the specification as applicable.
5. PO initiates design review process and complies with submittal requirements indicated (by OHPE and other stakeholders) on the completed CCC-PNF, NIH Policy Manual 1370 – Fire and Life Safety Building Permit Process and the ORF Permit Process..
6. For projects that do not require DTRs review, the PO is responsible for ensuring that the contract documents (plans and specifications) appropriately addresses ILSM and CRA requirements.
7. Refer to Section 5-7 Design Management and Design Review for additional requirements.

C. CONSTRUCTION PROCESS

1. PO, CO and A/E ensures ILSM and CRA Clauses are incorporated into the construction contract documents.



2. Pre-Construction Meeting:

- a. PO reviews Section 6-6, Pre-Construction Activities requirements and requests the contractor to provide a construction schedule at the Pre-construction Kickoff meeting.
- b. The P.O. notifies the ORF PNT via e-mail when the project is ready to start and the official "Notice to Proceed" date has been established by the CO. After this notification is received, the Division of the Fire Marshal will contact the P.O. to arrange the initial ILSM survey of the construction site with the P.O and contractor.
- c. Prior to the Pre-construction Kick-off meeting, the PO reviews the project specific ILSM and CRA requirements and include them as discussing items on the meeting agenda.
- d. PO invites IC, DFM, HES, CC Safety Officer CCOFM, OHPE, DTR, CC Building Facility Managers, CC Maintenance and other stakeholders as necessary to attend pre-construction meeting. (CC Safety Officer and HES are included for High Risk and Major Construction projects)
- e. PO briefs the superintendent, project manager, and the quality control director on ILSM & CRA risks and responsibilities.
 - PO advises the construction contractor of the stop work order clauses in the contract in case of non-compliance with ILSM or CRA procedures.
 - PO indicates to the contractor that ILSM & CRA procedures must be followed on a daily basis.
- f. PO provides the construction contractor with copies of:
 - CC ILSM Policy issued (9/26/07).
 - CCC- ILSM Construction Work Site Requirements (provided by DFM if applicable).
 - Current CRA Risk Assessment Evaluation- completed by OHPE.

3. Mobilization:

- a. PO or designated representative completes the CCC- Project Construction Sign (Exhibit X6-6-A) and posts it at the project site /or approved storage areas where it is visible and available for inspection. The sign must be completed in full to include completion of ILSMs and CRA requirements for the project.
- b. If a "hot work permit" is issued, the superintendent must post it at the project site where it is visible and available for inspection.
- c. If Material Safety Data Sheets (MSDS) are required, they must be posted or designation made where they are located for audit purposes.

4. Construction Progress Meetings:

- a. PO inspects the project site with the DFM, A/E, OHPE and other stakeholders as necessary to verify compliance with ILSM and CRA posted weekly by DFM.
- b. During construction progress meetings with the contractor, PO addresses the projects compliance with ILSM requirements identified by DFM and CRA requirements identified by OHPE or other stakeholders.

5. ILSM and CRA Revisions: When the scope or staging requirements of a project change such as: changes in traffic pattern, utilities, and project barriers, PO notifies OHPE and DFM to determine if new ILSMs and/or CRAs guidelines are necessary. If there is an urgent requirement, the PO must request expedited processing and will be able to walk it through for immediate approval.



6. ILSM and CRA Revisions: If there are changes to ILSM & CRA requirements, the PO updates and issues revised guidelines to the contractor. If the new guidelines change, the terms of the construction contract, the PO must work with the Contracting Officer to negotiate and issue a contract modification.
7. Site Inspection:
 - a. The construction superintendent visits the site on a daily basis to monitor progress for compliance with the ILSM and CRA requirements.
 - b. The contractor includes compliance with the project specific as a standard item under the daily reports and discusses requirements during “Lunchbox Safety Meetings”. It is recommended that the contractor keep meeting minutes and attendance lists of these sessions.
 - c. PO will monitor the construction contractor daily reports for compliance with ILSM & CRA requirements.
 - d. The CCC Safety Officer, OHPE and other stakeholders may periodically inspect the site for conformance with ILSM and CRA provisions. Any issues identified are reported immediately to the PO for corrective action. Non compliance with CRA or ILSM can be sufficient cause for issuance of a “Stop Work Order”.
 - e. The PO shall notify the Project Notification Team, DFM, OHPE, CC OFM and other stakeholders as necessary that the project has been completed and is ready for final inspection.
 - DFM will conduct final inspection and issue an Occupancy Permit consistent with NIH Policy Manual 1370 – Fire and Life Safety Building Permit Process.
 - The CC OFM will issue an Occupancy Permit as the user
 - OHPE will validate compliance with accreditation guidelines
 - See Section 6- 8 Site Coordination for additional final inspection procedures.

8. Project Completion

3-10-10 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- NIH Policy Manual 1370 – Fire and Life Safety Building Permit Process
- CC ILSM Policy (will include as an exhibit)
- CC OFM Occupancy Permit Procedure (will include as an exhibit)
- FDM Section 1-12 Project Plan
- FDM Section 4-7 Design-Bid -Build
- FDM Section 4-20 Site Coordination
- FDM Section 4-14 Design Management and Design Review

B. RELATED DOCUMENTS

- CDC Guidelines for Environmental Infection Control in Health-Care Facilities

C. RECORDS

- Completed Project Notification Form
- ILSM and CRA Evaluations
- Contractors Daily Reports



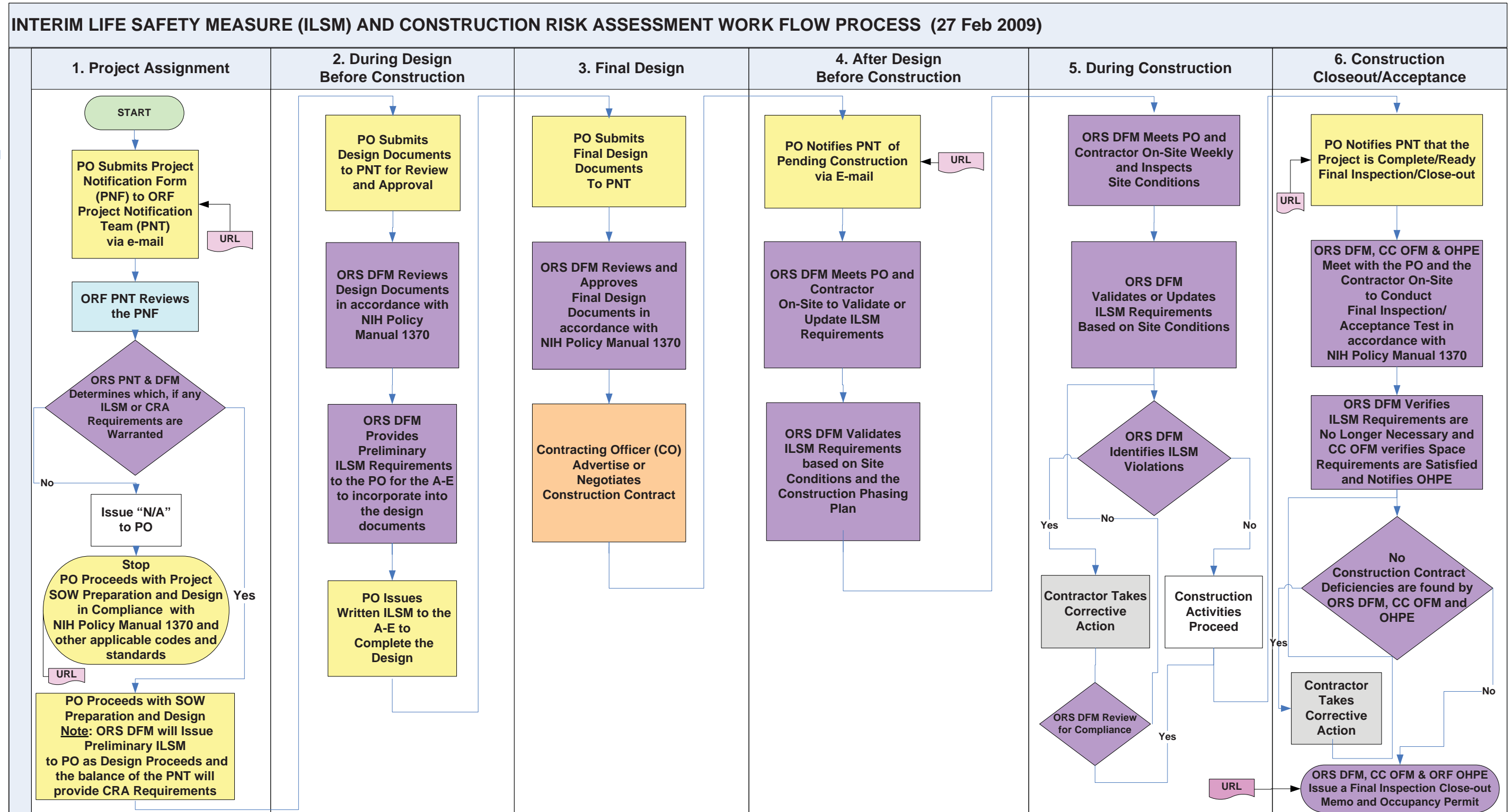
- Minutes of Progress Meeting

3-10-30 REPORTING REQUIREMENTS

A. The PO must document that:

- A Project Notification Form was submitted to OHPE for ILSM and CRA guidance
- DFM, DTR and other required stakeholders signed-off on the contract documents before the project was advertised
- DFM, CC OFM, HES, OHPE and others as necessary are notified when the project is complete and ready for final inspection
- Occupancy Permits are obtained from DFM, CC OFM and others as required prior to project close-out





LEGEND:

ORF – Office of Research Facilities
 ORS – Office of Research Services
 PNF - Project Notification Form
 PNT - Project Notification Team (ORS DFM, CC Safety, CC OFM, ORF OHPE, ORF DTR, CC HES, ORF FSB)





Date: _____

To: Office of Hospital Physical Environmental, Office of Research Facilities (OHPE)/ORF - Coordinator

From: _____
Project Officer, ORF/DPM & ICs

PROJECT INFORMATION:

Work request #	Project Title
_____	_____
Project Location- Building	Project Location Rooms- (list all room #)
_____	_____

DESCRIPTION OF SCOPE: (detail information)

Identify: Mechanical/Electrical/Plumbing (M/E/P), Medical Gas/Vacuum, Reverse-Osmosis Water / Tele-communication, fire protection, security system & other utilities that may be impacted as part of this project (Add additional sheets to the project notification to describe the project scope as necessary).

PROJECT DELIVERY METHOD:

- Design Bid Build
- Design Build
- Walk & Talk
- Construction Manager (CM)
As Agent or @ Risk

CHECK APPROPRIATE BOX

- []
- []
- []
- []

ESTIMATED CONSTRUCTION START DATE: _____

ESTIMATED CONSTRUCTION COMPLETION DATE: _____



PROJECT TYPE

	YES	NO
- Project Impacts Infrastructure	[]	[]
- Hospital/ Ambulatory Care Area	[]	[]
- Animal Area Renovation	[]	[]
- Public Service	[]	[]
- Office Renovation	[]	[]
- IC Unit	[]	[]
- Laboratory Renovation	[]	[]

TOTAL PROJECT SQUARE FOOTAGE: _____

REVIEW REQUIREMENTS:

		YES	NO
HES/CCOFM	Project requires review by HES		
OHPE	Project requires CRA **		
	Project requires review by OHPE		
DFM	Project requires ILSM		
	Project requires review by DFM		
ALL	Project may require CRA/ILSM (PO to submit first submission to: OHPE, , HES, CCOFM, DTR & DFM)		

**** If yes- OHPE to complete CRA evaluation form and return to PO as attachment to this form via-e-mail.**

COMMENTS:



SECTION 3-11: SUSTAINABLE DESIGN

3-11-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements
3-11-00	POLICY

As defined in the HHS Sustainable Buildings Implementation Plan, all construction projects will incorporate the Guiding Principles of the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (MOU) into the planning, design, construction, operation, maintenance, and decommissioning processes. Construction projects under the scope of this policy, which have a total project cost equal to or greater than \$3 million, will obtain certification from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED™) or the Green Building Initiative's Green Globes™ System.

Existing facilities will incorporate the Guiding Principles of the MOU to the maximum extent feasible in all improvement, repair and maintenance projects. In addition to incorporating the Guiding Principles of the MOU, improvements and repair projects, which have a total project cost equal to or greater than \$10 million and/or impacting 40% or more of the overall floor area, will obtain certification from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED™) or the Green Building Initiative's Green Globes™ System.

In addition, existing buildings shall be assessed for compliance with the Guiding Principles of the MOU to ensure that 15% or more of the HHS capital asset building inventory incorporates the sustainable practices in the Guiding Principles by FY 2015. The HHS capital asset building threshold for incorporating sustainable practices in existing buildings is 5,000 gross square feet or more, excluding housing. New housing projects with a total project value greater than \$3 million shall be designed to obtain LEED™ certification from the U.S. Green Building Council (USGBC). New housing projects with an estimated construction cost of less than \$10 million may alternatively obtain a third-party Green Globes™ certification from the Green Building Initiative (GBI). Projects in existing housing that are greater than \$3 million in total project cost and impact more than 60% of any individual unit shall also obtain third-party certification.

All new lease actions 5,000 useable square feet (usf) or more will incorporate the Guiding Principles of the MOU to the maximum extent feasible. New lease actions under 5,000 usf will consider the Guiding Principles as one criterion for lease evaluation. A build to suit lease will be a LEED™ certified building.

Requests for waivers shall be considered on a case-by-case basis for individual projects. The Deputy Assistant Secretary, Office for Facilities Management and Policy, Office of the Assistant Secretary for Administration and Management (OFMP/ASAM) must approve waivers and any other exceptions to the provisions of this policy as required by E.O. 13423.

To the maximum extent feasible sustainable design practices shall be considered in the design requirements for facilities funded through extramural construction grants of \$1 million or more.



A. HHS GUIDING PRINCIPLES FOR NEW CONSTRUCTION, MAJOR RENOVATIONS AND LEASES

1. **Employ Integrated Design Principles: Integrated Design:** Use a collaborative, integrated planning and design process that: Initiates and maintains an integrated project team in all stages of a project's planning and delivery. Establishes performance goals for siting, energy, water, materials, and indoor environmental quality along with other comprehensive design goals; and, ensures incorporation of these goals throughout the design and lifecycle of the building; and, considers all stages of the building's lifecycle, including deconstruction.

Commissioning: Employ total building commissioning practices tailored to the size and complexity of the building and its system components in order to verify performance of building components and systems and help ensure that design requirements are met. This should include a designated commissioning authority, inclusion of commissioning requirements in construction documents, a commissioning plan, verification of the installation and performance of systems to be commissioned, and a commissioning report.

2. **Optimize Energy Performance: Energy Efficiency:** Establish a whole building performance target that takes into account the intended use, occupancy, operations, plug loads, other energy demands, and design to earn the ENERGY STAR® targets for new construction and major renovation where applicable. For new construction, reduce the energy use by 30 percent compared to the baseline building performance rating per the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., (ASHRAE) and the Illuminating Engineering Society of North America (IESNA) Standard 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential. For major renovations, reduce the energy use by 20 percent below pre-renovations 2003 baseline. Laboratory spaces may use the Labs21 Laboratory Modeling Guidelines. If available, use Energy Star and FEMP-designated Energy Efficient Products. Per the Energy Independence and Security Act (EISA) Section 523, meet at least 30% of the hot water demand through the installation of solar hot water heaters, when life cycle cost effective.

Per Executive Order 13423, implement renewable energy generation projects on agency property for agency use, when life cycle cost effective.

Measurement and Verification: Per the Energy Policy Act of 2005 (EPAAct) Section 103, in-stall building level utility meters in new major construction and renovation projects to track and continuously optimize performance. Per EISA Section 434, include meters for natural gas and steam, where appropriate.

Compare actual performance data from the first year of operation with the energy design target. After one year of occupancy, measure all new major installations using the ENERGY STAR® Portfolio Manager for building and space types covered by ENERGY STAR®. For other building and space types, use an equivalent benchmarking tool such as the Labs21 benchmarking tool for laboratory buildings. Compare actual performance of Laboratory buildings through the Labs21 benchmarking tool.

3. **Protect and Conserve Water: Indoor Water:** Employ strategies that in aggregate use a minimum of 20 percent less potable water than the indoor water use baseline calculated for the building, after meeting the EPAAct 1992, Uniform Plumbing Codes 2006, and the International Plumbing Codes 2006 fixture performance requirements. The installation of water meters is encouraged to allow for the management of water use during occupancy.

Outdoor Water: Use water efficient landscape and irrigation strategies, including water re-use and recycling, to reduce outdoor potable water consumption by a minimum of 50 per-cent over that consumed by



conventional means (plant species and plant densities). The installation of water meters for locations with significant outdoor water use is encouraged.

Employ design and construction strategies that reduce storm water runoff and polluted site water runoff. Per EISA Section 438, to the maximum extent feasible, maintain or restore the predevelopment hydrology of the site with regard to temperature, rate, volume, and duration of flow using site planning, design, construction, and maintenance strategies.

Process Water: Per the Energy Policy Act of 2005 Section 109, when potable water is used to improve a building's energy efficiency, deploy life-cycle cost effective water conservation measures.

Water-Efficient Products: Use EPA's WaterSense Program-labeled products or other water conserving products. Choose irrigations contractors who are certified through a WaterSense labeled program.

4. **Enhance Indoor Environmental Quality: Ventilation and Thermal Comfort:** Meet ASHRAE Standard 55-2004, Thermal Environmental Conditions for Human Occupancy, including continuous humidity control within established ranges per climate zone, and ASHRAE Standard 62.1-2007, Ventilation for Acceptable In-door Air Quality.

Moisture Control: Establish and implement a moisture control strategy for controlling moisture flows and condensation to prevent building damage and mold contamination.

Daylighting: Achieve a minimum of daylight factor of 2 percent (excluding all direct sunlight penetration) in 75 percent of all space occupied for critical visual tasks. Provide automatic dimming controls or accessible manual lighting controls, and appropriate glare control.

Low-Emitting Materials: Specify materials and products with low pollutant emissions, including adhesives, sealants, paints, carpet systems, and furnishings.

Protect Indoor Air Quality during Construction: Follow the recommended approach of the Sheet Metal and Air Conditioning Contractor's National Association Indoor Air Quality Guidelines for Occupied Buildings under Construction, 1995. After construction and prior to occupancy, conduct a minimum 72-hour flush-out with maximum outdoor air consistent with achieving relative humidity no greater than 60 percent. After occupancy, continue flush-out as necessary to minimize exposure to contaminants from new building materials. Prohibit smoking within the building and within 25 feet of all building main entrances and building ventilation intakes during building occupancy.

5. **Reduce Environmental Impact of Materials: Recycled Content:** For EPA-designated products use products meeting or exceeding EPA's recycled content recommendations. For other products, use materials with recycled content such that the sum of postconsumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project. If EPA-designated products meet performance requirements and are available at a reasonable cost, a preference for purchasing them should be included in all solicitations relevant to construction, operation, maintenance of or use in the building.

Biobased Content: For USDA-designated products, use products meeting or exceeding USDA's biobased content recommendations. For other products, use biobased products made from rapidly renewable resources and certified sustainable wood products. If these designated products meet performance requirements and are available at a reasonable cost, a preference for purchasing them should be included in all solicitations relevant to construction, operation, maintenance of or use in the building.



Environmentally Preferable Products: Use products, such as low-emitting materials or products containing no toxic metals, that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.

Construction Waste and Materials Management: During a project's planning stage, identify local recycling and salvage operations that could process site-related construction and demolition materials. Include in the design the recycle or salvage of at least 50 percent of the non-hazardous construction, demolition and land clearing materials, excluding soil, where markets or onsite recycling opportunities exist. Provide salvage, reuse and recycling services for waste generated from major renovations, where markets or onsite recycling opportunities exist.

Ozone Depleting Compounds: Eliminate the use of ozone depleting compounds during and after construction where alternative environmentally preferable products are available, consistent with either the Montreal Protocol and Title VI of the Clean Air Act Amendments of 1990, or equivalent overall air quality benefits that take into account life cycle impacts.

3-10-10 Procedures

To promote the health of the public and our employees and minimize potential impacts of our mission activities on the environment, each Operating Division (OPDIV) of the Department of Health and Human Services (HHS) will incorporate sustainable and high-performance design principles in the planning, acquiring, siting, designing, building, operating, maintaining and decommissioning of all facilities.

Several policies and laws affecting facilities have been issued that promote and mandate the greening of the Federal Government. The design therefore shall provide for the protection of the environment through energy efficiency, recycling, pollution prevention, and affirmative procurement.

1. In January 2006, HHS joined 18 other federal agencies and authorities in signing the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (MOU) at the White House Summit on Federal Sustainable Buildings.
2. The Executive Order 13327 – Federal Real Property Asset Management and the HHS Real Property Asset Management Plan call for the Department to establish a sustainability policy.
3. In September 2006, the Department issued its initial policy for Sustainable and High Performance Buildings. In December 2006, the Department issued its initial Sustainable Buildings Implementation Plan (SBIP) for implementing the policy. The SBIP is updated every year with the latest information and policy.
4. In January 2007, Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management replaced E.O. 13123, Greening Through Efficient Energy Management. The new E.O strengthens the energy efficiency requirements for federal facilities enforces and requires Agencies to incorporate sustainable practices consistent with the MOU Guiding Principles.
5. In December 2007, the Energy Independence Policy Act of 2007 was signed into law that is designed to increase energy efficiency and the availability of renewable energy and makes many of the sustainable practices and requirements law.



3-11-20 GUIDANCE AND INFORMATION

The policy for Sustainable and High Performance Buildings applies to all buildings under the control of the Department and all OPDIVs, including all buildings that are reported in the HHS Automated Real Property Inventory System (ARIS), whether owned or leased and operated by HHS, or operated on behalf of HHS. This policy does not apply to tribally owned and operated buildings under the authorities of P.L. 93-638.

The HHS Sustainable Building Implementation Plan (SBIP) is updated annually and addendums are included on a semi-annual basis when new policy or requirements are identified. Due to the continued improvement of sustainable technology and techniques, the use of the SBIP is encouraged to be aware of the latest information and reporting procedures concerning federal facilities requirements. The NIH Division of Environmental Protection will provide additional guidance.

A. SUSTAINABLE DESIGN REFERENCES

- Department of Health and Human Services. HHS Policy for Sustainable and High Performance Buildings. December 2007. Available: <http://www.hhs.gov/asam/ofmp/hiperfldngpol.pdf>
- Department of Health and Human Services. HHS Real Property Asset Management Plan. Available: <http://www.hhs.gov/asam/ofmp/ramp.doc>
- Executive Order 13101: Greening the Government through Waste Prevention, Recycling, and Federal Acquisition. Available: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=1998_register&docid=fr16se98-113.pdf
- Executive Order 13123: Greening the Government through Efficient Energy Management. Available: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=1999_register&docid=fr08jn99-171.pdf
- Executive Order 13134: Developing and Promoting Biobased Products and Bio-energy. Available: <http://www.archives.gov/federal-register/executive-orders/1999.html#13134>
- Executive Order 13148: Greening the Government through Leadership in Environmental Management. Available: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=fr26ap00-129.pdf
- OMB Circular A-11, Section 55-Energy and Transportation Efficiency Management. Available: http://www.whitehouse.gov/omb/circulars/a11/current_year/s300.pdf#search=%22OMB%20Circular%20A-11%20Part%207%22
- OMB Circular A-11, Part 7 (Section 300), Planning, Budgeting, Acquisition, and Management of Capital Assets Available: http://www.whitehouse.gov/omb/circulars/a11/current_year/s300.pdf#search=%22OMB%20Circular%20A-11%20Part%207%22
- The Federal Leadership in High Performance and Sustainable Buildings, Memorandum of Understanding. Available: http://www.energystar.gov/ia/business/Guiding_Principles.pdf
- Green Building Initiative Green Globes System. Available: <http://www.thegbi.com/greenglobes/>
- US Green Building Council. Available: www.usgbc.org
Whole Building Design Guide Available: www.wbdg.org





SECTION 3-12: FEASIBILITY AND OTHER FACILITIES STUDIES

3-12-00	Policy
10	(Reserved)
20	Guidance and Information
30	(Reserved)

3-12-00 POLICY

The purpose of this section is to provide both general and specific information on requirements for facility studies to agency staff responsible for preparing or managing such studies.

This section includes guidance and requirements on all technical facility studies normally performed by OPDIVs. Generally, the studies described in this section are contracted for with private architectural/engineering (A/E) or other technical consulting firms. Alternatively, the OPDIV or other Federal personnel may perform them. When an OPDIV component does not conduct an in-house study and turns to another Federal component for the service, an interagency agreement is executed. The OPDIV remains responsible for the adequacy of all documents.

3-12-20 GUIDANCE AND INFORMATION

A. GENERAL GUIDANCE FOR FACILITY STUDIES

The following general study outline is provided as an option for studies where a format for preparing a work plan is not otherwise specified. At a minimum, facility studies address program, budget, and environmental requirements. This applies to all types of feasibility and special studies, and is oriented to studies conducted by consultants.

1. Content
 - a. Statement of the Problem. What is/are the question(s) to be answered by this study?
 - b. Background. The background and reasons for the study should be developed in sufficient detail to justify its need.
 - c. Methodology and approach to the study
 - d. Observations and Findings (including presentation of data)
 - e. Conclusions and Recommendations

B. EXAMPLES OF FACILITY STUDIES

1. FEASIBILITY STUDIES

The feasibility study is the most fundamental of facilities studies and addresses program, engineering, architectural, environmental, and budget issues. It is most frequently undertaken as part of a decision process comparing different solutions to satisfying a facility requirement, such as modernizing and/or expanding an existing facility versus constructing a replacement facility, or to establish the appropriate size and scope of a planned new facility. Such feasibility studies are frequently made in conjunction with preparation of a Program of Requirements (POR) document.

- a. The scope and parameters for a feasibility study must be stated in objective terms so that the A/E or consultant firm can produce an unbiased report.



- b. If the issues are basically technical, requiring A/E disciplines, the A/E selection process described in Volume I, Section 4-2, "Architect/Engineer Selection Process and Approvals," must be followed after the scope is approved.
- c. The recommendations of feasibility studies will be recorded in the Facility Survey Data Base. Each recommendation will be classified and prioritized in the Facility Survey Data Base.

2. PRE-DESIGN AND PRE-TRANSFER STUDIES

Pre-design and pre-transfer studies are undertaken when insufficient information is available to proceed.

- a. Utility Studies - Adequate utility support is essential. Such needs are particularly complex for hospitals and research facilities. Such studies require detailed information on utility availability, capacity, reliability, projected life, etc. Studies may be devised to cover all relevant utilities or specified ones; e.g., steam or water supply only. Studies should address the special needs related to the management of medical and/or hazardous waste.
- b. Physical Plant Audits or Existing Condition Survey - Physical Plant Audits or Existing Condition Survey is complete inventories of the physical plant with all deficiencies identified with a general plan of correction and estimated construction cost as well as disclose hazardous materials activities.

3. SUBSURFACE AND SOIL STUDIES

The studies listed below may be part of the site selection study. The complexity or individual nature of the site may require a special study or studies.

- a. Soil Investigation and Structural Report - Certain sites may contain unusual soil materials or formations that require special consideration (e.g. expandable clays, water table problems or unstable organic fill). The report should be prepared by a soils testing laboratory and reviewed by a licensed geotechnical engineer registered in the state or territory of the site.
- b. Seismic/Geologic Study - These studies are required for all sites in high risk seismic areas. Other sites may logically require special geologic studies; e.g. where rock or ledge is visible within or near the area to be developed.

4. BUILDING SYSTEMS STUDIES

Complexity in building systems often requires that individual systems be isolated and analyzed in order to develop the most effective and efficient application.

- a. Energy Conservation - The high-energy usage in hospitals and laboratories has prompted these studies. Mechanical and electrical systems are the prime focus. For instance, lighting may be reduced at certain hours and electric motors may be interlocked to reduce demand.
- b. Pollution Prevention - This includes both physical systems and management programs to prevent or minimize pollution, including recycling programs.
- c. Other Building Systems - Many other building systems may benefit from special studies. Some common subjects are as follows:
 - (1) HVAC System and Controls
 - (2) Accessibility for Persons with Disabilities
 - (3) Vertical Transportation Elevators and Escalators
 - (4) Security
 - (5) Maintenance of Building Equipment



(6) Fire Safety System

5. OTHER STUDIES

HHS facilities may require specific studies as listed but not limited to those below.

- a. Research Animal Holding Studies - Research animals require sophisticated environments that differ significantly from typical human environments. Use of hazardous chemicals in animal research requires careful monitoring, from delivery to final disposal of wastes. Facilities for animal studies must consider the animal species, population, research protocol, material handling, cage washing and disposal methods. A special study may be appropriate to answer facility questions in one or several of these animal research areas (e.g., Does the facility meet American Association for Accreditation of Laboratory Animal Care (AAALAC) standards?)
- b. Hospital Department Studies - As a result of disease incidence or population changes, certain departments may require space adjustments after a hospital has been in operation for several years. Efficient use of space may be improved by departmental studies. Such studies should address environmental issues, such as the management of hazardous or medical wastes.
- c. Technology Improvements - New equipment and technology may permit facilities to be operated more efficiently, or in a more environmentally benign manner (e.g., an improved medical waste incinerator). Specific studies are frequently necessary to plan such advancements.
- d. Transportation Studies - Special studies may be necessary to integrate the HHS facility into a community transportation plan. In addition, on-site traffic patterns of vehicles and materials may be of a complex nature requiring in-depth analysis of alternatives.
- e. Food Service - Food service functions of inpatient care complexes frequently warrant basic review when the cooking and serving equipment needs replacement. A study may identify more efficient methods of receiving, storing, preparing, and serving food.
- f. Laundry - Hospital requirements for laundry are demanding, complex and expensive. Studies are performed to develop more efficient laundry facilities and to determine cost effectiveness of private contracting for hospital linens, etc.

NIH Facilities Development Manual



Chapter 4 Design-Build



SECTION 4-1 DESIGN-BUILD GENERAL REQUIREMENTS AND PROCEDURES

4-1-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

4-1-00 POLICY

This section establishes Design-Build (D-B) as the procurement methodology that receives first consideration for all design and construction projects of federally-owned real property assets throughout the Department of Health and Human Services.

Implementation of Design-Build as the preferred project delivery system will ensure that facilities development within the Department honors the Department's value of fiscal responsibility and prioritization of mission critical functions over administrative bureaucracy. The acquisition of design and construction services for federal facilities using Design-Build shall follow the policies and procedures in FAR 36.3. Design-Build is the preferred method for design and construction of facilities owned and operated by HHS.

The Office for Facilities Management and Policy, Assistant Secretary for Administration and Management (OFMP/ASAM) will review any exceptions to this policy as part of the project approval process. (See Section 2-3 HHS Facility Project Approval Agreements.) Exceptions will be granted for projects contracted under P.L.93-638, Indian Self-Determination and Education Act, with tribal entities.

A. PUBLIC LAW 104-106, § 4105. DESIGN-BUILD SELECTION PROCEDURES

Both the Armed services Procurement Act and the Federal Property and Administrative Act are amended by adding a new section at 10 U.S.C. §2305a and U.S.C. §303M, Design-build selection procedures.

B. AUTHORIZATION

Unless the traditional acquisition approach of design-bid-build established under the Brooks Architect-Engineers Act (41 U.S.C. 541, et seq.) or another acquisition procedure authorized by law is used, the contracting officer shall use the two-phase selection procedures authorized by 10 U.S.C. 2305a or 41 U.S.C. 253m when entering into a contract for the design and construction of a public building, facility, or work, if the contracting officer makes a determination that the procedures are appropriate for use (see FAR Subpart 36.3). Other acquisition procedures authorized by law include the procedures established in FAR Part 36 and other parts of FAR Chapter 1.

C. STATUTORY COST LIMITATIONS.

Contracts for design-build services shall not be awarded at a cost to the Government--

In excess of statutory cost limitations, unless applicable limitations can be and are waived in writing for the particular contract; or which, with allowances for Government-imposed contingencies and overhead, exceeds the statutory authorization.



Solicitations containing one or more items subject to statutory cost limitations shall state--

1. The applicable cost limitation for each affected item in a separate schedule;
2. That an offer which does not contain separately-priced schedules will not be considered; and
3. That the price on each schedule shall include an approximate apportionment of all estimated direct costs, allocable indirect costs, and profit.

The Government shall reject an offer if its prices exceed applicable statutory limitations, unless laws or agency procedures provide pertinent exemptions. However, if it is in the Government's interest, the contracting officer may include a provision in the solicitation which permits the award of separate contracts for individual items whose prices are within or subject to applicable statutory limitations.

The Government shall also reject an offer if its prices are within statutory limitations only because it is materially unbalanced. An offer is unbalanced if its prices are significantly less than cost for some work, and overstated for other work.

The contracting officer shall not negotiate a price or fee that exceeds the following statutory limitations, imposed by 10 U.S.C. 2306(e) and 41 U.S.C. 254(b): For architect-engineer services for public works or utilities, the contract price or the estimated cost and fee for production and delivery of designs, plans, drawings, and specifications shall not exceed 6 percent of the estimated cost of construction of the public work or utility, excluding fees.

D. PERFORMANCE SPECIFICATIONS

The NIH Design Requirements Manual (DRM) is the official performance specifications for NIH Design-Build Projects.

4-2-10 PROCEDURES

A. ACQUISITION PLANNING.

During planning of project delivery and contract strategy for all projects, OPDIVs shall analyze the appropriateness of the Design-Build methodology. The OPDIV Contracting Officer, in close collaboration with appropriate design and construction professionals, determines during the budgeting and planning stage whether it is feasible and effective to use the Design-Build process. The OPDIVs should base their analyses on a best practice such as the Construction Industry Institute's Project Delivery and Contract Strategy. The OPDIVs shall include the acquisition analysis documentation with the Facility Project Approval Agreement provided to OFMP/ASAM. While D-B procurement can save time once the project is awarded, the D-B process requires more extensive "front-loading" of the project – that is, a more thorough and rigorous programming effort and a more thorough definition of requirements. In the planning stages of the project, the D-B process can be significantly more labor intensive for in-house personnel than the more traditional project delivery methods (e.g. design-bid-build process). Key elements in the success of a D-B project include:

1. Development and continual update of a thorough acquisition plan.
2. Developing comprehensive planning and programming documents based on preliminary studies and documents. The planning and programming document shall include a narrative description of all building elements, and systems including but not limited to HVAC Systems, Electrical, special sys-



tems, and equipments. These documents may include graphic presentation drawings, however not dimensioned or scaled to provide some general idea about the space. These documents shall not be directive and specific in describing systems, it shall be generic enough to provide opportunity for the A/E team to be innovative in design of the project. Preparation of these documents may require hiring A/E team and a commissioning expert, these services may be purchased as part of study, concept and feasibility of project. The documents shall be accompanied with a construction cost estimate, the document and the cost estimate shall be used in preparation of the FPAA. The A/E or any of its Team Members shall not participate in any of the Design-Build contractors.

3. Developing a request for proposal with a balance between performance specifications and specific technical requirements, where needed, for the type of facility being built. The level of technical detail included in the request for proposal will depend upon the complexity of the project and specific OPDIV requirements for construction.
4. Preparing accurate and necessary planning documents that will become integral to the request for proposal. The project team must secure OPDIV and high-level buy-in of the programming documents ahead of time, rather than making changes after award of the D-B contract.
5. Preparing realistic budgets to reduce the likelihood of scope reductions once the RFP is advertised.
6. Developing procedures and project controls to minimize owner-generated changes. Owner generated changes can be particularly problematic during a D-B project.
7. Assignment of a multi-disciplined technical review board that can ensure during D-B selection evaluations that the proposers have met the requirements of the RFP with sound design and the D-B firm is qualified for the level of work. The Government has the best opportunity for success by securing a D-B contractor with a demonstrated track record and collaborative experience in the type of project being proposed.

Prior to advertising design-build services the OPDIV must ensure that adequate funds are available to complete the design of the project; that the Planning and Programming Documents and HHS Facility Project Approval Agreement documents and statement of work are complete; evaluation criteria is established and the government estimate is complete.

4-1-20 GUIDANCE AND INFORMATION

A. GUIDANCE ON DESIGN-BUILD CONTRACT FORMULATION & PROCUREMENT

FAR 36.3 prescribe only the acquisition method for two-phase Design-Build selection procedures and there is no guidance on the required clauses or contract administration. Design-Build does not waive Federal law or regulations. For example, the 6 percent fee limitation for basic design services applies and the Miller Act requiring bonding applies. Refer to the FAR Matrix for the appropriate provisions and clause under both A/E and construction contracts. It is recommended that the provisions and clauses be written in full text.

Design-Build can be accomplished through various procurement methods. This is not intended to be an all-inclusive list, nor does HHS endorse a preference, but provides the following information on the most common methods.

1. “Best Value” is a selection process in which proposals contain both price and qualitative components, and award is based upon a combination of price and qualitative considerations. Qualitative can be further subdivided as to technical design and/or management plan. A qualification based selection process can be used in Phase One to determine the competitive range. Those firms who are the most qualified are invited to submit a proposal in response to the Phase Two RFP.



2. “Equivalent Design/Low Bid” is a form of best value selection in which qualitative proposals are followed by a critique rather than scoring. Price envelopes remained sealed. Each offeror receives the critique of its proposal and makes design changes and corresponding price amendment. Revised designs are evaluated for compliance, and then price envelopes, both original and amended, are opened. Award is based on lowest price because the proposal creates relative equivalency of designs.
3. “Fixed Price/Best Design” is a form best value selection in which the contract price is established by the Government and stated in the RFP. Design proposals and management plans are evaluated and scored, with award going to the team offering the best qualitative proposal for the established price.

Exhibit X4-2-A provides additional guidance to the OPDIVS in developing a Two-Phase Design-Build Selection.

B. REQUIREMENT TO USE DESIGN FIRMS LISTED IN DESIGN-BUILDER’S PROPOSAL

One of the significant qualitative considerations when evaluating a Design-Builder’s proposal (in response to the government’s RFP) is the quality of proposed design professionals on the team. The RFP should specify that the Design-Builder must retain all of the design professional firms listed in its proposal, for the entire period of the contract, for the duties and responsibilities assigned in the same document, unless specifically authorized otherwise by the Government. See exhibit X4-2-B for a Sample Design-Build Qualifications Questionnaire and X4-2-C for Sample Selection Criteria.

C. REFERENCES:

1. Labor Laws: FAR 22.4 Labor Standards for Contract Involving Construction applies to design-build services. 22.400 Scope of subpart. This subpart implements the statutes which prescribe labor standards requirements for contracts in excess of \$2,000 for construction, alteration, or repair, including painting and decorating, of public buildings and public works. Labor relations requirements prescribed in other subparts of Part 22 may also apply. FAR 22.4 include the Davis-Bacon Act and the Cope-land Act. FAR 22.6 Walsh-Healey Public Contracts Act also applies to design-build services. Equal Employment Opportunity as specified in FAR 22.8 applies to design -build.
2. Environmental Laws: The following environmental laws apply to design-build services: Clean Air Act (42 U.S.C. 7401 et seq.); Clean Water Act (33 U.S.C. 1251 et seq.); Executive Order 11738, September 10, 1973 (38 FR 25161, September 12, 1973);and Environmental Protection Agency (EPA) regulations (40 CFR Part 32).(National Environmental Protection Act)
3. Energy Conservation Laws: The following energy conservation laws apply to design-build services: Energy Policy and Conservation Act (42 U.S.C. 6361(a)(1)) and Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.); National Energy Conservation Policy Act (42 U.S.C. 8253 and 8262g); Executive Order 11912, April 13, 1976; Executive Order 12759, Sections 3, 9, and 10, April 17, 1991; and Executive Order 12902, March 8, 1994.
4. Hazardous Material Identification and Material Safety Data: Design-build services shall be in compliance with FAR 23.3. This FAR subpart prescribes policies and procedures for acquiring deliverable items, other than ammunition and explosives that require the furnishing of data involving hazardous materials. "Hazardous material" is defined in the latest version of Federal Standard No. 313.
5. Use of Recovered Materials: Design-build services shall be in compliance with the following regulations: Resource Conservation and Recovery Act of 1976 (RCRA), as amended (Solid Waste Disposal Act, 42 U.S.C. 6901, et seq.) and Executive Order 12873, dated October 20, 1993.



6. Buy American Act – Construction Materials: The Buy American Act (41 U.S.C. 10) and Executive Order 10582, December 17, 1954 (as amended). These apply to contracts for the construction, alteration, or repair of any public building or public work in the United States.

7. Miller Act - Performance & Payment Bonds: FAR 28.102-1(a) The Miller Act (40 U.S.C. 270a-270f) requires performance and payment bonds for any construction contract exceeding \$100,000. There are exceptions.

8. Other Applicable Federal Regulations: Services delivered by design-build contractor shall be in accordance with all applicable Federal Regulations including but not necessarily limited to the following: Architectural Barriers Act, OSHA (29CFR 1910); The National Historic Preservation Act of 1966 (36 CFR 800); The Archeological and Historic Preservation Act; National Capital Planning Commission (NCPC) "Master Planning Regulations" etc.

9. NIH and Departmental Guidelines:

Animal Care: Services delivered by design-build contractor shall be in accordance with the latest publication of "Guide for the Care and Use of Laboratory Animals," plus, the U.S. Public Health Service (PHS) and the American Association for Accreditation of Laboratory Animal Care (AAALAC) accreditation standards.

Biosafety: Services delivered by design-build contractor shall be in accordance with latest HHS Publication of "Biosafety in Microbiological and Biomedical Laboratories.

Volume I of the HHS Facilities Program Manual: Services delivered by design-build contractor shall be in accordance with the edition of Volume I of the HHS Facilities Program Manual.

NIH Design Requirements Manual: The design of NIH biomedical research laboratories and animal research facilities shall be design in accordance with latest edition of the NIH Design Requirements Manual.

NIH Office Fit-Out Guidelines: The design of NIH administrative facilities shall be design in accordance with latest edition of the NIH Office Fit-Out Guidelines.

NIH Public Space Fit-Out Guidelines: The design of NIH administrative facilities shall be design in accordance with latest edition of the NIH Public Space Fit-Out Guidelines.

NIH Interior Signage Manual: Interior signage in NIH facilities shall be design in accordance with latest edition of the NIH Interior Signage Manual.

D. LOCAL BUILDING CODES AND ORDINANCES

The NIH derives its authority from the Congress of the United States of America and is not subject to the laws, codes and ordinances of any jurisdiction of lessor authority unless the Congress defers authority to the states or local governments. The NIH will comply with local codes and ordinances so long as they are deemed necessary and reasonable and consistent with its mission. Facility improvements delivered by design-build services shall be in accordance with the applicable standards of the local model building code having jurisdiction, National Fire Protection Association (NFPA) such as the Life Safety Code (NFPA 101), Fire Protection for Laboratories Using Chemicals (NFPA 45), and Standard for the Installation of



Sprinkler Systems (NFPA 13). The NIH is not required to secure building or occupancy permits from local or state authorities; however, NIH may request certificate of safety inspection for various building sub-systems such as elevators from local authorities.

E. DESIGN BUILD CONTRACT ORDER OF PRECEDENCE AND CLAUSES

Do not use the standard clause “Order of Precedence-Uniform Contract Format” (FAR 52.215-8). This standard clause puts the order of precedence of the proposal above the scope of work when there are inconsistencies or conflicts between the two. In design-build construction, the RFP is the minimum standard except when the Offeror’s best value proposal exceeds the minimum RFP requirements, known as betterment. In this case, the betterment becomes the new minimum standard. The recommended language for this clause is:

Design-Build Contract – Order of Precedence

- (a) *The contract includes the standard contract clauses and schedules current at the time of the award. It also entails: (1) the solicitation in its entirety, including all drawings, cuts and illustrations, and any amendments during proposal evaluation and selection, and (2) the successful Offeror’s accepted proposal. The contract constitutes and defines the entire agreement between the Contractor and the Government. No documentation shall be omitted which in any way bears upon the terms of that agreement.*
 - (b) *In the event of conflict or inconsistency between any of the provisions of the various portions of this contract, precedence shall be given in the following order:*
 - (1) *Betterments: Any portions of the Offeror’s proposal, which both meet and exceed the provisions of the solicitation.*
 - (2) *The provisions of the solicitations.*
 - (3) *All other provisions of the accepted proposal.*
 - (4) *Any design products, including but not limited to plans, specifications, engineering studies and analyses, shop drawings, equipment installation drawings, etc. These are deliverables under the contract and are not part of the contract itself. Design products must conform to all provisions of the contract, in order of precedence herein.*
- (End of Clause)*

4-2-30 REPORTING REQUIREMENTS

BID REPORT FOR CONSTRUCTION CONTRACTS

The OPDIV shall submit a bid report to the Office for Facilities Management and Policy (OFMP) at the completion of the selection and evaluation process. A bid report is required only on those projects requiring HQ approval per the FPAA policy. The report is for OFMP information only. The Bid Report may be a copy of the selection report or summary of the significant technical and cost information contained therein. A format similar to the sample bid report form provided in Section 4-6, as Exhibit X4-6-D is acceptable.



SECTION 4-2 ACQUISITION PLANNING

4-2-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements
X4-2-A	Acquisition Planning Worksheet
X4-2-B	Sample Design-Build Qualifications Questionnaire
X4-2-C	Sample Phase Two Design-Build Proposal Selection Criteria
X4-2-D	Sample Design-Build Request for Proposal (RFP)
Appendix B	Sample Model Performance Specifications and Technical Requirements

4-1-00 POLICY

In accordance with FAR Part 7 and HHS policy, NIH shall perform acquisition planning for all acquisitions in order to provide for -

- Acquisition of commercial items or, to the extent that commercial items suitable to meet the Government's needs are not available, non-developmental items, to the maximum extent practicable; and
- Full and open competition or, when full and open competition is not required in accordance with Part 6, to obtain competition to the maximum extent practicable, with due regard to the nature of the supplies or services to be acquired.
- [Acquisition of services for design, construction or any combination of these shall be published and accessed via the Internet at <http://www.fedbizopps.gov>.](#)

Acquisition planning for federally-owned real property assets shall integrate the efforts of all personnel responsible for significant aspects of the acquisition. The purpose of this planning is to ensure that the Government meets its needs in the most effective, economical, and timely manner. In order to facilitate attainment of the acquisition objectives, the plan should identify those milestones at which decisions should be made. The plan should address all the technical, business, management, and other significant considerations that will control the acquisition. The specific content of plans will vary, depending on the nature, circumstances, and stage of the acquisition. The acquisition plan should include the following:

- Acquisition background and objectives that includes statement of need; applicable condition; life-cycle cost; performance characteristics; trade-offs; risks; and acquisition streamlining;
- Plans of action that includes sources, competition, source-selection procedures, acquisition considerations, budgeting and funding, product or service descriptions, priorities, allocations, and allotments, contractor versus government performance, inherently governmental functions, logistics considerations, government-furnished property, government-furnished information, environmental and energy conservation objectives, security considerations, contract administration, other considerations, and milestones for the acquisition cycle.

4-1-10 PROCEDURES

Acquisition planning should begin as soon as the [facility](#) need is identified, preferably well in advance of the fiscal year in which contract award or order placement is necessary. In developing the plan, the NIH forms a team consisting of all those who will be responsible for significant aspects of the acquisition, such



as contracting, fiscal, legal, professional and technical personnel. NIH should review the plan and if appropriate revise it at key dates specified in the plan, whenever significant changes occur, and no less often than annually. Requirements personnel (customer and users) should avoid issuing requirements on an urgent basis or with unrealistic delivery or performance schedules, since it generally restricts competition, increases prices, and increases project risks. Early in the planning process, the Project Officer should consult with the customer or user who determines type, quality, quantity, and delivery requirements. As part of developing an acquisition strategy, NIH is encouraged to use the Construction Industry Institute (CII) Project Delivery Contract Strategy (PDCS) to evaluate alternate project management delivery mechanisms. Design-Build must be considered as a preferred strategy in the evaluation. The evaluation through PDCS or a similar tool shall be forwarded with the Facility Project Approval Agreement (FPAA) on all projects requiring Department approval.

The Project Officer should coordinate with and secure the concurrence of the Contracting Officer in all acquisition planning. If the plan proposes using other than full and open competition when awarding a contract, the plan shall also be coordinated with the Competition Advocate as required in the Competition in Contracting Act (CICA). The acquisition plan or strategy must be coordinated with the Small Business and Disadvantaged Business Utilization Specialist (SADBUS).

4-1-20 GUIDANCE AND INFORMATION

A. CONTRACT TYPES

In acquisition planning, determining the type of contract early in the process is important. A wide selection of contract types is available to the Government and contractors in order to provide needed flexibility in acquiring the large variety and volume of supplies and services required by agencies. Contract types vary according to-

- The degree and timing of the responsibility assumed by the contractor for the costs of performance; and
- The amount and nature of the profit incentive offered to the contractor for achieving or exceeding specified standards or goals.

The contract types are grouped into two broad categories: fixed-price contracts and cost-reimbursement contracts.

The specific contract types range from firm-fixed-price, in which the contractor has full responsibility for the performance costs and resulting profit (or loss), to cost-plus-fixed-fee, in which the contractor has minimal responsibility for the performance costs and the negotiated fee (profit) is fixed. In between are the various incentive contracts in which the contractor's responsibility for the performance costs and the profit or fee incentives offered are tailored to the uncertainties involved in contract performance.

1. Firm Fixed Price Contract: A firm-fixed-price contract provides for a price that is not subject to any adjustment on the basis of the contractor's cost experience in performing the contract. This contract type places upon the contractor maximum risk and full responsibility for all costs and resulting profit or loss. It provides maximum incentive for the contractor to control costs and perform effectively and imposes a minimum administrative burden upon the contracting parties. The Contracting Officer may use a firm-fixed-price contract in conjunction with an award-fee incentive and performance or delivery incentives when the award fee or incentive is based solely on factors other than cost.



2. Cost-Reimbursement Contracts: Cost-reimbursement types of contracts provide for payment of allowable incurred costs, to the extent prescribed in the contract. These contracts establish an estimate of total cost for the purpose of obligating funds and establishing a ceiling that the contractor may not exceed (except at its own risk) without the approval of the Contracting Officer. There are several cost reimbursement type contracts allowed under the FAR.
 - a. Cost Contracts: A cost contract is a cost-reimbursement contract in which the contractor receives no fee.
 - b. Cost-Sharing Contracts: A cost-sharing contract is a cost-reimbursement contract in which the contractor receives no fee and is reimbursed only for an agreed-upon portion of its allowable costs. A cost-sharing contract may be used when the contractor agrees to absorb a portion of the costs, in the expectation of substantial compensating benefits.
 - c. Cost-Plus-Incentive-Fee Contracts: A cost-plus-incentive-fee contract is a cost-reimbursement contract that provides for an initially negotiated fee to be adjusted later by a formula based on the relationship of total allowable costs to total target costs.
 - d. Cost-Plus-Award-Fee Contracts: A cost-plus-award-fee contract is a cost-reimbursement contract that provides for a fee consisting of (a) a base amount (which may be zero) fixed at inception of the contract and (b) an award amount, based upon a judgmental evaluation by the Government, sufficient to provide motivation for excellence in contract performance.
 - e. Cost-Plus-Fixed-Fee Contracts: A cost-plus-fixed-fee contract is a cost-reimbursement contract that provides for payment to the contractor of a negotiated fee that is fixed at the inception of the contract. The fixed fee does not vary with actual cost, but may be adjusted as a result of changes in the work to be performed under the contract. This contract type permits contracting for efforts that might otherwise present too great a risk to contractors, but it provides the contractor only a minimum incentive to control costs.

B. INDEFINITE-DELIVERY CONTRACTS

There are three types of indefinite-delivery contracts: definite-quantity contracts, requirements contracts, and indefinite-quantity contracts. The appropriate type of indefinite-delivery contract may be used to acquire supplies and/or services when the exact times and/or exact quantities of future deliveries are not known at the time of contract award. Requirements contracts and indefinite-quantity contracts are also known as delivery order contracts or task order contracts.

1. The various types of indefinite-delivery contracts offer the following advantages. All three types permit-
 - a. Government stocks to be maintained at minimum levels; and
 - b. Direct shipment to users.
2. Indefinite-quantity contracts and requirements contracts also permit-
 - a. Flexibility in both quantities and delivery scheduling; and
 - b. Ordering of supplies or services after requirements materialize.
3. Indefinite-quantity contracts limit the Government's obligation to the minimum quantity specified in the contract.
4. Requirements contracts may permit faster deliveries when production lead time is involved, because contractors are usually willing to maintain limited stocks when the Government will obtain all of its actual purchase requirements from the contractor.



5. Indefinite-delivery contracts may provide for any appropriate cost or pricing arrangement under FAR Part 16, Cost or pricing arrangements that provide for an estimated quantity of supplies or services (*e.g.*, estimated number of labor hours).
6. A/Es should be selected for discrete tasks based on qualifications in accordance with FAR Part 36.

C. HHSAR - PART 307

Acquisition plans should include applicable provision of HHSAR Part 307 HHS Acquisition Plans.

D. ACQUISITION PROCEDURES

The Contracting Officer will determine if two-phase design-build selection procedures are appropriate to use in accordance with FAR 36.301

E. PHASE ONE SELECTION PROCEDURES

Proposals or qualifications will be evaluated in Phase One to determine which offerors will be invited to submit proposals for Phase Two. The Phase One request for qualifications RFQ is a formal request for the necessary and desirable qualifications in FedBizOpps from potential Design-Build contractors wishing to be considered for the competitive proposal preparation phase of the selection process (See Exhibit X4-1-B, Sample Design-Build Qualifications Questionnaire.). The Design-Builders who intend to submit qualification statements in response to the Government's RFQ shall be informed in advance of the requirements of request for proposal (RFP). Alternatively, the Government may publish both the RFQ and the RFP as a single, comprehensive document. Phase One evaluation factors shall be in accordance with FAR 36.301-1(a)(2). In addition the following evaluation factors are recommended:

1. Minimum level of bonding capacity and proof thereof,
2. Minimum insurance requirements,
3. Required license, registration and/or tax status of Design-Builder and team members, and
4. Financial strength and organizational resources.

After evaluating phase-one proposals, the Evaluation Board shall recommend to the Contracting Officer the most highly qualified offerors (not to exceed the maximum number specified in the solicitation). Only those offerors will be invited to submit phase-two proposals. Due to the cost involved in preparing a design-build proposal, the Evaluation Board should be certain that any firm on the short-list is considered competitive for selection in that they would be capable of completing the project successfully.

B. PHASE TWO REQUESTS FOR PROPOSAL EVALUATION PROCEDURES

Phase Two of the solicitation shall require submission of technical and price proposals, which shall be evaluated separately, in accordance with FAR Part 15. Beyond the mandatory requirements of the program and performance specifications, the proposal selection criteria are arguably the most critically examined section in the RFP. The selection criteria should be derived from and support the Government's stated objectives for the project. The criteria are the basis for determining which contractor proposals are responsive. Therefore, it is very important for the Government to do a good job of defining the essential criteria and to communicate it clearly in the RFP. (See Facilities Program Manual Exhibit X4-5-C, Sample Phase Two Design-Build Proposal Selection Criteria.) The clarity with which the government under-



stands and communicates the project requirements will be significant in the quality of proposals received and ultimately in the quality of the product delivered.

1. Communications: It is in the Government's best interest to maintain a high level of competition between the offerors. To accomplish this, the offerors must know that they have an equal opportunity to prepare a winning Design-Build proposal. Critical to maintaining equal opportunity for all offerors is the establishment of an unbiased method of communication between the offerors and the Government. Techniques and procedures that improve Government/Offeror communication and create an atmosphere of impartiality should be implemented.
2. Design-Build Planning and Technical Requirements: Development of a comprehensive program of facility requirements and performance specifications that anticipates and answers the offerors questions is imperative. In-person briefings for Design-Build teams can be held. The Government's technical and contracting staff and others that are familiar with the project should be utilized for this purpose. The Government must document and distribute the outcomes of these meetings. The Contracting Officer should allow only written questions outside the Q&A sessions, and provide written answers to all offerors simultaneously. If necessary, the Contracting Officer may issue addenda to the RFP as a result of the questions throughout the process. Contact between the proposers and the Government should carefully follow the process outlined in the RFP. The Contracting Officer should set a cutoff date for questions and a deadline for last addenda to the RFP, typically no less than two weeks prior to the submission deadline.
3. Discussions with Offerors: Members of the Source Selection Board may, with approval of the Contracting Officer, submit written questions to each offeror, which are requests for clarification of that offeror's proposal. The offeror provides a written response to those questions.
4. Presentations: For Design-Build competitions in which design criteria are the predominant factor in selection, the offeror may be given an opportunity to present and defend their proposal before the Evaluation Board. The following procedures are recommended:
 - a. The Contracting Officer determines the order of presentation. The Government should determine the dates, duration, and venue well in advance.
 - b. Only members and employees of the offeror's team may participate in the presentation (no professional presenters).
 - c. Members of competing offeror's teams are excluded from the audience. The Government will determine in advance what presentation materials, if any may be used in the presentations. The offeror should not modify or add to their proposal during their in-person presentations. This restriction includes technical information not contained in their initial submittal, unless it is in response to a question from the Evaluation Board.
5. Other Information at the Option of the Offeror: It may be appropriate to allow the offerors to submit additional technical drawings, specifications, calculations and special reports. This additional procurement sensitive information typically has to be prepared by the Design-Build team in order to arrive at a price proposal. This additional information can serve to protect the interests of both parties in the Design-Build contract by more precisely describing what is offered in the response to the RFP. This additional procurement sensitive information should be provided only to the Evaluation Board, and kept separate from the specified design display materials.
6. Unsolicited Alternates: The Design-Build selection process is based strictly on the offeror's response to the RFP and its requirements. Therefore, the Evaluation Board should not consider unsolicited alternates.



7. Disqualification: If significant and intentional breaches of the RFP procedures occur, the Contracting Officer will investigate and make corrective actions, including offeror disqualification, if warranted. If unintentional or unlisted discrepancies appear in the proposal, the Contracting Officer will require the offeror to certify that the proposal will meet every requirement of the RFP, or disqualify the proposal. The basis of disqualification at each phase of the selection process should be described in the RFP.

4-1-30 REPORTING REQUIREMENTS

On projects requiring the Department's approval, a submittal of the Acquisition Plan is not required. However, the analysis/documentation supporting the chosen acquisition methodology using PDCS or a similar tool shall be forwarded to OFMP with the initial FPAA submittal. OFMP may require that the NIH submit the detailed acquisition plan as additional justification.



SAMPLE NIH DESIGN-BUILD ACQUISITION PLANNING WORKSHEET

1. Design Build Product and/or Service Descriptions

The Contractor shall design, construct and deliver the General Laboratory for Cellular Biology located on NIH's Bethesda Campus. The structure will consist of 215,000 gross square feet of space.

2. Background and Objectives

The General Laboratory for Cellular Biology (GLCB) will house the staff of a special task force created by a Presidential Commission on Health. This task force is composed of eminent scientists from different Institutes (ICs), within the National Institutes of Health (NIH). The Task Force is charged with the responsibility to find the cause and cure of a recently discovered virus that attacks the human immune system.

The GLCB will accommodate 7 laboratories, shared analytical laboratories, and support space. The laboratory facility will house the staff of the Scientific Director, administrative space associated with the laboratories as well as ancillary space. There will also be an animal research facility associated with the GLCB.

3. Applicable Conditions (State all significant conditions affecting the acquisition)

This project will be procured under 48 CFR Part 36.3 Two Step Design-Build, as required by the Office of the Secretary. In Phase I, a maximum of three offerors will be selected based on their qualifications to proceed on to Phase II. Each offeror will be required to provide a design solution and given a stipend of \$ 50,000 to defray the cost of the design solution. One offeror will be selected based on their design solution and their proposal to design, construct and deliver the GLCB.

4. Cost: Set forth the established cost goals for the acquisition and the rationale supporting them, and discuss related cost concepts to be employed

\$ 153,000,000.00 will be funded by B&F
\$ 16,000,000.00 will be funded by the ICs

5. Performance Characteristics:

Program of Requirements Completed
Program of Requirement is at-tached.

Performance Specification
Use existing NIH Specifications and the NIH Design Requirements Manual



6. Delivery or performance-period requirements: Describe the basis for establishing delivery or performance-period requirements. Explain and provide reasons for any urgency if it results in concurrency of development and production or constitutes justification for not providing for full and open competition.

The scheduled for the design and construction of the GLCB is as follows:

Pre Design	6 months
Design	9 months
IFB	2 months
Construction	18 months
Activation & Occupation	6 months

The GLCB is urgently needed to house a taskforce to find the cause and cure of a recently discovered virus that attacks the human immune system. This is a Presidential Initiative that has the full backing of Congress.

7. Trade-offs: Discuss the expected consequences of trade-offs among the various cost, capability or performance, and schedule goals.

At this time there are no expected consequences of trade-offs among the various cost, capability or performance, and schedule goals. The project is fully funded and supported. Adequate human capital and financial resources have been assigned to this project.

8. Risks: Discuss technical, cost, and schedule risks and describe what efforts are planned or underway to reduce risk and the consequences of failure to achieve goals. If concurrency of development and production is planned, discuss its effects on cost and schedule risks.

The Government proposes to enter into a firm fixed-price contract with the successful offeror to design, construct and deliver GLCB where the offeror or contractor assumes the risk for cost and schedule.

The Government is liable for different site conditions and program changes.

9. Acquisition streamlining: If specifically designated by the requiring agency as a program subject to acquisition streamlining, discuss plans and procedures to -- Encourage industry participation by using:

Draft Solicitations Pre-solicitation Conferences

Other Means of Stimulating Industry Involvement

The Government proposes to advertise in trade journals and other media published by professional societies such as The Design Build Institute of America, The American Institute of Architects, etc., to assure that qualified entities are aware of the solicitation.



<p>10. Sources: Indicate the prospective sources of supplies and/or services that can meet the need. Consider required sources of supplies or services. Include consideration of small business, small disadvantaged business, and women-owned small business concerns.</p> <p>The Government proposes full and open competition. Full and open competition does not preclude small business, small disadvantaged business, and women-owned small business concerns from competing for this contract so long as they can meet the bonding requirements of the Miller Act.</p>	
<p>11. Competition: Describe how competition will be sought, promoted, and sustained throughout the course of the acquisition. If full and open competition is not contemplated, cite the authority in 6.302, discuss the basis for the application of that authority, identify the source(s), and discuss why full and open competition cannot be obtained.</p> <p>The Government proposes full and open competition.</p>	
<p>12. Source-selection procedures:</p> <p>Two Phase Selection <input type="checkbox"/> yes <input type="checkbox"/> no XXX Required <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Proposed Phase 1 Evaluation Criteria:</p> <p><input type="checkbox"/> Technical approach; <input type="checkbox"/> Specialized experience and technical competence; <input type="checkbox"/> Quality of individuals proposed for key positions; <input type="checkbox"/> Professional qualifications; <input type="checkbox"/> Capability to accomplish the work in the time required; <input type="checkbox"/> Location; <input type="checkbox"/> Quality of technical and managerial organization; <input type="checkbox"/> Design philosophy;</p> <p><input type="checkbox"/> Construction management plan; <input type="checkbox"/> Financial strength; <input type="checkbox"/> Resources; <input type="checkbox"/> Past performance; <input type="checkbox"/> Other appropriate factors (List below)</p> <p>Propose Phase 2 Evaluation Criteria:</p> <p><input type="checkbox"/> Architectural Image & Character; <input type="checkbox"/> Functional Efficiency & Flexibility; <input type="checkbox"/> Quality of Materials and Systems; <input type="checkbox"/> Quantity of Usable Area; <input type="checkbox"/> Access; <input type="checkbox"/> Safety & Security; <input type="checkbox"/> Energy Conservation; <input type="checkbox"/> Sustainable Design; <input type="checkbox"/> Operation & Maintenance Cost; <input type="checkbox"/> Cost/Value Comparison; <input type="checkbox"/> Completion Schedule; <input type="checkbox"/> Other (List below)</p>	
<p>13. Qualification Base Selection</p> <p><input type="checkbox"/> Fixed Price/Best Design <input type="checkbox"/> Weighted Criteria Process</p>	<p>14. Contracting considerations</p> <p><input type="checkbox"/> Firm-Fixed-Price Contract <input type="checkbox"/> Incentive Contract <input type="checkbox"/> Cost Plus Fixed Fee Contract <input type="checkbox"/> Indefinite-Quantity Contract <input type="checkbox"/> Multiple Award Preference</p>
<p>15. Budgeting and Funding:</p> <p>Government Estimate Completed. <input type="checkbox"/> yes (Attach Government Estimate) <input type="checkbox"/> no See POR and FPA</p>	



<p>16. Priorities, allocations, and allotments: When urgency of the requirement dictates a particularly short delivery or performance schedule, certain priorities may apply. If so, specify the method for obtaining and using priorities, allocations, and allotments, and the reasons for them</p> <p>Not Applicable</p>	
<p>17. Contractor versus Government performance: Address the consideration given to OMB Circular No. A-76</p> <p>This project will give full consideration to OMB Circular No. A-76 and the President's Management Agenda with respect to Competitive Sourcing.</p>	
<p>18. Inherently governmental functions</p> <ol style="list-style-type: none"> 1. All pre-design services and functions are inherently governmental. 2. All acquisition services are inherently governmental. 3. All project management, project oversight, and project monitoring is inherently governmental. 4. All evaluation of contractor performance is inherently governmental. 	
<p>19. Management information requirements: Discuss, as appropriate, what management system will be used by the Government to monitor the contractor's effort.</p> <p>The Contracting Officer is responsible for administering the contract. The Project Officer who is the Contracting Officer's Technical Representative (COTR) under the direction of the Contracting Officer is responsible for monitoring the contractor's performance.</p>	
<p>20. Logistics considerations</p>	
<p>20A. The assumptions determining contractor or agency support, both initially and over the life of the acquisition, including consideration of contractor or agency maintenance and servicing</p> <p>The Office of Acquisitions has the capability to support both initially and over the life of the acquisition. Including consideration of contractor or agency maintenance and servicing.</p>	<p>20B. The reliability, maintainability, and quality assurance requirements, including any planned use of warranties</p> <p>The proposal or contract has provision and clauses addressing reliability, maintainability, and quality assurance requirements, including any planned use of warranties.</p>
<p>20C. The requirements for contractor data (including repurchase data) and data rights, their estimated cost, and the use to be made of the data</p> <p>The proposal or contract has provision and clauses addressing the requirements for contractor data (including repurchase data) and data rights, their estimated cost, and the use to be made of the data.</p>	<p>20D. Standardization concepts, including the necessity to designate, in accordance with agency procedures, technical equipment as "standard" so that future purchases of the equipment can be made from the same manufacturing source.</p> <p>GSA Schedule is encouraged for standardization. Care must be taken not to violate the Competition in Contracting Act. The NIH also requires designs of its laboratories to follow the NIH Design Requirements Manual.</p>



21. Government-furnished property: Indicate any property to be furnished to contractors, including material and facilities, and discuss any associated considerations, such as its availability or the schedule for its acquisition

During construction of the GLCB the Contractor may use NIH utilities, if available. The Contractor may use an agreed upon area to store and secure materials. The Government will provide temporary identification documents so that construction workers will have access to NIH.

22. Government-furnished information: Discuss any Government information, such as manuals, drawings, and test data, to be provided to prospective Offerors and Contractors.

The Government will make available to the Contractor the NIH Design Requirements Manual.

23. Environmental and energy conservation objectives.

Environmental Review Required. Yes No Note: Environmental Checklist is complete.

Energy Conservation Objectives Required. Yes No Note: Sustainability Checklist is complete.

24. Security considerations: For acquisitions dealing with classified matters, discuss how adequate security will be established, maintained, and monitored.

Security will be handled in accordance Interagency Security Committee's (ISC) Design Criteria and the Division of Physical Security ORS policies and procedures. Due to the nature of this facility, policies and procedures of the Division of Occupational Safety and Health must be followed

25. Contract administration

Assigned Contracting Officer _____

Assigned Contract Specialist _____

Assigned Project Manager Alamelu Ramesh, P.E.

Project Accepted on behalf of the Government by: _____

26. Stipend Required Yes No Amount of Stipend \$50,000.00 for each offeror invited to compete in Phase II.



27. Other considerations: Discuss, as applicable, standardization concepts, the industrial readiness program, the Defense Production Act, the Occupational Safety and Health Act, foreign sales implications, and any other matters germane to the plan not covered elsewhere

The following laws and Executive Orders apply to the design and construction of the GLCB:

1. Miller Act - Performance & Payment Bonds: FAR 28.102-1(a) The Miller Act (40 U.S.C. 270a-270f) requires performance and payment bonds for any construction contract exceeding \$100,000
2. Energy Policy and Conservation Act (42 U.S.C. 6361(a)(1)) and Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.);
3. National Energy Conservation Policy Act (42 U.S.C. 8253 and 8262g);
4. Executive Order 11912, April 13, 1976;
5. Executive Order 12759, Sections 3, 9, and 10, April 17, 1991; and Executive Order 12902, March 8, 1994.
6. The National Environmental Policy Act (NEPA) The regulations implementing NEPA were issued by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500 1508). Executive Order 11214 also governs NEPA responsibilities.
7. Clean Water Act (33 U.S.C. §§1251 et seq.)
8. The Clean Air Act, 42 USC §§7401
9. Architectural Barriers Act of 1968, 42 USC §§4151-4156, as defined in the Federal Management Regulation (FMR) §102.76.60 through 102.76.95 and the Architectural Barriers Act Accessibility Standard, defined as Appendices C and D, 36 CFR §1191, ABA Chapters 1, 2, and Chapters 3 through 10.
10. Compliance with Codes and Standards: In accordance with 40 U.S.C. §3312, each HHS building should be constructed or altered, to the maximum extent feasible, in compliance with one of the nationally recognized model building codes and with other nationally recognized codes, including mechanical and electrical codes, fire and life safety codes, and plumbing codes. Due consideration should be given to all State and local zoning laws as if the project were not being constructed or altered by a Federal agency. (The Government and its contractors are not required to obtain building permits or to perform inspections.) Solicitations for design and construction of HHS buildings should contain clauses notifying prospective contractors of the statutory provisions of 40 U.S.C. §§3112 (f) and (g).
11. FAR 22.4 Labor Standards for Contract Involving Construction applies to design-build services. 22.400 Scope of subpart. This subpart implements the statutes which prescribe labor standards requirements for contracts in excess of \$2,000 for construction, alteration, or repair, including painting and decorating, of public buildings and public works. Labor relations requirements prescribed in other subparts of Part 22 may also apply.
12. FAR 22.4 includes the Davis-Bacon Act and the Copeland Act.
13. FAR 22.6 Walsh-Healey Public Contracts Act also applies to design-build and construction services.
14. Equal Employment Opportunity as specified in FAR 22.8 or Executive Order 11246 applies to all Federal contracts.
15. 29 CFR Part 1910 -- Occupational Safety and Health Standards sets minimum design standards for facilities such as egress, fire prevention plan, ventilation etc.
16. 29 CFR Part 1926 is the Safety and Health Regulations for Construction.
17. Latest edition of Biosafety in Microbiological and Biomedical Laboratories
18. Latest edition of the NIH Design Requirements Manual



Milestones for the acquisition cycle: Address the following steps and any others appropriate:

Acquisition plan approval. [Yes](#)

Program of Requirements. [Yes](#)

Performance Specifications. [Yes](#)

Data requirements. [Yes](#)

Completion of acquisition-package preparation. [Yes](#)

Purchase request. [N/A](#)

Justification and approval for other than full and open competition where applicable and/or any required D&F approval. [N/A](#)

Issuance of synopsis. [No](#)

Issuance of solicitation. [TBD](#)

Evaluation of proposals, audits, and field reports. [No](#)

Beginning and completion of negotiations. [No](#)

Contract preparation, review, and clearance. [No](#)

Contract award. [No](#)



Sample Design-Build Qualifications Questionnaire

<p>Design - Build Services Request for Qualifications</p>	<p>1. Project Name and Location</p>	<p>2a FedBizOpps Announcement Date,</p>	<p>2b. Agency Identifica- tion Number</p>	<p>2c. Date Prepared</p>				
<p>3. Firm (or Joint Venture) Name & Address</p>		<p>3a. Name, title & Telephone Number of Principal to Contact</p>						
<p>4a. Year Present Firm(s) Established</p> <p>Firm:</p> <p>Firm:</p> <p>Firm:</p>	<p>4b (Firm 1) Specify Type of Owner- ship and check below if applicable</p> <p><input type="checkbox"/> Small Business</p> <p><input type="checkbox"/> Small Disadvantaged Business</p> <p><input type="checkbox"/> Woman Owned Business</p>	<p>4c (Firm 2) Specify Type of Ownership and check below if applicable</p> <p><input type="checkbox"/> Small Business</p> <p><input type="checkbox"/> Small Disadvantaged Busi- ness</p> <p><input type="checkbox"/> Woman Owned Business</p>	<p>4d (Firm 3) Specify Type of Ownership and check below if applicable</p> <p><input type="checkbox"/> Small Business</p> <p><input type="checkbox"/> Small Disadvantaged Business</p> <p><input type="checkbox"/> Woman Owned Business</p>					
<p>5. Team Member Personnel by De- sign/Construction Profession:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 25%;"> <p>___ Administrative</p> <p>___ Architects</p> <p>___ Civil Engineers</p> <p>___ Construction Managers</p> <p>___ Draftspersons/CADD Operators</p> <p>___ Electrical Engineers</p> </td> <td style="width: 25%;"> <p>___ Estimators</p> <p>___ Field Supervisors</p> <p>___ Geotechnical Engineers</p> <p>___ Interior Designers</p> <p>___ Landscape Architects</p> <p>___ Mechanical Engineers</p> <p>___ Planners Urban/Regional</p> <p>___ Project Managers</p> </td> <td style="width: 25%;"> <p>___ Quality Control Managers</p> <p>___ Safety Officers</p> <p>___ Sanitary Engineers</p> <p>___ Schedulers</p> <p>___ Specification Writers</p> <p>___ Structural Engineers</p> <p>___ Surveyors</p> </td> <td style="width: 25%;"> <p>Other:</p> <p>___</p> <p>___ Total Personnel</p> </td> </tr> </table>					<p>___ Administrative</p> <p>___ Architects</p> <p>___ Civil Engineers</p> <p>___ Construction Managers</p> <p>___ Draftspersons/CADD Operators</p> <p>___ Electrical Engineers</p>	<p>___ Estimators</p> <p>___ Field Supervisors</p> <p>___ Geotechnical Engineers</p> <p>___ Interior Designers</p> <p>___ Landscape Architects</p> <p>___ Mechanical Engineers</p> <p>___ Planners Urban/Regional</p> <p>___ Project Managers</p>	<p>___ Quality Control Managers</p> <p>___ Safety Officers</p> <p>___ Sanitary Engineers</p> <p>___ Schedulers</p> <p>___ Specification Writers</p> <p>___ Structural Engineers</p> <p>___ Surveyors</p>	<p>Other:</p> <p>___</p> <p>___ Total Personnel</p>
<p>___ Administrative</p> <p>___ Architects</p> <p>___ Civil Engineers</p> <p>___ Construction Managers</p> <p>___ Draftspersons/CADD Operators</p> <p>___ Electrical Engineers</p>	<p>___ Estimators</p> <p>___ Field Supervisors</p> <p>___ Geotechnical Engineers</p> <p>___ Interior Designers</p> <p>___ Landscape Architects</p> <p>___ Mechanical Engineers</p> <p>___ Planners Urban/Regional</p> <p>___ Project Managers</p>	<p>___ Quality Control Managers</p> <p>___ Safety Officers</p> <p>___ Sanitary Engineers</p> <p>___ Schedulers</p> <p>___ Specification Writers</p> <p>___ Structural Engineers</p> <p>___ Surveyors</p>	<p>Other:</p> <p>___</p> <p>___ Total Personnel</p>					
<p>6. If submitted by Joint-Venture list participating firms and outline specific areas of responsibility(including administrative, technical and financial) for each firm:</p>								



9. Proposed Subcontracts for Special Professional Design Services			
Type of Service _____ Name of Firm _____ Address _____	Type of Service _____ Name of Firm _____ Address _____	Type of Service _____ Name of Firm _____ Address _____	Type of Service _____ Name of Firm _____ Address _____
Type of Service _____ Name of Firm _____ Address _____	Type of Service _____ Name of Firm _____ Address _____	Type of Service _____ Name of Firm _____ Address _____	Type of Service _____ Name of Firm _____ Address _____
10. Proposed Major Subcontractor Team Members for Construction			
Type of Work _____ Name of Firm _____ Address _____	Related Project Examples: _____ _____	Type of Work _____ Name of Firm _____ Address _____	Related Project Examples: _____ _____
Type of Work _____ Name of Firm _____ Address _____	Related Project Examples: _____ _____	Type of Work _____ Name of Firm _____ Address _____	Related Project Examples: _____ _____
Type of Work _____ Name of Firm _____ Address _____	Related Project Examples: _____ _____	Type of Work _____ Name of Firm _____ Address _____	Related Project Examples: _____ _____



11. Insert\Attach Organizational Chart



12. Brief Resume of Key Personnel, Specialist, and Individual Consultant for this Project	
a. Name & Title	
b. Project Assignment	
c. Name of Firm with which Associated	
d. Years Experience	
e. Education/Training	
f. Registration/License	
g. Experience and Qualifications Relevant to the Proposed Project	



13. Work by Firm or Joint Venture Members which best illustrate current qualifications relevant to this project. (List no more than 10 projects)

a. Project Name and Location	b. Nature of Firms Responsibility	c. Completion Date	d. Estimated Cost (in thousands)	e. Project Owners Name & Address and Contacts Name & Phone Number
------------------------------	-----------------------------------	--------------------	----------------------------------	-------------------------------------------------------------------

Project Description and Magnitude



14. All work by firm or joint-venture members currently being performed directly for federal agencies					
a. Project name and Location	b. Nature of Firm's Responsibility	c. Agency Name & Address	d. Percent Complete	e. Estimated cost (In Thousands)	
				Entire Project	Work for which firm is responsible



15. Narrative Response to Specialized Experience and Technical Competence

A large, empty rectangular box intended for a narrative response to specialized experience and technical competence.



16. Narrative Response to: Capability to accomplish the work in the time required.



17. Narrative Response to: Location in the general geographical area of the project and knowledge of the locality of the project.



18. Narrative Response to: Quality of technical and managerial organization proposed.



19. Narrative Response to: Design approach or philosophy.

A large, empty rectangular box with a black border, intended for a narrative response to the design approach or philosophy question.



20. Narrative Response to: Construction management plan, including time, cost and quality control.

A large, empty rectangular box with a black border, intended for a narrative response to the question above.



21. Narrative Response to: Financial strength and stability of the offeror.

a. Name & Address of Bonding Company

b. Bonding Limit

c. Current Bonding Capacity

--	--	--



22. Narrative Response to: Past performance of the offeror's team (including the architect-engineer and construction members) Past performance on contracts with Government agencies and private industry in terms of cost control, quality of work, and compliance with performance schedules

A large empty rectangular box intended for the narrative response to question 22.



23. Narrative Response to: Minority Participation.



24. Narrative Response to: Other appropriate factors (excluding cost or price related factors, which are not permitted in Phase One.

25. The Forgoing is a Statement of Facts:

Date: _____

Signature: _____

Typed Name and Title: _____



SAMPLE PHASE TWO DESIGN-BUILD PROPOSAL SELECTION CRITERIA

A. Building Project

1. Architectural Image & Character
2. Functional Efficiency & Flexibility
3. Quality of Materials and Systems
4. Quantity of Usable Area
5. Access
6. Safety & Security
7. Energy Conservation
8. Operation & Maintenance Cost
9. Cost/Value Comparison
10. Completion Schedule

- B. Alternate for Engineering Project: Technical Innovation and Environmental Acceptability of Engineered Solution. Criteria 2, 3, 5, 6, 7, 8, 9, and 10 above apply.



STANDARD FORM 33

SOLICITATION, OFFER AND AWARD		I. THE CONTRACT IS A PART OF OFF. MGMT. OF ACQ. (FFR)		FORM	DATE OF PRINT
2. CONTRACT NUMBER	3. SOLICITATION NUMBER	4. TYPE OF SOLICITATION <input type="checkbox"/> OPEN <input type="checkbox"/> LIMITED BIDDING	5. YEAR ORDERED	6. SOLICITATION/PROPOSAL NUMBER	
7. ORDER BY		8. ADDRESS OFFER TO (See Instructions)			
NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".					
SOLICITATION					
9. Sealed offers (original and _____ copies) for furnishing the supplies or services described are to be received at the place specified in Item 8, or if handwritten, in the envelope located in _____ with _____ local time _____.					
<small>CANNON - LAM Submissions, Modifications, and Withdrawals: See Section I, Revision No. GS-214-F or GS-215-1. All offers are subject to all terms and conditions contained in this solicitation.</small>					
10. FOR INFORMATION ONLY	11. MAIL	12. TELEPHONE FOR CONTACT DURING		13. E-MAIL ADDRESS	
		AREA CODE	NUMBER	E-MAIL	
14. PART OF CONTRACT					
15. (SEE INSTRUCTIONS)	16. (SEE INSTRUCTIONS)	17. (SEE INSTRUCTIONS)	18. (SEE INSTRUCTIONS)	19. (SEE INSTRUCTIONS)	20. (SEE INSTRUCTIONS)
PART I - THE SCHEDULE			PART II - CONTRACT CLAUSES		
A	B	C	D	E	F
SOLICITATION/CONTRACT FORM	SUPPLIES OR SERVICES AND PROVISIONS	DESCRIPTION OF SPECIAL OFFERS AND STATE	PROVISIONS AND WARNINGS	INSPECTION AND ACCEPTANCE	DELIVERIES OR PERFORMANCE
				G	H
				CONTRACT ADMINISTRATION DATA	SPECIAL CONTRACT REQUIREMENTS
				I	J
				CONTRACT CLAUSE	LIST OF REQUIREMENTS, NOTES AND OTHER ATTACH.
				K	L
				CONTRACT ADMINISTRATION DATA	TERMS, NOTES, AND NOTES TO OFFEROR
				M	N
				TERMS AND CONDITIONS AND OTHER INFORMATION OF OFFEROR	TERMS AND CONDITIONS FOR OFFEROR
OFFER (Must be fully completed by offeror)					
NOTE: Item 12 does not apply if the solicitation is under the provisions of GS-214-10, Standard Bid Acceptance Period.					
13. In compliance with the above the undersigned agrees, if the offer is accepted within _____ calendar days after a different period is specified by the offeror from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the present offeror's selection, delivered at the designated point(s), within the time specified in the schedule.					
14. REQUEST FOR PROMPT PAYMENT		15. (SEE INSTRUCTIONS)	16. (SEE INSTRUCTIONS)	17. (SEE INSTRUCTIONS)	18. (SEE INSTRUCTIONS)
<small>See Section 2, Clause (A), GS-214-10</small>					
19. ASSIGNMENT OF RIGHTS		20. (SEE INSTRUCTIONS)	21. (SEE INSTRUCTIONS)	22. (SEE INSTRUCTIONS)	23. (SEE INSTRUCTIONS)
<small>NOTE: In this offering, assignment of rights of ownership in the intellectual work for offers prepared documents submitted and drawn.</small>					
14A. NAME AND ADDRESS OF OFFEROR	14B. (SEE INSTRUCTIONS)	14C. (SEE INSTRUCTIONS)	14D. (SEE INSTRUCTIONS)		
			Type or print		
15A. (SEE INSTRUCTIONS)	15B. (SEE INSTRUCTIONS)	15C. (SEE INSTRUCTIONS)	15D. (SEE INSTRUCTIONS)	15E. (SEE INSTRUCTIONS)	15F. (SEE INSTRUCTIONS)
AWARD (To be completed by Government)					
16. (SEE INSTRUCTIONS)	17. (SEE INSTRUCTIONS)	18. (SEE INSTRUCTIONS)			
		Type or print			
19. (SEE INSTRUCTIONS)	20. (SEE INSTRUCTIONS)	21. (SEE INSTRUCTIONS)	22. (SEE INSTRUCTIONS)	23. (SEE INSTRUCTIONS)	24. (SEE INSTRUCTIONS)
25. (SEE INSTRUCTIONS)	26. (SEE INSTRUCTIONS)	27. (SEE INSTRUCTIONS)			
		Type or print			
28. (SEE INSTRUCTIONS)	29. (SEE INSTRUCTIONS)	30. (SEE INSTRUCTIONS)	31. (SEE INSTRUCTIONS)	32. (SEE INSTRUCTIONS)	33. (SEE INSTRUCTIONS)
Signature of Government Official					
IMPORTANT: Record all records on the Form, or on Standard Form 26, or by other authorized official action methods.					
FOR OFFICE USE ONLY - GOVERNMENT			STANDARD FORM 33 (Rev. 10-89)		
Previous editions are obsolete			Printed by GSA - (48) 100-000-000-000-000		



PART I
SECTION B
SUPPLIES OR SERVICES AND PRICES COST



OPTIONAL FORM 347 (BACK)

SUPPLEMENTAL INVOICING INFORMATION

If desired, this order (or a copy thereof) may be used by the Contractor as the Contractor's invoice, instead of a separate invoice, provided the following statement, signed and dated is on (or attached to) the order: "Payment is requested in the amount of \$..... No other invoices will be submitted." However, if the Contractor wishes to submit an invoice, the following information must be provided: contract number; if any, order number; item number(s); description of supplies or services; class, quantities, unit prices, and extended totals. Freight/shipping costs will be indicated as a separate item on the invoice. Where shipping costs exceed \$10 (except for parcel post), the billing must be supported by a bill of lading or receipt. When several orders are involved in an order and all occur during the same billing period, consolidated periodic billings are encouraged.

RECEIVED REPORT

Quantity in the "Quantity Accepted" column on the face of this order has been rejected, accepted, received by use and conform to contract. Items listed below have been rejected for the reasons indicated.

REJECTION REASON	REASON	QUANTITY	DATE	INITIALS

REASON FOR REJECTION

REASON	QUANTITY FOR REJECTION	DATE	INITIALS	REASON FOR REJECTION



MODEL NIH COST PROPOSAL FORM FOR DESIGN-BUILD DELIVERY SYSTEMS

Description	Cost	Instructions	For Government Use Only	Remarks
Basic Design Services Plans and specifications		Not to exceed 6% of Construction Cost		
Division 1 General Conditions				
Division 2 Site Work				
Division 3 Concrete				
Division 4 Masonry				
Division 5 Metals				
Division 6 Woods & Plastics				
Division 7 Thermal & Moisture Protection				
Division 8 Doors & Windows				
Division 9 Finishes				
Division 10 Specialties				
Division 11 Equipment				
Division 12 Furnishings				
Division 13 Special Construction				
Division 14 Conveyance Systems				
Division 15 Mechanical				
Division 16 Electrical				



PART I

SECTION C

STATEMENT OF WORK

NATIONAL INSTITUTES OF HEALTH
BETHESDA, MARYLAND

W.R.# _____

_____, 2____

Insert Appropriate Scope of Work from Appendix B



PART I

SECTION D

PACKING & MARKING

A. GENERAL

All deliverables in Phase I and Phase II shall be postmarked no later than the published due date. All deliverables in Phase I and Phase II that are postmarked on or before the published due date are to be in the Contracting Officer's office no later than one week past the published due date.

Failure to meet the above requirements will disqualify the Offeror.

B. DESIGN PROPOSAL

Where the Government has determined that Phase II will require a design proposal the Offerors in the competitive range shall submit their design proposal double wrap to the Contracting Officer. The outer wrapping shall be addressed to the Competition Advisor with the Offeror's return address. The inner wrapping will show only the Offeror's designated identification number provided by the Government.

Failure to meet the above requirements will disqualify the Offeror.

C. DESIGN PROPOSAL DOCUMENTS

Where the Government has determined that Phase II will require a design proposal the Offerors in the competitive range shall identify all design proposal documents with the Offeror's designated identification number provided by the Government.

Failure to meet the above requirements will disqualify the Offeror.



Part I

SECTION E

INSPECTION AND ACCEPTANCE

The Contracting Officer shall inspect all offers and required documents to ensure compliance with the solicitation. Those offers that comply with the solicitation will be accepted and sent forward for further consideration.

Request for Proposal

Section A

- SF 33
- Affirmative Action Plan

Section B

- Cost Proposal

Section C

- Proposal
- Conceptual Site Plan
- Basement Floor Plan
- Ground Floor Plan
- Typical Floor Plan
- Cross Section
- Longitudinal Section
- North Elevation
- East Elevation
- South Elevation
- West Elevation
- Mechanical, Plumbing & Electrical Plans
- Birds eye perspective showing the design in context with the campus

- Perspective of the design of the whole building showing its entrance
 - Interior Perspective showing the lobby
- Interior Perspective showing the conference center
 - Interior Perspective showing a typical biomedical laboratory
- Outline Technical Specifications
- Scale Model
- Display Boards

Section F

- Proof of Professional and Trades Licensing
- Proof of Project Office Location
- Proposal Bond
- Quality Control Plan
- Performance Bond
- Payment Bond
- Workers' Compensation Insurance
- General Liability Insurance
- Automobile Insurance



PART I

SECTION F

DELIVERIES OR PERFORMANCE

A. GENERAL

The Government shall convene a Design-Build Selection Board that will evaluate the qualifications of the Offerors required by the solicitation and make recommendations to the Selecting Office of the highest qualified Offeror in order of their preference.

B. PHASE I DELIVERIES

1. The Offeror shall submit a completed Standard Form XXX (Design-Build Services Solicitation for Qualifications).
2. The Offeror shall submit an Affirmative Action Plan. Equal Employment Opportunity is required under Executive Order 11246 (EO 11246), as amended. It is an Act to ensure compliance with the regulations of the U.S. Department of Labor to promote the full realization of equal employment opportunity for all persons, regardless of race, color, religion, sex, or national origin. This EO is also known as Contract Compliance. With respect to construction the EO has prescribed guidelines. See FAR 22.804-2 "Construction." Non-construction contracts that in any 12-month period, total, or can reasonably be expected to total, \$50,000 or more, is required to develop a written affirmative action program for each of its establishments within 120 days from the commencement of its first such Government contract, and/or subcontract. See FAR 22.804-1. The affirmative action plan will be evaluated as part of the overall submission care should be taken not set quotas or quantify the number of minorities or women. The evaluation criteria will consider minority and women participation on the team and include factors for minority and/or women-owned firms as part of the respondent's team, minority and/or women managers identified as part of the respondent's team or minority and women that are employed by the team.

C. PHASE II DELIVERIES

The Offeror shall submit the following completed documents.

1. Completed Standard Form YYY (Solicitation, Offer and Award Design-Build Contract)
2. Completed and signed Agreement
3. Schematic Design Proposal to include the following drawings:
 - a. Site Plan
 - b. Basement Floor Plan
 - c. Ground Floor Plan
 - d. Typical Floor Plan
 - e. Cross Section
 - f. Longitudinal Section
 - g. North Elevation
 - h. East Elevation
 - i. South Elevation
 - j. West Elevation.
 - k. Mechanical, Plumbing and Electrical Plans
 - l. Birds eye perspective showing the design in context with the campus
 - m. Perspective of the design of the whole building showing its entrance



- n. Interior perspective showing the lobby
- o. Interior perspective showing the conference center.
- p. Interior perspective showing a typical biomedical laboratory.
- q. Outline Technical Specifications
- r. Scale model
- s. Display Boards
- t. Cost Proposal

Additional documents will not be accepted and may be a basis for disqualification.

4. Representations Certifications and Other Statements.

- a. Requirements for Professional and Contractor Licensing. All design professional and trade persons are required to be licensed and shall be licensed by the local jurisdiction having authority. The Offeror shall submit names and registration numbers of key personnel required to be licensed by the local jurisdiction having authority.
- b. Location of Project Office. The Government requires that architectural and engineering construction documents be produced within a 30 mile radius of the project site. This is to ensure that these professionals are conveniently available to the Government during the construction document review stage, and during the subsequent construction phase. The Offeror shall submit proof of local establishment or in the form of a contract to lease or purchase a project office within a 30-mile radius of the project site.
- c. Proposal Bond. A proposal bond in the amount of 1% of the total estimated project cost is required at the time of submittal of the design-build proposal.
- d. Quality Control Plan. The Offeror shall submit a quality control plan outlining how the team will meet the requirements of the program and the performance specifications.
- e. Performance and Payment Bonds. A performance bond in the amount of \$ 2,500,000.00 in accordance with 7.1 (2) (C) of the agreement is required at the time of submittal of the design-build proposal. Furthermore the Government requires a payment bond of 100% of the proposal price in accordance with 7.1(2) (C) iii of the Agreement is required at the time of submittal of the design-build proposal.
- f. Workers' Compensation Insurance. The Offeror shall submit proof of workers' compensation insurance in the amount of \$ _____.
- g. General Liability Insurance. The Offeror shall submit proof of bodily injury liability insurance in accordance with 7.4 of the Agreement.
- h. Automobile Liability Insurance. The Offeror shall submit proof of automobile liability insurance in accordance with 7.5 of the Agreement.



Part I

SECTION G

CONTRACT ADMINISTRATION DATA

A. PROJECT ADMINISTRATION MANUAL

The project administration manual describes the procedures to be followed by both the Contractor and the Government's Representative during the term of the design-build contract. It shall include:

1. Directory of key personnel and their official contact address/phone/fax,
2. List of fixed events (reports, submittals, etc.) described in the RFP,
3. List the Contractor's notice requirements, as specified in the RFP,
4. List the Contractor submittal requirements, as specified in the RFP,
5. Correspondence procedures between the design builder and the Government's representative,
6. Schedule of regular and special meetings and procedures for minutes,
7. List of records required of both Contractor and the Government's representative (submittal logs, change order logs, etc.), and
8. Forms to be utilized by the Contractor (application for payment, etc.).

B. PROJECT COORDINATION

The Contractor shall submit to the Government for approval contract documents (construction documents) with their associated estimates at the followings stages:

1. Design Development (70%) with systems estimate.
2. Contract Documents (100%) with quantity takeoff estimates.

C. DESIGN AND CONSTRUCTION DOCUMENTS

When accepted and approved by the Government for progress, design development and construction documents (plans and specifications) produced by the design builder after award become part of the contract documents. However the Government's approval and acceptance of these documents do not relieve the design-builder from the obligation to meet the requirements of the RFP and its proposal, unless specifically indicated otherwise by the Government on an item-by-item basis.



PART I

SECTION H

SPECIAL CONTRACT REQUIREMENTS

Not Used



Part II

SECTION I

CONTRACT CLAUSES



STIPULATION 1 GENERAL PROVISIONS

1.1 Basic Definitions

“Architect-engineer services” as defined in 40 U.S.C. 541, means:

- A. Professional services of an architectural or engineering nature, as defined by State law, if applicable, which are required to be performed or approved by a person licensed, registered, or certified to provide such services;
- B. Professional services of an architectural or engineering nature performed by contract that are associated with research, planning, development, design, construction, alteration, or repair of real property; and
- C. Such other professional services of an architectural or engineering nature, or incidental services, which members of the architectural and engineering professions (and individuals in their employ) may logically or justifiably perform, including studies, investigations, surveying and mapping, tests, evaluations, consultations, comprehensive planning, program management, conceptual designs, plans and specifications, value engineering, construction phase services, soils engineering, drawing reviews, preparation of operating and maintenance manuals, and other related services.

“Construction” means construction, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other real property. For purposes of this definition, the terms “buildings, structures, or other real property” include but are not limited to improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, cemeteries, pumping stations, railways, airport facilities, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, canals, and channels. Construction does not include the manufacture, production, furnishing, construction, alteration, repair, processing, or assembling of vessels, aircraft, or other kinds of personal property.

“Contract” is intended to refer to a contract for design-build services.

“Contracting Officer” is authorized to enter into a contract on behalf of the Government.

“Contractor” (Sometimes referred to as the “Contractor” or “DB”)

“Contract Documents” are the Program of Requirements, Performance Specifications, Design Proposal, approved construction documents and the requirements within the awarded proposal.

“Deliverables” is the sum of the drawings, specifications, models, etc., prepared by the offeror in response to a Request for Proposal.

“Design” means defining the construction requirement (including the functional relationships and technical systems to be used, such as architectural, environmental, structural, electrical, mechanical, and fire protection), producing the technical specifications and drawings, and preparing the construction cost estimate.

“Design-build” as used means combining design and construction in a single contract with one contractor.

“Contractor” means the Contractor.

“Design Proposal” is that portion of a design-build proposal which contains design factors, usually including function, layout, materials, aesthetics and specifications. Design proposal falls under the general category of qualitative evaluation factors.

“FAR” means Federal Acquisition Regulations

“Firm” means any individual, partnership, corporation, association, or other legal entity permitted by law to practice the professions of architecture, engineering or related field. It also means any individual, partnership, corporation, association, or other legal entity permitted by law to construct facilities.

“Government” The entity for which the project is being built and with whom the Contractor will be in privity of contract

“Management Proposal” is that portion of a design-build proposal, which contains the management plan including project approach, personnel, organization, scheduled, affirmative action plan, etc. The management plan falls under the category of qualitative evaluation factors.

“Offeror” is one of the selected respondents to participate in the RFP Phase (2) of the design-build competition. The offerors are the only ones eligible to submit a proposal.

“Performance Specifications” is a specification expressed in terms of an expected outcome or acceptable performance standard. Often used in design-build criteria to articulate the Government’s requirements.

“Plans and specifications” means drawings, specifications, and other data for construction.

“Record drawings,” means drawings submitted by a contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract.

“Shop drawings,” means drawings submitted by the construction contractor or a subcontractor at any tier or required under a Design-build contract, showing in detail--

- A. The proposed fabrication and assembly of structural elements,
- B. The installation (i.e., form, fit, and attachment details) of materials or equipment, or



C. Both.

1.2 Design Proposal

1.2.1 Stipends: (*Optional*) The Government will provide a stipend of \$ 50,000.00 for the development of a design proposal based on the Program of Requirements, Performance Specifications, and Budget Estimate.

1.2.2 Award: The Government will select one (1) proposal and the successful offeror will be awarded the contract to design and build the project.

1.2.3 Preliminary Evaluation: The Contractor shall provide a preliminary evaluation of the Government's Program of Requirements, Performance Specifications and Budget Estimate, each in the terms of the other.

1.2.4 Site Visit: The Contractor shall visit the site, become familiar with local conditions with local conditions, and correlate observable conditions with Government's Program of Requirements, Performance Specifications and Project Budget.

1.2.5 Preliminary Design Proposal: The Contractor shall prepare the Preliminary Design in accordance with applicable laws and regulations. The Contractor shall submit to the Government a Design Proposal, including the complete Preliminary Design Documents, a statement of proposed contract sum, a proposed schedule for the completion of the work. Preliminary Design Documents shall consist of preliminary drawings, outline specifications or other documents sufficient to establish the size, quantity and character of the entire project, its civil, architectural, structural, mechanical, and electrical systems, and the materials and such other elements of the Project as may be appropriate. Deviations from the Government's requirements shall be disclosed in the Proposal.

1.3 Specifications and Drawings for Construction. As prescribed in *FAR 36.521*, [FAR Clause 52.236-21](#) is inserted:

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "pre-

scribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by," or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefore. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings will be retained by the Contracting Officer and one set will be returned to the Contractor.



1.3.1 Copyrights As prescribed in *FAR 27.409(i)*, FAR Clause 52.227-17 (c) --(1) is inserted:

Data first produced in the performance of this contract. (i) The Contractor agrees not to assert, establish, or authorize others to assert or establish, any claim to copyright subsisting in any data first produced in the performance of this contract without prior written permission of the Contracting Officer. When claim to copyright is made, the Contractor shall affix the appropriate copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to such data when delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. The Contractor grants to the Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable, worldwide license for all such data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government.

1.4 Laws and Regulations for Federal Construction

1.4.1 Labor Laws: FAR 22.4 Labor Standards for Contract Involving Construction applies to design-build services. 22.400 Scope of subpart. This subpart implements the statutes which prescribe labor standards requirements for contracts in excess of \$2,000 for construction, alteration, or repair, including painting and decorating, of public buildings and public works. Labor relations requirements prescribed in other subparts of Part 22 may also apply. FAR 22.4 includes the Davis-Bacon Act and the Copeland Act. FAR 22.6 Walsh-Healey Public Contracts Act also applies to design-build services. Equal Employment Opportunity as specified in FAR 22.8 applies to design-build.

1.4.2 Environmental Laws: The following environmental laws apply to design-build services: Clean Air Act (42 U.S.C. 7401 et seq.); Clean Water Act (33 U.S.C. 1251 et seq.); Executive Order 11738, September 10, 1973 (38 FR 25161, September 12, 1973); and Environmental Protection Agency (EPA) regulations (40 CFR Part 32).(National Environmental Protection Act)

1.4.3 Energy Conservation Laws: The following energy conservation laws apply to design-build services: Energy Policy and Conservation Act (42 U.S.C. 6361(a)(1)) and Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.); National Energy Conservation Policy Act (42 U.S.C. 8253 and 8262g); Executive Order 11912, April 13, 1976; Executive Order 12759, Sections 3, 9, and 10, April 17, 1991; and Executive Order 12902, March 8, 1994.

1.4.4 Hazardous Material Identification and Material Safety Data: Contractor shall be in compliance with FAR 23.3. This FAR subpart prescribes policies and procedures for acquiring deliverable items, other than ammunition and explosives that require the furnishing of data involving hazardous materials. "Hazardous material" is defined in the latest version of Federal Standard No. 313.

1.4.5 Use of Recovered Materials: Contractor shall be in compliance with the following regulations: Resource Conservation and Recovery Act of 1976 (RCRA), as amended (Solid Waste Disposal Act, 42 U.S.C. 6901, et seq.) and Executive Order 12873, dated October 20, 1993.

1.4.6 Buy American Act – Construction Materials: The Buy American Act (41 U.S.C. 10) and Executive Order 10582, December 17, 1954 (as amended). These apply to contracts for the construction, alteration, or repair of any public building or public work in the United States.

1.4.7 Metric Conversion Act The Metric Conversion Act of 1975, as amended by the Omnibus Trade and Competitiveness Act of 1988 (15 U.S.C. 205a, et seq.), designates the metric system of measurement as the preferred system of weights and measures for United States trade and commerce, and it requires that each agency use the metric system of measurement in its acquisitions, except to the extent that such use is impracticable or is likely to cause significant inefficiencies or loss of markets to United States firms. Requiring activities are responsible for establishing guidance implementing this policy in formulating their requirements for acquisitions.

1.4.8 Equal Opportunity: Equal Employment Opportunity is required under Executive Order 11246 (EO 11246), as amended. It is an Act to ensure compliance with the regulations of the U.S. Department of Labor to promote the full realization of equal employment opportunity for all persons, regardless of race, color, religion, sex, or national origin. This EO is also known as Contract Compliance. With respect to construction the EO has prescribe guidelines. See FAR 22.804-2 "Construction." Non construction contracts that in any 12-month period, total, or can reasonably be expected to total, \$50,000 or more, is required to develop a written affirmative action program for each of its establishments within 120 days from the commencement of its first such Government contract, subcontract. See FAR 22.804-1.

1.4.9 Other Applicable Federal Regulations: Services delivered by design-build contractor shall be in accordance with all applicable Federal Regulations including but not necessarily limited to the following: Uniformed Federal Accessibility Standards, OSHA (29CFR 1910); The National Historic Preservation Act of 1966 (36 CFR 800); The Archeological and Historic Preservation Act; *etc.*

1.5 NIH Design Policies and Guidelines

1.5.1 Reserved for Agency Specific Guidelines: Animal Care: Services delivered by A/E contractor shall be in accordance with the latest edition "Guide for the Care and Use of Laboratory Animals," plus, the U.S. Public Health Service (PHS) and the American Association for Accreditation of Laboratory Animal Care (AAALAC) accreditation standards.

1.5.2 Biosafety: Services delivered by A/E contractor shall be in accordance with the latest edition of HHS Publication



"Biosafety in Microbiological and Bio-medical Laboratories, 3rd Edition, May 1988.

1.5.3 NIH Design Requirements Manual: Services delivered by A/E contractor shall be in accordance with the NIH Design Requirements Manual (Laboratories and Animal Research Facilities)

1.5.4 NIH Office Fit-Out Guidelines: Services delivered by A/E contractor shall be in accordance with the NIH Office Fit-Out Guidelines (Administrative Space)

1.5.5 NIH Public Space Fit-Out Guidelines: Services delivered by A/E contractor shall be in accordance with the NIH Public Space Fit-Out Guidelines (Public Space)

1.5.6 NIH Amenities Guidelines: Services delivered by A/E contractor shall be in accordance with the NIH Amenities Guidelines (cafeterias, day care centers, fitness center, etc.)

1.5.7 NIH Interior Signage Manual: Services delivered by A/E contractor shall be in accordance with the NIH Interior Signage Manual (interior signage and way finding)

STIPULATION 2 THE GOVERNMENT

2.1 Responsibilities

2.1.1 Contracting Officer's Technical Representative: The Government's Contracting Officer shall designate a representative to act on the Government's behalf with respect to technical matters of the project. The Contracting Officer's Technical Representative (COTR) The COTR manages the project on behalf of the contracting officer to ensure compliance with the terms of the contract. The COTR does not have the authority to modify or change a contract. The Government or such authorized representative will examine documents submitted by the Contractor and will render decisions in a timely manner and in accordance with the schedule accepted by the Government. The Government may obtain independent review of construction documents or other design documents submitted by the Contractor by a separate architect, engineer, contractor or cost estimator under contract to or employed by the Government. Such independent reviews will be undertaken at the Government's expense in a timely manner and will not delay the orderly progress of the work.

2.1.2 Government Information: The Government shall provide full information in a timely manner regarding requirements for the Project, including a written Facility Program of Requirements and Performance Specifications which will set forth the Government's objectives, schedule, constraints and criteria.

2.1.3 On-Site Representative: The Government may appoint an on-site representative to observe the work and to have such other responsibilities as the Government and the Contractor agree in writing.

2.1.4 Physical Data: As prescribed in FAR 36.504, FAR Clause 52.236-4 is inserted:

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by the Government: *The Government will provide the Contractor with the following: topographic map showing existing contours, natural features and man-made improvements; soil report including soil boring logs and location; and underground utility plans with profiles and inverts.*

(b) Weather conditions: The project is expected to take more than a year to construct. The project is located in the North Temperate Zone. According to the U.S. Weather Service, temperatures are expected to be slightly above normal and precipitation is expected to be normal.

(c) Transportation facilities The Government will not provide parking for the Contractor or their Subcontractors. The Contractor shall secure a site for employee parking and provide a bus to bring employees to the site and return and pick up employees and take them away from the site. The Government will not provide parking for the Contractor's bus.

(d) The Government will provide the Contractor and their Subcontractors' employees with temporary identification badges for access to the site.

STIPULATION 3 CONTRACTOR

3.1 Services and Responsibilities

3.1.1 Requirements for Registration of Designers As prescribed in FAR 36.609-4, FAR Clause 52.236-25 is inserted:

The design of architectural, structural, mechanical, electrical, civil, or other engineering features of the work shall be accomplished or reviewed and approved by architects or engineers registered to practice in the particular professional field involved in a State or possession of the United States, in Puerto Rico, or in the District of Columbia.

3.1.2 Acts and Omissions The Contractor shall be responsible to the Government for acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons, including design professionals, performing any portion of the Contractor's obligations under the agreement.



3.1.3 Site Investigation and Conditions Affecting the Work As prescribed in *FAR 36.503*, [FAR Clause 52.236-3](#) is inserted:

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

3.2 Basic Services

3.2.1. Superintendence by the Contractor As prescribed in *FAR 36.506*, [FAR Clause 52.236-6](#) is inserted:

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

3.2.2 General Submittals: The Contractor shall submit construction documents for the review and approval by the Government. Construction Documents may include drawings, specifications, and other documents and electronic data setting forth in detail the requirements for construction of the work, and shall:

1. be consistent with the Program of Requirements and Performance Specifications;
2. provide information for the use of those in the building trades; and

3. include documents customarily required regulatory agency approvals.

3.2.3 Performance of Work by the Contractor As prescribed in *FAR 36.501(b)*, [FAR Clause 52.236-1](#) is inserted

The Contractor shall perform on the site, and with its own organization, work equivalent to at least twenty (20) percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

3.2.3.1 The Contractor shall provide and pay for design services, labor, materials, equipment, tools, and machinery, utilities, transportation and other facilities and services necessary for the proper execution and completion of the work, whether temporary or permanent and whether or not incorporated or to be incorporated in the work.

3.2.4 Material and Workmanship As prescribed in *FAR 36.505*, [FAR clause 52.236-5](#) is inserted:

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.



Construction not conforming to these requirements, including substitutions not properly approved by the Government, shall be corrected in accordance with Clause 4.3(c)

3.2.4.1 The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under this agreement.

3.2.5 Permits and Responsibilities As prescribed in *FAR 36.507*, [FAR Clause 52.236-7](#) is inserted:

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

3.2.5.1 Local Building Codes and Ordinances: The **agency** derives its authority from the Congress of the United States of America and is not subject to the laws, codes and ordinances of any jurisdiction of lessor authority unless the Congress defers authority to the states or local governments. The **agency** will comply with local codes and ordinances so long as they are deemed necessary and reasonable and consistent with its mission. Facility improvements design A/E services shall be in accordance with the applicable standards of the local model building code having jurisdiction, National Fire Protection Association (NFPA) such as the Life Safety Code (NFPA 101), and Standard for the Installation of Sprinkler Systems (NFPA 13). The **agency** is not required to secure building or occupancy permits from local or state authorities; however, the **agency** may request certificate of safety inspection for various building sub-systems such as elevators from local authorities.

3.2.6 Cleaning Up As prescribed in *FAR 36.512*, [FAR Clause 52.236-12](#) is inserted:

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

3.3 Optional Services

3.3.1 Public Hearings: *Providing services in connection with a public hearing, arbitration proceeding or legal proceeding except where the Contractor is a party thereto.*

3.3.2 Assistance: *Providing assistance in the utilization of equipment or systems such as preparation of operation and maintenance manuals, training personnel for operation and maintenance, and consultation during operation.*

STIPULATION 4 TIME

4.1 General: Unless otherwise indicated the Government and the Contractor shall perform their perspective obligations as expeditiously as is consistent with reasonable skill and care and the orderly progress of the Project.

4.2 Period of Performance: The period of performance for basic award is 720 calendar days from the date of Award.

4.3 Schedules for Construction Contracts As prescribed in *FAR 36.515*, [FAR Clause 52.236-15](#) is inserted:

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.



4.4 Use and Possession Prior to Completion As prescribed in *FAR 36.511*, FAR Clause 52.236-11 is inserted:

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

4.5 Suspension of Work As prescribed in *FAR 42.1305(a)*, FAR Clause 52.242-14 (modified) is inserted for solicitations and contracts when a fixed-price design-build contract is contemplated:

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(c) A claim under this clause shall not be allowed--

(1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this re-

quirement shall not apply as to a claim resulting from a suspension order); and

(2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

4.6 Stop-Work Order As prescribed in *FAR 42.1305(b)*, the following FAR Clause 52.242-15 is inserted. The "90-day" period stated in the clause may be reduced to less than 90 days.

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.



4.7 Government Delay of Work As prescribed in *FAR 42.1305(d)*, *FAR Clause 52.242-17* is inserted in solicitations and contracts when a fixed-price contract is contemplated for supplies other than commercial or modified-commercial items. The clause use is optional when a fixed-price contract is contemplated for services, or for supplies that are commercial or modified-commercial items.

(a) If the performance of all or any part of the work of this contract is delayed or interrupted (1) by an act of the Contracting Officer in the administration of this contract that is not expressly or implied authorized by this contract, or (2) by a failure of the Contracting Officer to act within the time specified in this contract, or within a reasonable time if not specified, an adjustment (excluding profit) shall be made for any increase in the cost of performance of this contract caused by the delay or interruption and the contract shall be modified in writing accordingly. Adjustment shall also be made in the delivery or performance dates and any other contractual term or condition affected by the delay or interruption. However, no adjustment shall be made under this clause for any delay or interruption to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(b) A claim under this clause shall not be allowed--

(1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved; and

(2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the delay or interruption, but not later than the day of final payment under the contract.

STIPULATION 5 PAYMENT

5.1 Payments under Fixed-Price Design-Build Contracts. As prescribed in *FAR 32.111(a)(5)*, *FAR Clause 52.232-5* is inserted:

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the prescribed certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer



shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.

(h) Final payment. The Government shall pay the amount due the Contractor under this contract after--

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation because of un-definitive work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on un-definitive contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such

as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

5.2 Prompt Payment for Design-Build Contracts As prescribed in *FAR 32.908(b)*, [FAR Clause 52.232-27](#) is inserted:

Notwithstanding any other payment terms in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in section 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project:

(A) The due date for making such payments shall be 14 days after receipt of the payment request by the designated billing office. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date shall be the 14th day after the date of the Contractor's payment request, provided a proper payment request is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, shall be as specified in the contract or, if not specified, 30 days after approval for release to the Contractor by the Contracting Officer.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other



division of the contract for which the price is stated separately in the contract):

(A) The due date for making such payments shall be either the 30th day after receipt by the designated billing office of a proper invoice from the Contractor, or the 30th day after Government acceptance of the work or services completed by the Contractor, whichever is later. If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date shall be the 30th day after the date of the Contractor's invoice, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) On a final invoice where the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance shall be deemed to have occurred on the effective date of the contract settlement.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(2)(i) through (a)(2)(ix) of this clause. If the invoice does not comply with these requirements, it shall be returned within 7 days after the date the designated billing office received the invoice, with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a)(4) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., prompt payment discount terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.

(viii) For payments described in subdivision (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Any other information or documentation required by the contract.

(x) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

(3) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority (e.g., tariffs). This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice principal payment amount approved by the Government until the payment date of such approved principal amount; and will be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice principal payment amount and will be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(2) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in subdivision (a)(1)(ii) of this clause, Government acceptance or approval shall be deemed to have occurred con-



structively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. In the event that actual acceptance or approval occurs within the constructive acceptance or approval period, the determination of an interest penalty shall be based on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days.

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(5) Prompt payment discounts. An interest penalty also shall be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(6) Additional interest penalty. (i) A penalty amount, calculated in accordance with subdivision (a)(6)(iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor--

(A) Is owed an interest penalty of \$1 or more;

(B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with

subdivision (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be required. Contractors shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) Demands must be postmarked on or before the 40th day after payment was made, except that--

(1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or

(2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii)(A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty except--

(1) The additional penalty shall not exceed \$5,000;

(2) The additional penalty shall never be less than \$25; and

(3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a)(4)(iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a)(6)(iii)(A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).



(b) Contract financing payments--(1) Due dates for recurring financing payments. If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the [insert day as prescribed by Agency head; if not prescribed, insert 30th day] day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(2) Due dates for other contract financing. For advance payments, loans, or other arrangements that do not involve recurring submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(3) Interest penalty not applicable. Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to include a payment clause and an interest penalty clause conforming to the standards set forth in subparagraphs (c)(1) and (c)(2) of this clause in each of its subcontracts, and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to

impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) A copy of any notice issued by a Contractor pursuant to subdivision (d)(3)(i) of this clause has been furnished to the Contracting Officer.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to subparagraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under subparagraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--



(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under subdivision (e)(5)(i) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under subparagraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under subdivision (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under subparagraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under subdivision (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under subdivision (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. A written notice of any withholding shall be issued to a subcontractor (with a copy to the Contracting Officer of any such notice issued by the Contractor), specifying--

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the United States is a party. The United States may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime Contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract



under paragraph (c) of this clause shall not be construed to be an obligation of the United States for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

5.3 Discounts for Prompt Payment. As prescribed in *FAR 32.111(c)(1)*, *FAR Clause 52.232-8* is inserted:

(a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a prompt payment discount in conjunction with the offer, offerors awarded contracts may include prompt payment discounts on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the agency annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day.

5.4 Statutory Cost limitations. Contracts for design-build services shall not be awarded at a cost to the Government--

- A. In excess of statutory cost limitations, unless applicable limitations can be and are waived in writing for the particular contract; or
- B. Which, with allowances for Government-imposed contingencies and overhead, exceeds the statutory authorization.

Solicitations containing one or more items subject to statutory cost limitations shall state--

- A. The applicable cost limitation for each affected item in a separate schedule;
- B. That an offer which does not contain separately-priced schedules will not be considered; and
- C. That the price on each schedule shall include an approximate apportionment of all estimated direct costs, allocable indirect costs, and profit.

The Government shall reject an offer if its prices exceed applicable statutory limitations, unless laws or agency procedures provide pertinent exemptions. However, if it is in the Government's interest, the contracting officer may in-

clude a provision in the solicitation which permits the award of separate contracts for individual items whose prices are within or subject to applicable statutory limitations.

The Government shall also reject an offer if its prices are within statutory limitations only because it is materially unbalanced. An offer is unbalanced if its prices are significantly less than cost for some work, and overstated for other work.

5.4.1 The contracting officer shall not negotiate a price or fee that exceeds the following statutory limitations, imposed by 10 U.S.C. 2306(e) and 41 U.S.C. 254(b): For architect-engineer services for public works or utilities, the contract price or the estimated cost and fee for production and delivery of designs, plans, drawings, and specifications shall not exceed six (6) percent of the estimated cost of construction of the public work or utility, excluding fees.

STIPULATION 6 PROTECTION OF PERSONS AND PROPERTY

6.1 Accident Prevention. As prescribed in *FAR 36.513*, *FAR Clause 52.236-13* is inserted:

(a) The Contractor shall provide and maintain work environments and procedures which will--

- (1) Safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;
- (2) Avoid interruptions of Government operations and delays in project completion dates; and
- (3) Control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall--

- (1) Provide appropriate safety barricades, signs, and signal lights;
- (2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and
- (3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.



(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(f) *Before commencing the work, the Contractor shall--*

(1) Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and

(2) Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

6.2 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements. As prescribed in FAR 36.509, FAR Clause 52.236-9 is inserted:

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site, and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to

repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

STIPULATION 7 INSURANCE AND BONDS

7.1 Performance and Payment Bonds-- Construction. As prescribed in FAR 28.102-3(a), FAR Clause 52.228-15 is inserted:

(a) Definitions. As used in this clause--

"Contract price" means the award price of the contract or, for requirements contracts, the price payable for the estimated quantity; or for indefinite-delivery type contracts, the price payable for the specified minimum quantity.

(b) Unless the resulting contract price is \$100,000 or less, the successful offeror shall be required to furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance Bonds (Standard Form 25): (i) The penal amount of performance bonds shall be 100 percent of the original contract price.

(ii) The Government may require additional performance bond protection when the contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract price.

(iii) The Government may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(2) Payment Bonds (Standard Form 25-A): (i) The penal amount of payment bonds shall equal--

(A) 50 percent of the contract price if the contract price is not more than \$1 million;

(B) 40 percent of the contract price if the contract price is more than \$1 million but not more than \$5 million; or

(C) \$2.5 million if the contract price is more than \$5 million.

(ii) If the original contract price is \$5 million or less, the Government may require additional protection if the contract price is increased. The penal amount of the total protection shall meet the requirement of subparagraph (b)(2)(i) of this clause.

(iii) The Government may secure additional protection by directing the Contractor to increase the penal sum of the existing bond or to obtain an additional bond.

(c) The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid



Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register, or may be obtained from the:

U.S. Department of Treasury
Financial Management Service

Surety Bond Branch

401 14th Street, NW, 2nd Floor, West Wing

Washington, DC 20227

7.2 Insurance--Work on a Government Installation. As prescribed in *FAR 28.310*, *FAR Clause 52.228-5* is inserted:

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective--

(1) For such period as the laws of the State in which this contract is to be performed prescribe; or

(2) Until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Requirements or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

7.3 Workers' Compensation Insurance. As prescribed in *FAR 28.309*, *FAR Clause 52.228-4* is inserted:

The Contractor shall (a) provide, before commencing performance under this contract, such workers' compensation insurance or security as the Defense Base Act (42 U.S.C. 1651, et seq.) requires and (b) continue to maintain it until performance is completed. The Contractor shall insert, in all subcontracts under this contract to which the Defense Base Act applies, a clause similar to this clause (including this sentence) imposing upon those subcontractors this requirement to comply with the Defense Base Act.

7.4 General Liability The Contractor and subcontractors shall have bodily injury liability insurance coverage written on the comprehensive form of policy of at least \$100,000.00 per occurrence, bodily injury and property damage combined and \$356,000.00 general (annual) aggregate.

7.5 Automobile Liability The Contractor and subcontractors shall be required to have automobile liability insurance written on the comprehensive form of policy. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing the contract. Policies covering automobiles operated in the United States shall provide coverage of at least \$ 50,000.00 for each accident (bodily injury and property damage combined).

STIPULATION 8 CHANGES IN THE WORK

8.1 Changes--Fixed-Price. As prescribed in *FAR 43.205(a)(1)*, *FAR Clause 52.243-1* is inserted. The 30-day period may be varied according to agency procedures.

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

(1) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the Government in accordance with the drawings, designs, or specifications.

(2) Method of shipment or packing.

(3) Place of delivery.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.

(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.



(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

(f) No services for which an additional cost or fee will be charged by the Contractor shall be furnished without the prior written authorization of the Contracting Officer.

8.2 Differing Site Conditions. As prescribed in FAR 36.502, FAR Clause 52.236-2 is inserted:

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of--

(1) Subsurface or latent physical conditions at the site which differ materially from those indicated in this contract; or

(2) Unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in paragraph (a) of this clause for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

STIPULATION 9 INSPECTION & ACCEPTANCE

9.1 Inspection of Construction. As prescribed in FAR 46.312, FAR Clause 52.246-12 is inserted

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes re-inspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may--

(1) By contract or otherwise, replace or correct the work and charge the cost to the Contractor; or

(2) Terminate for default the Contractor's right to proceed.



(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

9.2 Warranty of Construction (Mar 1994) As prescribed in *FAR 46.710(e)(1)*, FAR Clause 52.246-21 is inserted

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

9.3 Release of Liens

(a) At the completion of work the Contractor shall secure a release of lien from all subcontractors and suppliers who performed on the contract to indemnify the Government from all future mechanics liens.

STIPULATION 10 DISPUTE RESOLUTION

10.1 Disputes As prescribed in *FAR 33.215*, FAR Clause 52.233-1 is inserted.

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A



claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph (d)(2) of this clause. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) Contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim--

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using--

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use ADR. If the Contractor refuses an offer for alternative disputes resolution, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request. When using arbitration conducted pursuant to 5 U.S.C. 575-580, or when using any other ADR technique that the agency elects to handle in accordance with the ADRA, any claim, regardless of amount, shall be accompanied by the certification described in subparagraph (d)(2)(iii) of this clause, and executed in accordance with subparagraph (d)(3) of this clause.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date that the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in FAR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

STIPULATION 11 MISCELLANEOUS PROVISIONS

11.1 Requirement to Use Firms Listed in Contractors Qualification Statement The Contractor must retain all of the design professional firms listed in its qualification statement, for the entire period of the contract, for the duties and responsibilities assigned in the same document, unless specifically authorized otherwise by the Government.

11.2 Subcontracts for Design Services As prescribed in FAR 44.204(b), FAR Clause 52.244-4 is inserted:

Any design subcontractors and outside associates or consultants required by the Contractor in connection with the services covered by the design portion of the contract will be limited to individuals or firms that were specifically identified and agreed to during negotiations. The Contractor shall obtain the Contracting Officer's written consent before making any substitution for these subcontractors, associates, or consultants.

11.3 Subcontracts for Construction The Contractor as soon as practicable, shall furnish to the Contracting Officer in writing names of the persons or entities the Contractor will engage as construction subcontractors for the work.



11.4 Other Contracts. As prescribed in *FAR 36.508*, [FAR Clause 52.236-8](#) is inserted:

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other Contractor or by Government employees.

11.5 Authorization and Consent. As prescribed in *FAR 27.201-2(a)*, [FAR Clause 52.227-1](#) is inserted:

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent herein above granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold); however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

11.6 Notice and Assistance Regarding Patent and Copyright Infringement. As prescribed in *FAR 27.202-2*, [FAR Clause 52.227-2](#) is inserted:

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to

the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at FAR 2.101.

11.7 Patent Indemnity--Construction Contracts. As prescribed in *FAR 27.203-5*, [FAR Clause 52.227-4](#) is inserted:

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

11.8 Value Engineering As prescribed in *FAR 48.201(f)*, [FAR Clause 52.248-2](#) is inserted:

(a) General. The Contractor shall (1) perform value engineering (VE) services and submit progress reports as specified in the Requirements; and (2) submit to the Contracting Officer any resulting value engineering proposals (VEP's). Value engineering activities shall be performed concurrently with, and without delay to, the schedule set forth in the contract. The services shall include VE evaluation and review and study of design documents immediately following completion of the 35 percent design state or at such stages as the Contracting Officer may direct. Each separately priced line item for VE services shall define specifically the scope of work to be accomplished and may include VE studies of items other than design documents. The Contractor shall be paid as the contract specifies for this effort, but shall not share in savings which may result from acceptance and use of VEP's by the Government.

(b) Definitions. "Life cycle cost," as used in this clause, is the sum of all costs over the useful life of a building, system or product. It includes the cost of design, construction, acquisition, operation, maintenance, and salvage (resale) value, if any.

"Value engineering," as used in this clause, means an organized effort to analyze the functions of systems, equipment, facilities, services, and supplies for the purpose of achieving the essential functions at the lowest life cycle cost consistent with required performance, reliability, quality, and safety.



"Value engineering proposal," as used in this clause, means, in connection with the contract, a change proposal developed by employees of the Federal Government or Contractor value engineering personnel under contract to an agency to provide value engineering services for the contract or program.

(c) Submissions. After award of a design-build contract the Contractor shall--

(1) Provide the Government with a fee breakdown schedule for the VE services (such as criteria review, task team review, and bid package review) included in the contract schedule;

(2) Submit, for approval by the Contracting Officer, a list of team members and their respective resumes representing the engineering disciplines required to complete the study effort, and evidence of the team leader's qualifications and engineering discipline. Subsequent changes or substitutions to the approved VE team shall be submitted in writing to the Contracting Officer for approval; and

(3) The team leader shall be responsible for pre-study work assembly and shall edit, reproduce, and sign the final report and each VEP. All VEP's, even if submitted earlier as an individual submission, shall be contained in the final report.

(d) VEP preparation. As a minimum, the Contractor shall include the following information in each VEP:

(1) A description of the difference between the existing and proposed design, the comparative advantages and disadvantages of each, a justification when an item's function is being altered, the effect of the change on system or facility performance, and any pertinent objective test data.

(2) A list and analysis of design criteria or specifications that must be changed if the VEP is accepted.

(3) A separate detailed estimate of the impact on project cost of each VEP, if accepted and implemented by the Government.

(4) A description and estimate of costs the Government may incur in implementing the VEP, such as design change cost and test and evaluation cost.

(5) A prediction of any effects the proposed change may have on life cycle cost.

(6) The effect the VEP will have on design or construction schedules.

(e) VEP acceptance. Approved VEP's shall be implemented by bilateral modification to this contract.

STIPULATION 12 TERMINATION OF THE AGREEMENT

12.1 Termination for Convenience of the Government

As prescribed in *FAR 49.502(a)(1)*, FAR Clause 52.249-1 is inserted:

The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the rights, duties, and obligations of the parties, including compensation to the Contractor, shall be in accordance with Part 49 of the Federal Acquisition Regulation in effect on the date of this contract.

12. 2 Default As prescribed in *FAR 49.504(c)(1)*, FAR Clause 52.249-10 is inserted:

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include--

(i) Acts of God or of the public enemy,

(ii) Acts of the Government in either its sovereign or contractual capacity,

(iii) Acts of another Contractor in the performance of a contract with the Government,

(iv) Fires,

(v) Floods,

(vi) Epidemics,

(vii) Quarantine restrictions,



- (viii) Strikes,
 - (ix) Freight embargoes,
 - (x) Unusually severe weather, or
 - (xi) Delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors-Builders or suppliers; and
- (2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.
- (c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.
- (d) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

**STIPULATION 13
FAR CLAUSES INCORPORATED BY
REFERENCE**

As prescribed in FAR 52.107(b), the following clauses are inserted:

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

- 52.203-3 Gratuities.
- 52.203-7 Anti-Kickback Procedures.
- 52.204-3 Taxpayer Identification.
- 52.204-4 Printing/Copying Double-Sided on Recycled Paper.
- 52.204-5 Women-Owned Business.
- 52.204-6 Data Universal Numbering System (DUNS) Number.
- 52.209-5 Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters.
- 52.209-6 Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment.

- 52.211-12 Liquidated Damages--Construction.
- 52.211-13 Time Extensions.
- 52.215-2 Audit and Records--Negotiation.
- 52.222-1 Notice to the Government of Labor Disputes.
- 52.222-2 Payment for Overtime Premiums.
- 52.222-4 Contract Work Hours and Safety Standards Act--Overtime Compensation.
- 52.222-6 Davis-Bacon Act.
- 52.222-7 Withholding of Funds.
- 52.222-8 Payrolls and Basic Records.
- 52.222-9 Apprentices and Trainees.
- 52.222-10 Compliance with Copeland Act Requirements.
- 52.222-11 Subcontracts (Labor Standards).
- 52.222-12 Contract Termination--Debarment.
- 52.222-13 Compliance with Davis-Bacon and Related Act Regulations.
- 52.222-14 Disputes Concerning Labor Standards.
- 52.222-15 Certification of Eligibility.
- 52.222-16 Approval of Wage Rates.
- 52.222-17 Labor Standards for Construction Work Facilities Contracts.
- 52.222-20 Walsh-Healey Public Contracts Act.
- 52.222-21 Certification of Nonsegregated Facilities.
- 52.222-22 Previous Contracts and Compliance Reports.
- 52.222-23 Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity.
- 52.222-24 Pre-award On-Site Equal Opportunity Compliance Review.
- 52.222-25 Affirmative Action Compliance.
- 52.222-26 Equal Opportunity.
- 52.222-27 Affirmative Action Compliance Requirements for Construction.
- 52.222-28 Equal Opportunity Pre-award Clearance of Subcontracts.
- 52.222-35 Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era.
- 52.222-36 Affirmative Action for Workers with Disabilities.
- 52.222-37 Employment Reports on Disabled Veterans and Veterans of the Vietnam Era.
- 52.223-1 Clean Air and Water Certification.
- 52.223-2 Clean Air and Water.
- 52.223-3 Hazardous Material Identification and Material Safety Data.
- 52.223-4 Recovered Material Certification.
- 52.223-5 Pollution Prevention and Right-to-Know Information.
- 52.223-6 Drug-Free Workplace.
- 52.223-7 Notice of Radioactive Materials.
- 52.223-9 Certification and Estimate of Percentage of Recovered Material Content for EPA Designated Items.
- 52.223-10 Waste Reduction Program.
- 52.223-11 Ozone-Depleting Substances.
- 52.223-12 Refrigeration Equipment and Air Conditioners.
- 52.223-13 Certification of Toxic Chemical Release Reporting.
- 52.223-14 Toxic Chemical Release Reporting.



- 52.224-1 Privacy Act Notification.
- 52.224-2 Privacy Act.

- 52.225-1 Buy American Certificate.
- 52.225-3 Buy American Act--Supplies.
- 52.225-5 Buy American Act--Construction Materials.
- 52.225-11 Restrictions on Certain Foreign Purchases.
- 52.225-12 Notice of Buy American Act Requirement--Construction Materials.
- 52.225-13 Notice of Buy American Act Requirement--Construction Materials under Trade Agreements Act and North American Free Trade Agreement.
- 52.225-15 Buy American Act--Construction Materials under Trade Agreements Act and North American Free Trade Agreement
- 52.225-18 European Union Sanction for End Products.
- 52.225-19 European Union Sanction for Services.
- 52.225-20 Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program Certificate.
- 52.225-21 Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program.
- 52.225-22 Balance of Payments Program--Construction Materials--NAFTA.

- 52.227-1 Authorization and Consent.
- 52.227-2 Notice and Assistance Regarding Patent and Copyright Infringement.
- 52.227-3 Patent Indemnity.
- 52.227-5 Waiver of Indemnity.
- 52.227-6 Royalty Information.
- 52.227-7 Patents--Notice of Government Licensee.
- 52.227-9 Refund of Royalties.
- 52.227-10 Filing of Patent Applications--Classified Subject Matter.
- 52.227-12 Patent Rights--Retention by the Contractor (Long Form).
- 52.227-13 Patent Rights--Acquisition by the Government.
- 52.227-14 Rights in Data--General.
- 52.227-15 Representation of Limited Rights Data and Restricted Computer Software.
- 52.227-16 Additional Data Requirements.
- 52.227-17 Rights in Data--Special Works.
- 52.227-18 Rights in Data--Existing Works.
- 52.227-19 Commercial Computer Software--Restricted Rights.
- 52.227-20 Rights in Data--SBIR Program.
- 52.227-23 Rights to Proposal Data (Technical).

- 52.228-2 Additional Bond Security.
- 52.228-11 Pledges of Assets.
- 52.228-14 Irrevocable Letter of Credit.

- 52.230-1 Cost Accounting Standards Notices and Certification.
- 52.230-2 Cost Accounting Standards.
- 52.230-3 Disclosure and Consistency of Cost Accounting Practices.
- 52.230-4 Consistency in Cost Accounting Practices.

- 52.230-6 Administration of Cost Accounting Standards

- 52.232-11 Extras.
- 52.232-18 Availability of Funds.
- 52.232-19 Availability of Funds for the Next Fiscal Year. (*If Applicable*)
- 52.232-23 Assignment of Claims.
- 52.232-24 Prohibition of Assignment of Claims.
- 52.232-33 Mandatory Information for Electronic Funds Transfer Payment.

- 52.233-1 Disputes.
- 52.233-2 Service of Protest.
- 52.233-3 Protest after Award.

- 52.236-3 Site Investigation and Conditions Affecting the Work.
- 52.236-10 Operations and Storage Areas.
- 52.236-11 Use and Possession Prior to Completion.
- 52.236-14 Availability and Use of Utility Services.
- 52.236-15 Schedules for Construction Contracts.
- 52.236-16 Quantity Surveys.
- 52.236-17 Layout of Work.
- 52.236-19 Organization and Direction of the Work.
- 52.236-26 Pre-construction Conference.
- 52.236-27 Site Visit (Construction).

- 52.242-13 Bankruptcy.
- 52.242-17 Government Delay of Work.
- 52.243-1 Changes--Fixed-Price.
- 52.243-2 Changes--Cost-Reimbursement.
- 52.245-6 Liability for Government Property (Demolition Services Contracts) [*If applicable*].
- 52.245-10 Government Property (Facilities Acquisition).
- 52.246-1 Contractor Inspection Requirements.
- 52.246-12 Inspection of Construction.
- 52.246-13 Inspection--Dismantling, Demolition, or Removal of Improvements[*If applicable*].
- 52.246-15 Certificate of Conformance.



PART III

SECTION J

LIST OF ATTACHMENTS

1. Program of Requirement
2. Performance Specifications (NIH Design Requirements Manual)



Part IV

SECTION K

REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS



Part IV

SECTION L

INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

A. ELIGIBILITY TO RECEIVE REQUEST FOR PROPOSAL DOCUMENTS AND SUBMIT A DESIGN-BUILD PROPOSAL

Only those pre-qualified Offerors (design-builders) recommended by the evaluation board and selected by the source selection official (contracting officer) is entitled to receive the RFP, addenda, etc., and only they may submit a design-build proposal. Each design-build entity must remain exactly as indicated in the Offeror's qualification statement, unless a substitution is authorized the contracting officer in consultation with the chairperson of the Evaluation Board. However, the Offeror is free to add additional design and construction resources with out permission. Duties and responsibilities of the pre-qualified design-build team members may not be significantly changed without the Government's permission.

B. FIXED PRICE PROPOSALS

The RFP fixes the base proposal price; the Government will allow the Offerors the opportunity to submit specific deviations or exceptions to the RFP, with a scoring penalty.

C. COMPLETE PROPOSAL

A valid and complete design-build proposal meeting all the requirements of the RFP must be submitted. Proposals may not be conditioned or qualified in any way, except as may be allowed in the RFP (See Deviations Exceptions to the RFP). Proposals with limitations or conditions are subject to disqualification and rejection. Award must be based on receipt of a complete proposal.

D. FUNCTIONAL FACILITY

Proposals must provide for a complete and functional facility. In absence of any description of function in the RFP, the Government has the right to expect the proposal to provide for a facility that will be fully operational in every aspect, and for the purposes for which the facility was intended. Award will be made on the evidence and on the unqualified assumption that the proposal provides a completely functional facility.

E. COMMUNICATIONS

The Government will conduct a through, in-person briefing and question and answer (Q&A) sessions for design-build teams, utilizing the Government's operational personnel and others that are familiar with the functions and operations of the units to be housed in the proposed facility improvement, publish extensive notes of these meetings, and if necessary publish the Q&As in an addenda to the RFP.

The Government will allow only written questions outside the Q&A sessions, and provide written answers to all Offerors simultaneously by facsimile and publish addenda, with source of questions held confidential. All questions must be in to the Contracting Officer, no later than the close of business on _____. Contact with the Government's staff, consultants, evaluation board and other designated individuals, except as prescribed in the RFP is strictly prohibited.



F. INSPECTION OF SITE AND EXAMINATION OF DATA

The contracting officer will make appropriate arrangements for prospective respondents to inspect the work site and to have the opportunity to examine data available to the Government which may provide information concerning the performance of the work, such as soil boring samples, original soil boring logs, and records and plans of previous construction. The data is available for examination in Building _____ at 9:00 am on _____.

G. PRESENTATIONS

The Offeror will be given sufficient opportunity to present and defend their proposal before the Evaluation Board. The following procedures shall be followed:

1. The order of presentation shall be determined by lottery and the dates, duration and venue determined by the Government, well in advance,
2. Only members and employees of the Offerors team may participate in the presentation (no professional presenters),
3. Members of competing Offeror's teams shall be excluded from the audience,
4. The Government will determine in advance what presentation materials, if any, may be used in the presentations, and
5. The Offeror shall be specifically prevented from modifying or adding to their proposal during their in-person presentations. This restriction includes technical information not contained in their initial submittal, unless it in response to a question from the Evaluation Board.

H. UNSOLICITED ALTERNATIVES

The design-build selection process is based strictly on the Offeror's response to the RFP and its requirements. Therefore, the Evaluation Board will not consider unsolicited alternates.

I. DISQUALIFICATIONS

All deliverables in the RFP shall be postmarked no later than the published due date. All deliverables in RFP that are postmarked on or before the published due date are to be in the Contracting Officer's office no later than one week past the published due date. Failure to meet the above requirements will disqualify the Offeror.

If significant and intentional breaches of the RFP procedures occur, the Contracting Officer will investigate and make corrective actions, including offeror disqualification, if warranted. If unintentional or unlisted discrepancies appear in the proposal the contracting officer will require the Offeror to certify that the proposal will meet every requirement of the RFP, or disqualify the proposal. The basis of disqualification at each phase of the selection process should be described in the RFP.



Part IV

SECTION M

EVALUATION FACTORS FOR AWARD

Factor	Weight	Quality				
		Excellent (4)	Good (3)	Fair (2)	Poor (1)	Unacceptable (0)
Architectural Image & Character	15					
Functional Efficiency & Flexibility	15					
Quality of Materials and Systems	10					
Quantity of Usable Area	10					
Accessibility	5					
Safety & Security	10					
Sustainability	10					
Operation & Maintenance Cost	10					
Cost/Value Comparison	10					
Completion Schedule	5					

For deviations and exceptions to the RFP a penalty of 20% of total score will be assessed





SECTION 4-3 DESIGN-BUILD MANAGEMENT PROCEDURES

4-3-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserved)

4-3-00 POLICY

A. DESIGN REVIEWS

Designs for design-build contracts shall comply with Section 5-7 of this manual

B. EVALUATION & ENFORCEMENT OF CONTRACTOR QUALITY CONTROL

Construction quality control for design-build contracts shall be in compliance with Section 6-10 of the manual

4-3-10 PROCEDURES

A. CONTRACT AWARD

After the proposals have been evaluated, an award will be made with reasonable promptness to the Offeror whose proposal is the “Best Value” and most advantageous to the Government, considering price and the price-related factors included in the RFP, as well as the other evaluation factors which may include past performance, safety history, available resources, schedule, etc.

B. DESIGN-BUILD CONTRACT ADMINISTRATION

NIH shall decide the appropriate key staff for any project team depending on complexity, cost, type of construction, etc. Key team members that may be involved in construction projects are: Contracting Officer, Project Officer (COTR), Commissioning Agent (if required see Section 3-) and the Design-Build Contractor.

1. Design and Construction Documents: When accepted by the Government for progress, design development and construction documents (plans and specifications) produced by the design builder after award become part of the contract documents. However the Government’s approval and acceptance of these documents do not relieve the de-sign-builder from the obligation to meet the requirements of the RFP and its proposal, unless specifically indicated otherwise by the Government on an item by item basis.
2. Retain Listed Firms: Design-builder’s architect/engineer shall be the same in-house staff and /or firm(s) listed in the design-builder’s qualification statement, unless a change has been approved by the Government, and said staff and/or firm(s) shall be retained and employed for the project throughout the contract period.



3. Professional Responsibility: Design-builders architect/engineer should at all times attempt to safeguard the health, safety and well being of the public.
4. Inspections: Design-builders architect/engineer should inspect the work periodically and reject work that does not comply with the construction documents prepared by and/or approved by it.
5. Interpretations: Design-builders architect/engineer should make interpretations of its construction documents when requested to do so by the Government, which interpretations should be reasonably inferred from those documents. Design-builders architect/engineer should be reasonably available to the Government for such interpretations and other information related to the design and construction documents
6. Review of Shop Drawings: Design-builders architect/engineer should review and approve all shop drawings, samples, etc. for compliance with the construction documents and the intent of the RFP, prior to their submission to the Government. (The Government does not approve, but acknowledges progress represented by the submissions.)
7. Monitoring Schedule, Scope, and Cost: In addition to visual inspections of the work and materials, it would be good practice for project officers to measure performance of design-build projects using management tools that evaluate progress with respect to schedule, scope and cost. By integrating the resultant data, useful information is derived which can be used to determine the percentage of work complete for payment purposes or to identify schedule problems that require corrective action on the part of the contractor.
8. Submittals: The need for submittals shall be determined by the PO, as required by the contract. Typically, submittals take one or more of the following forms: architectural and engineering plans, technical specifications, shop drawings, diagrams, catalog submittals, color charts, samples, mock-ups, safety plans, testing plans, test results, disposal plans, production plant visits, as-built drawings, and other associated information. Substitutions may be allowed only at the discretion of the Contracting Officer. The OPDIVs shall define the scope, process, elements, and documentation of the submittal approval activity.
9. Contractor Payments: Contractor progress, or partial, payments are usually made periodically (monthly) during the progress of the Project. The amount of payment is usually based upon the contract amount, an approved schedule of values, an approved progress schedule, project officer verification of the value of work-in-place and stored materials, satisfactory progress on the approved progress schedule, and project officer recommendation to the Contracting Officer for payment. From time to time, payments may be reduced for cause, as outlined in the FAR. Approval authority for progress payments rests with the Contracting Officer.
10. Final Payment: Contractor final payment is made at the end of the Project when all provisions and requirements of the contract have been satisfactorily accomplished by the contractor. The project officer addresses construction issues and reports any deficiencies to the Contracting Officer. Approval authority of final payment rests with the Contracting Officer.

C. ACCEPTANCE:

The Contracting Officer has sole authority to grant final acceptance of any facility or portion thereof. Generally, acceptance infers approval of all work, including satisfactory correction of all the items on the deficiencies and omissions list. Acceptance of the contract work is final and conclusive, subject to certain contractual conditions such as warranties, guarantees, latent defects, etc. For this reason, a facility should not be accepted without a clear delineation in writing of any conditions or exceptions to the acceptance. Acceptance should not be granted unless all close-out items have been completed, such as O&M Manuals, as-built drawings, list of systems and equipment, attic stock, tools, maintenance parts, etc., and that all specified operator/ maintenance personnel training has been provided.



1. **Warranties:** The OPDIVs responsible for the Project shall appoint appropriate staff to assist the Contracting Officer in the management of the technical portion of the warranty process for the completed Project. The OPDIVs shall determine the period of time that the project officer remains involved with warranty management, before transferring the responsibility to the organization providing operations and maintenance functions for the facility.
2. **Closeout Documents:** All documents required by the contract including, but not limited to, Guarantees and Warranties, Commissioning Reports, Record Drawings, Operation and Maintenance Manuals, and Training Documents, shall be provided as specified prior to contract closeout. Each OPDIV shall prepare a format to assure that all contracts are closed out and all funds are disbursed or debilitated from the project.
3. **Training:** Training of Operations and Maintenance Staff to operate and maintain the new facility and sophisticated building systems and equipment is important to the activation of the facility. Provisions for adequate operation and maintenance training should be provided for in the specifications or in the general provision of the contract. The contract should require the contractor to provide a detailed training plan based on actual submitted manufacturer's recommendations for review and approval by the COTR. Provisions for training the operators/ users in the care and use of equipment should also be included in the contract. Training should occur prior to acceptance of the work by the Government.

4-3-20 GUIDANCE AND INFORMATION

A. OPTIONAL PROJECT ADMINISTRATION MANUAL

The project administration manual describes the procedures to be followed by both the design - build contractor and the Government's Representative during the term of the design - build contract. It will include:

- Directory of key personnel and their official contact address/phone/fax,
- List of fixed events (reports, submittals, etc.) described in the RFP,
- List the design-builder's notice requirements, as specified in the RFP,
- List the design-builder submittal requirements, as specified in the RFP. Correspondence procedures between the design builder and the Government's representative,
- Schedule of regular and special meetings and procedures for minutes,
- List of records required of both design-builder and the Government's representative (submittal logs, change order logs, etc.), and
- Forms to be utilized by the design -builder (application for payment, etc.).

NIH Facilities Development Manual



Chapter 5 Design



SECTION 5-1 A/E ACQUISITION PLANNING

5-1-00	Policy
10	Procedures (Reserved)
20	Guidance and Information
30	Reporting Requirements
X5-1-A	Sample NIH Design Acquisition Planning Worksheet

5-1-00 POLICY

In accordance with FAR Part 7 and HHS policy, NIH shall perform acquisition planning for all acquisitions in order to provide for -

- Acquisition of commercial items or, to the extent that commercial items suitable to meet the Government's needs are not available, non-developmental items, to the maximum extent practicable; and
- Full and open competition or, when full and open competition is not required in accordance with Part 6, to obtain competition to the maximum extent practicable, with due regard to the nature of the supplies or services to be acquired.

Acquisition planning for federally-owned real property assets shall integrate the efforts of all personnel responsible for significant aspects of the acquisition. The purpose of this planning is to ensure that the Government meets its needs in the most effective, economical, and timely manner. In order to facilitate attainment of the acquisition objectives, the plan should identify those milestones at which decisions should be made. The plan should address all the technical, business, management, and other significant considerations that will control the acquisition. The specific content of plans will vary, depending on the nature, circumstances, and stage of the acquisition. The acquisition plan should include the following:

- Acquisition background and objectives that includes statement of need; applicable condition; life-cycle cost; performance characteristics; trade-offs; risks; and acquisition streamlining;
- Plans of action that includes sources, competition, source-selection procedures, acquisition considerations, budgeting and funding, product or service descriptions, priorities, allocations, and allotments, contractor versus government performance, inherently governmental functions, logistics considerations, government-furnished property, government-furnished information, environmental and energy conservation objectives, security considerations, contract administration, other considerations, and milestones for the acquisition cycle.

5-1-20 GUIDANCE AND INFORMATION

- For indefinite deliver contracts A/Es should be selected for discrete tasks based on qualifications in accordance with FAR Part 36.6.
- Acquisition plans should include applicable provision of HHSAR Part 307 HHS Acquisition Plans.

See Chapter 4 Section 4-1 for acquisition planning procedures, guidance and information.



5-1-30 REPORTING REQUIREMENTS

On projects requiring the Department's approval, a submittal of the Acquisition Plan is not required. However, the analysis/documentation supporting the chosen acquisition methodology using PDCS or a similar tool shall be forwarded to OFMP with the initial FPAA submittal. OFMP may require that the NIH submit the detailed acquisition plan as additional justification.



SAMPLE NIH A/E ACQUISITION PLANNING WORKSHEET

1. Architect-Engineer Service Descriptions

The Contractor shall design the General Laboratory for Cellular Biology located on NIH's Bethesda Campus. The structure will consist of 215,000 gross square feet of space.

2. Background and Objectives

The General Laboratory for Cellular Biology (GLCB) will house the staff of a special task force created by a Presidential Commission on Health. This task force is composed of eminent scientists from different Institutes (ICs), within the National Institutes of Health (NIH). The Task Force is charged with the responsibility to find the cause and cure of a recently discovered virus that attacks the human immune system.

The GLCB will accommodate 7 laboratories, shared analytical laboratories, and support space. The laboratory facility will house the staff of the Scientific Director, administrative space associated with the laboratories as well as ancillary space. There will also be an animal research facility associated with the GLBC.

3. Applicable Conditions (State all significant conditions affecting the acquisition)

This project will be procured under 48 CFR Part 36.6 Architect/Engineer Services. Each firm will be required to provide a SF 330 Architect-Engineer Qualifications

4. Cost: Set forth the established cost goals for the acquisition and the rationale supporting them, and discuss related cost concepts to be employed

\$ 10,140,000.00 will be funded by B&F not to exceed the statutory 6% fee limitation

5. Performance Characteristics:

Program of Requirements Completed
Program of Requirement is at-tached.

Performance Specification
Use existing NIH Specifications and the NIH Design Requirements Manual



6. Delivery or performance-period requirements: Describe the basis for establishing delivery or performance-period requirements. Explain and provide reasons for any urgency if it results in concurrency of development and production or constitutes justification for not providing for full and open competition.

The scheduled for the design of the GLCB is as follows:

Pre Design	6 months
Design	9 months
IFB	2 months
Construction	18 months

The GLCB is urgently needed to house a taskforce to find the cause and cure of a recently discovered virus that attacks the human immune system. This is a Presidential Initiative that has the full backing of Congress.

7. Trade-offs: Discuss the expected consequences of trade-offs among the various cost, capability or performance, and schedule goals.

At this time there are no expected consequences of trade-offs among the various cost, capability or performance, and schedule goals. The project is fully funded and supported. More than adequate human capital and financial resources have been assigned to this project.

8. Risks: Discuss technical, cost, and schedule risks and describe what efforts are planned or underway to reduce risk and the consequences of failure to achieve goals. If concurrency of development and production is planned, discuss its effects on cost and schedule risks.

The Government proposes to enter into a firm fixed-price contract with the highest qualified firm to design, GLCB where the Architect-Engineer assumes the risk for cost and schedule.

The Government is liable for different site conditions and program changes.

9. Acquisition streamlining: If specifically designated by the requiring agency as a program subject to acquisition streamlining, discuss plans and procedures to -- Encourage industry participation by using:

Draft Solicitations Pre-solicitation Conferences

Other Means of Stimulating Industry Involvement

The Government proposes to advertise in trade journals and other media published by professional societies such as The American Institute of Architects, etc., to assure that qualified firms are aware of the solicitation.



10. Sources: Indicate the prospective sources of supplies and/or services that can meet the need. Consider required sources of supplies or services. Include consideration of small business, small disadvantaged business, and women-owned small business concerns.

The Government proposes full and open competition. Full and open competition does not preclude small business, small disadvantaged business, and women-owned small business concerns from competing for this contract.

11. Competition: Describe how competition will be sought, promoted, and sustained throughout the course of the acquisition. If full and open competition is not contemplated, cite the authority in 6.302, discuss the basis for the application of that authority, identify the source(s), and discuss why full and open competition cannot be obtained.

The Government proposes full and open competition

12. Source-selection procedures:

Qualification Base Selection yes no 330 Required yes no

Design Competition yes no HHS Approval for Design Competition yes no

Proposed Evaluation Criteria:

- Technical approach;
- Specialized experience and technical competence;
- Quality of individuals proposed for key positions;
- Professional qualifications;
- Capability to accomplish the work in the time required;
- Location;
- Quality of technical and managerial organization;
- Design philosophy;
- Construction management plan;
- Resources;
- Past performance;
- Other appropriate factors (List below)

13. Qualification Base Selection

- Fixed Price/Best Design
- Weighted Criteria Process

14. Contracting considerations

- Firm-Fixed-Price Contract
- Incentive Contract
- Cost Plus Fixed Fee Contract
- Indefinite-Quantity Contract
- Multiple

15. Budgeting and Funding:

Award Preference

Government Estimate Completed. yes (Attach Government Estimate) no
See POR and FPAA



<p>16. Priorities, allocations, and allotments: When urgency of the requirement dictates a particularly short delivery or performance schedule, certain priorities may apply. If so, specify the method for obtaining and using priorities, allocations, and allotments, and the reasons for them</p> <p>Not Applicable</p>	
<p>17. Contractor versus Government performance: Address the consideration given to OMB Circular No. A-76</p> <p>This project will give full consideration to OMB Circular No. A-76 and the President's Management Agenda with respect to Competitive Sourcing.</p>	
<p>18. Inherently governmental functions</p> <p>A. All pre-design services and functions are inherently governmental. B. All acquisition services are inherently governmental. C. All project management, project oversight, and project monitoring is inherently governmental. D. All evaluation of contractor performance is inherently governmental.</p>	
<p>19. Management information requirements: Discuss, as appropriate, what management system will be used by the Government to monitor the contractor's effort.</p> <p>The Contracting Officer is responsible for administering the contract. The Project Officer who is the Contracting Officer's Technical Representative (COTR) under the direction of the Contracting Officer is responsible for monitoring the contractor's performance.</p>	
<p>20. Logistics considerations</p>	
<p>20A. The assumptions determining contractor or agency support, both initially and over the life of the acquisition, including consideration of contractor or agency maintenance and servicing</p> <p>The Office of Acquisitions has the capability to support, both initially and over the life of the acquisition, including consideration of contractor or agency maintenance and servicing.</p>	<p>20B. The reliability, maintainability, and quality assurance requirements, including any planned use of warranties</p> <p>The proposal or contract has provision and clauses addressing reliability, maintainability, and quality assurance requirements, including any planned use of warranties.</p>
<p>20C. The requirements for contractor data (including repurchase data) and data rights, their estimated cost, and the use to be made of the data</p> <p>The contract has provision and clauses addressing the requirements for contractor data (including repurchase data) and data rights, their estimated cost, and the use to be made of the data.</p>	<p>20D. Standardization concepts, including the necessity to designate, in accordance with agency procedures, technical equipment as "standard" so that future purchases of the equipment can be made from the same manufacturing source.</p> <p>GSA Schedules is not applicable because this procurement fall under the "Brooks Act". The NIH also requires designs of its laboratories to follow the NIH Design Requirements Manual.</p>



<p>21. Government-furnished property: Indicate any property to be furnished to contractors, including material and facilities, and discuss any associated considerations, such as its availability or the schedule for its acquisition</p> <p>Not Applicable</p>
<p>22. Government-furnished information: Discuss any Government information, such as manuals, drawings, and test data, to be provided to prospective Offerors and Contractors.</p> <p>The Government will make available to the Contractor the NIH Design Requirements Manual.</p>
<p>23. Environmental and energy conservation objectives.</p> <p>Environmental Review Required. <input type="checkbox"/> Yes <input type="checkbox"/> No Note: Environmental Checklist is complete.</p> <p>Energy Conservation Objectives Required. <input type="checkbox"/> Yes <input type="checkbox"/> No Note: Sustainability Checklist is complete.</p>
<p>24. Security considerations: For acquisitions dealing with classified matters, discuss how adequate security will be established, maintained, and monitored</p> <p>Security will be handled in accordance Interagency Security Committee's (ISC) Design Criteria and the Division of Physical Security, ORS policies and procedures. Due to the nature of this facility policies and procedures of the Division of Occupational Safety and Health must be followed</p>
<p>25. Contract administration</p> <p>Assigned Contracting Officer _____</p> <p>Assigned Contract Specialist _____</p> <p>Assigned Project Manager Alamelu Ramesh, P.E.</p> <p>Project Accepted on behalf of the Government by: _____</p>
<p>26. Stipend Required <input type="checkbox"/>Yes <input type="checkbox"/>No Amount of Stipend</p>



27. Other considerations: Discuss, as applicable, standardization concepts, the industrial readiness program, the Defense Production Act, the Occupational Safety and Health Act, foreign sales implications, and any other matters germane to the plan not covered elsewhere

The following laws and Executive Orders apply to the design and construction of the GLCB:

- A. Energy Policy and Conservation Act (42 U.S.C. 6361(a)(1)) and Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.);
- B. National Energy Conservation Policy Act (42 U.S.C. 8253 and 8262g);
- C. Executive Order 11912, April 13, 1976;
- D. Executive Order 12759, Sections 3, 9, and 10, April 17, 1991; and Executive Order 12902, March 8, 1994.
- E. The National Environmental Policy Act (NEPA) The regulations implementing NEPA were issued by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500 1508). Executive Order 11214 also governs NEPA responsibilities.
- F. Clean Water Act (33 U.S.C. §§1251 et seq.)
- G. The Clean Air Act, 42 USC §§7401
- H. Architectural Barriers Act of 1968, 42 USC §§4151-4156, as defined in the Federal Management Regulation (FMR) §102.76.60 through 102.76.95 and the Architectural Barriers Act Accessibility Standard, defined as Appendices C and D, 36 CFR §1191, ABA Chapters 1, 2, and Chapters 3 through 10.
- I. Compliance with Codes and Standards: In accordance with 40 U.S.C. §3312, each HHS building should be constructed or altered, to the maximum extent feasible, in compliance with one of the nationally recognized model building codes and with other nationally recognized codes, including mechanical and electrical codes, fire and life safety codes, and plumbing codes. Due consideration should be given to all State and local zoning laws as if the project were not being constructed or altered by a Federal agency. (The Government and its contractors are not required to obtain building permits or to perform inspections.) Solicitations for design and construction of HHS buildings should contain clauses notifying prospective contractors of the statutory provisions of 40 U.S.C. §§3112 (f) and (g).
- J. FAR 22.4 Labor Standards for Contract Involving Construction applies to A/E services. 22.400 Scope of subpart. This subpart implements the statutes which prescribe labor standards requirements for contracts in excess of \$2,000 for construction, alteration, or repair, including painting and decorating, of public buildings and public works. Labor relations requirements pre-scribed in other subparts of Part 22 may also apply.
- K. FAR 22.4 include the Davis-Bacon Act and the Copeland Act.
- L. FAR 22.6 Walsh-Healey Public Contracts Act also applies to A/E and construction services.
- M. Equal Employment Opportunity as specified in FAR 22.8 or Executive Order 11246 applies to all Federal contracts.
- N. 29 CFR Part 1910 -- Occupational Safety and Health Standards sets minimum design standards for facilities such as egress, fire prevention plan, ventilation etc.
- O. 29 CFR Part 1926 is the Safety and Health Regulations for Construction.
- P. Latest edition of Biosafety in Microbiological and Biomedical Laboratories
- Q. Latest edition of the NIH Design Requirements Manual



Milestones for the acquisition cycle: Address the following steps and any others appropriate:

Acquisition plan approval. **Yes**

Program of Requirements. **Yes**

Performance Specifications. **Yes**

Data requirements. **Yes**

Completion of acquisition-package preparation. **Yes**

Purchase request. **N/A**

Justification and approval for other than full and open competition where applicable and/or any required D&F approval. **N/A**

Issuance of synopsis. **No**

Issuance of solicitation. **TBD**

Evaluation of proposals, audits, and field reports. **No**

Beginning and completion of negotiations. **No**

Contract preparation, review, and clearance. **No**

Contract award. **No**





SECTION 5-2: ARCHITECT ENGINEER SELECTION PROCESS

5-2-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements
X5-2-A	Architect/Engineer Selection Process Flow Chart
X5-2-B	Checklist to Award Architect/Engineer Design Contract
X5-2-C	A/E Selection Guidance

5-2-00 POLICY

This section sets forth policies, procedures and guidance for Design-Bid-Build of federally-owned real property assets, the traditional method that utilizes two or more separate and discrete contracts to deliver a facility. Usually there is one design (architect-engineer contract) and one or more construction contracts. Under this arrangement there is no privity between the contracts. The designer who develops the plans and specification (contract documents) cannot direct or supervise construction.

The procurement of architectural-engineering (A/E) services is qualifications based, in accordance with FAR 36.6 and the requirements of the Brooks Act (40 U.S.C.1101-1104). The Brooks Act “declares it to be the policy of the Federal Government to publicly announce all requirements for architectural and engineering services and to negotiate contracts for architectural and engineering services on the basis of demonstrated competence and qualification for the type of professional services required and at fair and reasonable prices”.

5-2-10 PROCEDURES

The following information is provided to assist with the planning and implementation of Design-Bid-Build projects. Exhibits X5-2-A and X5-2-B provides a checklist for the sequence of events leading up to award of an Architect/Engineer design contract.

A. REQUEST TO UTILIZE DESIGN COMPETITIONS

The OPDIVS shall obtain permission to utilize design competitions from the Assistant Secretary for Administration and Management through the Office for Facility Management and Policy.

B. QUALIFICATION BASED A/E SELECTIONS

The A/E selection process is fairly simple but it is unique in the Federal acquisition system. The A/E selection is a competitive process and it is prescribed in 48 CFR 36.6 (FAR 36.6). The selection of firms (teams) to provide A/E services are based on qualifications only and cost is not a selection factor. It is a two-part selection process starting first evaluation of qualification statements (SF 330) and second by holding discussions with the highest qualified firms or teams. The A/E Selection Board recommends in the order of preference the firm or teams to be selected by the Selecting Authority. The contracting officer is authorized by the Selecting Official to negotiate with the selected firm. This method of A/E selection is known as the “Brooks Act”.



C. PRE-DESIGN PROCEDURES

Prior to advertising design services the OPDIV must ensure that adequate funds are available to complete the design of the project; that the Planning and Programming documents and HHS Facility Project Approval Agreement and statement of work are complete; evaluation criteria is established and the government estimate is complete.

1. Availability and Certification of Design Funds: Designs for new facilities, replacement facilities, and building additions must be accomplished with funds appropriated for the specified project. Designs for building improvement projects must normally be accomplished with specifically designated funds or with lump sum amounts appropriated for repairs and improvements. Guidance should be requested from the OFMP, in the event of questions on the appropriateness of proposed design funding sources.

In unusual cases where time is critical, and the appropriation/apportionment appears to be imminent, it may be appropriate to advertise for design services before the funds are actually received. In such cases, the Contracting Officer should obtain a written statement from the agency's financial management officer to the effect that appropriation and apportionment of proper funds is expected within 60 days. Wording should also be included in the announcement to the effect that the Department expects to receive design funds in the near future, and that the award of the A/E contract is subject to the receipt of these funds.

2. Planning and Programming Documents and HHS Facility Project Approval Agreement: The planning and programming documents, [Project Definition Rating Index](#) and HHS Facility Project Approval Agreement (FPAA) define a large portion of the scope of work, and are essential to the A/E selection process. Therefore, planning and programming documents clearly defining the project scope and requirements should be approved prior to advertising the procurement. An HHS Facility Project Approval Agreement must be approved by the Department prior to awarding a design contract.
3. Preparation of the A/E Statement of Work: The A/E Statement of Work is the key document in the actual performance of the work. A well-prepared statement of work minimizes negotiation problems, eliminates ambiguities, and assures that the design will satisfy program needs. The planning and programming documents should be incorporated into the Statement of Work or attached to the Statement of Work to describe the project requirements and concept. The Statement of Work should be tailored to the specific design requirements of each project. Typical areas covered by the Scope of Work are pre-design services, basic design service and optional construction contract administration services. [See Appendix A for Sample Statements of Work.](#)

Evaluation Criteria: In qualification-based selections, the Evaluation Board establishes criteria to be used in evaluating the A/E firms before making the public announcement. The criteria for qualification-based selections shall conform to the Federal evaluation criteria set forth in FAR 36.6. [In design competitions the selection of the A/E is based on a comparison of proposed solutions to planning and programming documents or the design problem.](#)

4. Government Prepared Estimate of A/E Costs: The rules governing preparation of the independent government estimate of the cost for required A/E services are set forth in FAR 36. The estimate shall be prepared on the basis of a detailed analysis of the required work as though the Government were submitting a proposal. The estimate must be prepared prior to publishing the FedBizOpps announcement. The independent government estimate serves two main purposes:
 - a. It determines the sufficiency of funds to cover the project as outlined in the statement of work. If the estimate indicates that the allocated funds are not sufficient to cover the pro-



- posed project, the procuring agency may modify the statement of work or pursue an authorized increase in funding.
- b. It serves as a guideline to measure the reasonableness of the A/E firm's fee proposal. Major differences between the government estimate and the A/E cost proposal, or the scope of services to be furnished, should be investigated thoroughly. Major differences may indicate that the statement of work is not clearly defined or communicated. Any changes that are made in the government estimate or statement of work must be agreed upon by both the Contracting Officer (CO) and the technical staff and recorded in the CO's file.

The fee estimate for design shall not exceed six percent (6%) of the estimated cost of construction, as required by law. Other required services, not related to design, must be included in the estimate but are not included in the 6% calculation. The maximum fee limitation does not apply to the following A/E services: preparing planning and programming documents; feasibility studies; measured drawings of existing facility; subsurface investigations; structural, electrical, and mechanical investigation of existing facility; topographic/ boundary/ utilities surveys; special consultant services; the cost of reproducing drawings and specifications for bidding and for distribution to prospective bidders and plan file rooms; reproduction of approved designs through models, color renderings, photographs, or other presentation media; travel and per diem allowances; supervision or inspection of construction, review of shop drawings or samples and other services performed during the construction phase; and all other services that are not integrally a part of the A/E's design services.

The most difficult part of a government estimate is determining the burden rate i.e. overhead, general administration cost and profit. The burden rate varies based on the firm's business practices. The NIH Division of Financial Advisory Services audits A/E firms and establishes burden rates. Some A/E firms who have recently been contracted by another Federal agency and may have an audited burden rate. Since a government estimate is required prior to advertisement of the services it recommended that a rate of 1.5 be used. Keep in mind that this rate will most likely change when the A/E is selected. Remember that cost is not a factor in the selection process and the potential A/E should not be penalized for a high burden rate.

C. EVALUATION BOARDS

The NIH shall establish appropriate evaluation boards or juries to evaluate A/E qualifications to design HHS facilities.

1. The Evaluation Board for architect-engineer services shall be established according to FAR 36.602-2. It is recommended that the board include registered professionals representing relevant architectural and engineering disciplines. The board could also include members representing the program users to be housed in the facility, operations and maintenance, agency planning and other specialized support functions. The agency official responsible for facilities ([Director, Office of Research Facilities](#)) will establish an Ad Hoc Evaluation Board for each architect-engineer contract.

- a. Functions of the Evaluation Board

Under the general direction of the head of the contracting activity, an evaluation board shall perform the following functions (FAR 36.602-3)

- -Review the current data files on eligible firms and responses to a public notice concerning the particular project.
- -Evaluate the firms in accordance with the criteria.



Members of the Board should come to a reasonable consensus. No member should be allowed to rate way out of the norm i.e. ratings too high or too low without being challenge. Do not let a member rate the first competitor low because they would like to see what the other competitors are like. Do not use gimmicks such as tossing out the highest and lowest scores. Do not let board members bring personal bias to the table. Dismiss any board member that has a conflict of interest. To ensure fairness freeze the scores do not go back to change scores after all the qualification statements have been reviewed.

Determine the short list by establishing a competitive range. Do not use discriminating factors to eliminate a competitor.

- -Hold discussions (interviews) with at least three of the most highly qualified firms regarding concepts and the relative utility of alternative methods of furnishing the required services.

Remember three firms is a minimum not a maximum. There should be a natural break or a competitive range

Any firm that makes the short list can do the job; however, there are exceptions. Consider putting all short-listed firms on an equal footing start them all at zero and do not use the ratings of the qualification statements. Some firms are very good at presentation and very weak on substance and they may get selected because they have extremely high scores on their qualification statements but have a mediocre interview. The interview is where the rubber meets the road and you don't want to select a firm that is not the best because of the beautiful brochures at the beginning of the process. If Agency rules require the board to include the ratings of qualification statements, make sure they are so low that it will not impact the overall rating.

- -Prepare a selection report for selection authority recommending, in order of preference, at least three firms that are considered to be the most highly qualified to perform the required services. The report shall include a description of the discussions and evaluation conducted by the board to allow the selection authority to review the considerations upon which the recommendations are based.

Focus on the team and not the firm.

- -The firm may have an excellent reputation for producing great designs; however, it is the personnel assigned to the project that are actually going to do the work.
- -Focus on the leadership. The team should have designated a project manager to lead the day-to-day activities.
- -Be careful of principals who act as project managers. It is ok to have a principal in charge, but the principal should not to run the day-to-day project activities.
- -Pay close attention to the team's organizational structure and how it will communicate and interact with itself and with the Government.
- -Give credit where credit is due. Individual experience is just as important as the firm's experience.
- -Make sure that all key personnel are at the interview.
- -Strongly recommend conducting interviews at A/E's office or where the work will be done. You can physically observe the A/E resources and capabilities.



2. Duties of the Chairperson - The Chairperson of the A/E Evaluation Board for all contracts will assist the OPDIV Facility Manager or designee in appointing the members of the board. In addition, the Chairperson will call and preside over as many meetings as he/she deems necessary to complete the selection process. The Chairperson will also recommend the assistance of other technical personnel (non-voting technical advisors) who may make a substantial contribution to the evaluation process. The Chairperson will also develop the final selection report for approval and inclusion in the contract file.
3. Competition Advisor - In the rare event that a design competition is contemplated the OPDIV shall appoint a Competition Advisor. The Competition Advisor serves as the sponsoring OPDIV's focal point for the design competition. The Competition Advisor should be a registered architect who holds a senior position within OPDIV or HHS. The Competition Advisor may be hired from the outside if HHS does not have qualified personnel available for the assignment. The Competition Advisor will: prepare the Competition Announcement; assist in the preparation of the Program of Requirements; establish eligibility requirements and register the competitors; assist in the recruitment of design jurors; establish competition security protocols; and establish the presentation format for the competition.
4. Design Competition Jury - The jury should be composed of nationally recognized registered architects and engineers including senior HHS design professionals. The jurors or members of their staff are not allowed to compete for the project. (See 4-7-20B when used.)
5. Selection Authority The agency head or a designated selection authority shall make the final selection decision. The selection authority shall review the recommendations of the evaluation board and shall, with the advice of appropriate technical and staff representatives, make the final selection. This final selection shall be a listing, in order of preference, of the firms considered most highly qualified to perform the work. If the firm listed as the most preferred is not the firm recommended as the most highly qualified by the evaluation board, the selection authority shall provide for the contract file a written explanation of the reason for the preference.

The selection authority shall not add firms to the selection report. If the firms recommended in the report are not deemed to be qualified or the report is considered inadequate for any reason, the selection authority shall record the reasons and return the report through channels to the evaluation board for appropriate revision.

All firms on the final selection list are considered "selected firms" with which the contracting officer may negotiate in accordance with 36.606.

D. DESIGN ACQUISITION PROCEDURES

1. Public Announcements - The Government shall make a public announcement of any planned A/E selection. See paragraphs 5-2-20A and 5-2-20B for additional information.
2. Evaluation Procedures - A/E firms shall be evaluated and rated to establish the competitive range. Each evaluation board member shall review the information submitted by each A/E firm and rate the firms individually. When the members have finalized their rankings of the firms, they shall be tabulated and summarized. See Exhibit X4-7-B for a Sample Selection Evaluation Form. From this summary, the firms within the competitive range are selected for interviews. At least three of the top firms thus selected shall be notified and scheduled for discussions (interviews).
3. Interviews - The evaluation board shall clearly communicate to each firm the evaluation criteria, time allowed and key A/E personnel that should attend the interview. Firms should be allowed sufficient time to prepare for interviews. The topics must stay within the parameters established in the announced evaluation criteria in the public announcement. At the end of the interviews, the



board members shall rank the interviewed firms again, using the previously established ranking criteria. With the approval of the OPDIV Facility Director, telephone interviews may be conducted with A/E Firms for small projects in accordance with the Short Selection process described in the FAR.

4. Selection Report - The selection report shall be prepared by the Chairperson of the board, and signed by the Chairperson and each member of the board. It shall include a list of the most highly qualified firms (not less than three) ranked in terms of relative qualifications. This report shall document the extent of the evaluation and the considerations upon which the recommendations were based. The report shall be submitted to the Selecting Official.
5. Negotiations - Negotiations shall be conducted with the top-ranked A/E firm. If a mutually satisfactory contract cannot be negotiated with that firm, the CO shall obtain a best and final offer, in writing, from the prospective A/E firm, terminate the negotiations, and so advise the firm. Negotiations shall then be initiated with the next listed firm in the order of preference, and this procedure shall continue until a mutually satisfactory contract has been negotiated. If negotiations fail with all the listed firms, the selection process shall reconvene. Promptly at the conclusion of any negotiations, a memorandum setting forth the principal elements of the negotiations shall be prepared for use by the reviewing authorities and for inclusion in the contract file.

The final selection authorizes the contracting officer to begin negotiations. Negotiations shall be conducted in accordance with FAR 15, beginning with the most preferred firm in the final selection for a firm fixed fee contract. The contracting officer should ordinarily request a fee proposal from the firm, ensuring that the solicitation does not inadvertently preclude the firm from proposing the use of modern design methods.

Provide the A/E with fee proposal format that is consistent with government estimate format.

There is a fee limitation on Federal A/E contracts. The fee cannot exceed 6% of construction. The fee is defined as the cost and the associated cost to produce plans, specifications and estimates (PS&E).

Remember that the 6% is a maximum and the fee can be lower. Negotiate base on the level of effort.

The contracting officer shall inform the firm that no construction contract may be awarded to the firm that designed the project, except as provided in 36.209. During negotiations, the contracting officer should seek advance agreement (see 31.109) on any charges for computer-assisted design. When the firm's proposal does not cover appropriate modern and cost-effective design methods (e.g., computer-assisted design), the contracting officer should discuss this topic with the firm. Because selection of firms is based upon qualifications, the extent of any subcontracting is an important negotiation topic. The clause pre-scribed at 44.204(b), Subcontractors and Outside Associates and Consultants (Architect-Engineer Services) (see 52.244-4), limits a firm's subcontracting to firms agreed upon during negotiations.

a. Negotiation Position

The Contracting Officer along with the Project Officer should develop a negotiation position based on the selected A/E's fee proposal. The Project Officer should prepare a technical evaluation of the A/E fee proposal outlining the differences between the Government Estimate and the fee proposal. If the selected A/E and its principal consultants have not been recently audited then the Contracting Officer should request an audit from the Division of Financial (DF). The General Counsel should be consulted if you anticipate difficult negotiations or items in the fee proposal that are not understood or controversial. The differences in the fee proposal should be carefully



evaluated. If the A/E misses something in their proposal make sure you inform them. You want to make sure that the A/E provides adequate re-sources to ensure that your project is successful.

6. Design Contract Award - After the selection of the A/E firm and conclusion of negotiations, the CO shall award the contract. The contract and the statement of work shall reflect any changes that were agreed upon during negotiations. The contract shall set forth the scope, the period of performance (i.e., the start and completion dates), a schedule of submissions, and method of payment. The contract shall reflect the A/E firm's assurance that it will provide a design that can be constructed within the Government's construction/renovation cost estimate.
7. Collecting Data on and Appraising Firms Qualifications – NIH shall maintain offices or permanent evaluation boards, or arrange to use the offices or boards of other agencies, to receive and maintain data on firms wishing to be considered for Government contracts. Each office or board shall be assigned a jurisdiction by its parent agency, making it responsible for a geographical region or area, or a specialized type of construction.

Qualifications Data - To be considered for architect-engineer contracts, a firm must file with the appropriate office or board the Standard Form 330, "Architect-Engineer and Related Services Questionnaire".

Data files and the classification of firms - Under the direction of the parent agency, offices or permanent evaluation boards shall maintain an architect-engineer qualifications data file. These offices or boards shall review the SF 330 filed, and shall classify each firm with respect to- location, specialized experience, professional capability, and capacity, with respect to the scope of work that can be undertaken.

Currency of files: Any office or board maintaining qualifications data files shall review and update each file at least once a year. This process should include:

- -Encouraging firms to submit annually an updated statement of qualifications and performance data on a SF 330.
- Reviewing the SF 330 and, if necessary, updating the firm's classification.
- -Recording any contract awards made to the firm in the past year.
- -Assuring that the file contains a copy of each pertinent performance report.
- -Discarding any material that has not been updated within the past three years, if it is no longer pertinent.
- -Posting the date of the review in the file.

Use of Data Files: Evaluation boards and other appropriate Government employees, including contracting officers, shall use data files on firms.

8. Selecting and awarding new A/E contracts under a JOFOC citation.
 - a. If sole source of a firm is required, the PO prepares a JOFOC and submits the JOFOC documentation along with the following to the CO:
 - Government estimate
 - SOW
 - RFCA Memorandum including RQM (see C-230 Funding Request)



- b. The CO/ A/E Construction Contracting Branch chief reviews the JOFOC and forwards it to the appropriate levels of authority for approval. The CO follows the procedures set forth by the JOFOC manual.
9. Design Contract Administration - Each OPDIV shall decide the appropriate key staff for any project team depending on complexity, cost, type of construction, etc. Key team members that may be involved in design projects are: Contracting Officer, Project Officer (COTR), Architect/Engineer, and Commissioning Agent (if required see Section 3-10).
- a. Monitoring Schedule, Scope, and Cost: In addition to review of the work it is standard practice for project officers to measure performance of design projects using management tools that evaluate progress with respect to schedule, scope and cost. By integrating the resultant data, useful information is derived which can be used to determine the percentage of work complete for payment purposes or to identify schedule problems, which require corrective action on the part of the contractor.
 - b. Submittals: The need for submittals shall be determined by the OPDIVs. (See Section 4- 3) The OPDIVs shall define the scope, process, elements, and documentation of the submittal approval activity.
 - c. Contractor Payments: Contractor progress or partial payments are usually made periodically (monthly) during the progress of the Project or at specific submittal authorized in the contract. The amount of payment is usually based upon the contract amount or an approved progress schedule, and project officer recommendation to the Contracting Officer for payment. From time to time, payments may be reduced for cause, as outlined in the FAR. Approval authority for progress payments rests with the Contracting Officer.
 - d. Final Payment: Contractor final payment is made at the end of the Project when the contractor has satisfactorily accomplished all provisions and requirements of the contract. The project officer addresses design issues and reports any deficiencies to the Contracting Officer. Approval authority of final payment rests with the Contracting Officer.

5-2-20 GUIDANCE AND INFORMATION

A. QUALIFICATION BASED SELECTIONS FOR A/E SERVICES

The Federal Acquisition Regulations (FAR) pertaining to A/E services were adopted to carry out the requirements of the Brooks Act (40 U.S.C. 1101-1104).

1. The regulations setting forth the procedures for choosing an A/E firm may be found in FAR subpart 36.6, "Architect Engineer Services." These procedures apply to the selection of all architectural and engineering services, including studies, surveys and analyses. The purpose of this section is to supplement the FAR subparts mentioned throughout the section and it should be read in conjunction with them.
2. The Short Selection Process described in the FAR may be utilized for contracts that do not exceed the small purchase limitation. The Board or the Chairperson of the Board can make the selection of the A/E.
 - a. Selection by the Board - The board shall review and evaluate architect-engineer firms in accordance with Board's functions, except that the selection report shall serve as the final selection list and shall be provided directly to the Contracting Officer. The report shall serve as an authorization for the Contracting Officer to commence negotiations in accordance with FAR 36.606.



- b. Selection by the Chairperson of the Board - When the board decides that formal action by the board is not necessary in connection with a particular selection, the following procedures shall be followed:
- (1) The chairperson of the board shall perform the functions required in FAR 36.602-3.
 - (2) The OPDIV's designated selection authority shall review the report and approve it or return it to the chairperson for appropriate revision.
 - (3) Upon receipt of an approved report, the chairperson of the board shall furnish the Contracting Officer a copy of the report, which will serve as an authorization for the Contracting Officer to commence negotiations in accordance with 36.606.
3. The CO shall make a public announcement of any planned A/E selection. The CO will provide a copy of the announcement to the Evaluation Board for the file. The specific requirements for publicizing Federal contract actions are set forth in the FAR. Announcements for design contracts expected to exceed \$25,000 must be published in the FedBizOpps, unless the contracts are to be procured through an existing task order or other procurement process through which the firms included in the procurement have been previously selected through full and open competition published in the FedBizOpps. The CO will determine the appropriate method and requirements for the public announcement for each project. The announcement should be published at least thirty days prior to the A/E selection, and the procurement schedule should take this requirement into consideration. For contracts expected to be \$25,000 or less, the CO shall as a minimum publicize the announcement in the vicinity of the project by displaying the notice at the procuring office and publishing it in the local daily newspaper. Affected professional societies in the area may be notified of the project consideration as well.

The public announcement should contain brief but clear statements consistent with the requirements of the FAR. It should include the project location, scope of service required, the relative importance of the significant evaluation factors presented in descending order, range of construction cost, type of contract proposed, estimated start and completion dates, and date by which responses must be received. Any other specialized requirements (energy conservation, phased design/construction, etc.) or limitations on eligibility (small business or Buy Indian set-aside) should also be indicated. The amount of funding available for the project should never be announced. The public announcement should define what information the A/E must provide before and during the selection process. The information to be provided may include the "Architect-Engineer Qualifications" on SF 330, if the A/E firm does not have a current SF 330 on file with the agency. The agency may also request additional information, but the public announcement should clearly define what information will be considered and what the evaluation criteria will be.

Take care, not restrict competition by applying criteria that only few firms can meet such as: "Only firms who have experience in designing and constructing a minimum of three biomedical research laboratories valued at \$100,000,000.00 each over the past three years will be considered for the design of the laboratory building. Remember A/Es are selected on their qualifications and the quality of their work not the quantity. An advertisement feature a requirement such as this is discriminatory against racial minorities and women because they more than likely would not have had the opportunity to design and construct three lab facilities valued at \$ 100,000,000.00 in the past three years. It is very unlikely that 99% of all the A/Es in the nation would qualify for the design of laboratory under this announcement. Special personnel requirements such as the need for a fire protection engineer should be noted in the public announcement.



B. DESIGN COMPETITIONS

A design competition is a method of awarding a design contract based on design excellence. A design contract should be awarded to the person or firm who submits the best design in the judgment of a jury in accordance with the rules of the competition. Design competitions are allowed under FAR 36.602 (b). When the Department approves the use of design competition, OPDIVs may evaluate firms on the basis of their conceptual design of the project. Characteristics that would make design competition an appropriate A/E selection method include:

- Unique situations exist involving prestige projects, such as the design of memorials and structures of unusual national significance;
 - Sufficient time is available for the production and evaluation of conceptual designs; and
 - The design competition, with its related costs, will substantially benefit the project.
1. Design competitions can be open or invited. They can be one or two stages. Open design competitions are simply competitions that are open to all design professionals - most frequently registered architects. Invited competitions are design competitions where a select group of design professionals – typically highly regarded or recognized architects are invited to submit a design on a project.
 - a. One-stage competitions are competitions where the winner is selected by the jury and awarded the contract to design the project. This is the most common type of competition used by the private sector and internationally. The competitor bears all the cost and risk in entering the design competition. The Vietnam Veteran’s Memorial is an example of a one-stage design competition.
 - b. A two-stage design competition is a competition that is usually open to all design professionals and the highest-ranking competitors are invited to compete in the second stage. It is common practice for the jury to give the second stage competitors a written critique of their design submission.
 2. The Competition Announcement The competition announcement should feature a short description of the project and its location. Key dates such as competition registration deadlines and submission deadlines should be mentioned. The name of the jurors should be stated. Eligibility requirements should be clearly stated. The competition announcement should be widely disseminated in professional journals and newsletters to maximize interest in the competition.
 - a. Competition Registration - Persons or firms interested in competing in the design competition should be registered and pay a nominal entry fee to defray the cost of the competition.
 - b. Eligibility - Competitions should open to architects and engineers who are registered in the United States.
 - c. Competition Security - To assure fair and impartial evaluations of competition submittals, names should not be used to identify competitors. Registrants for the competition should be assigned a number to assure anonymity. These numbers should be used throughout the competition process.
 3. The design competition document should consist of the competition rules, a site description, program of requirements, and competition submission format.

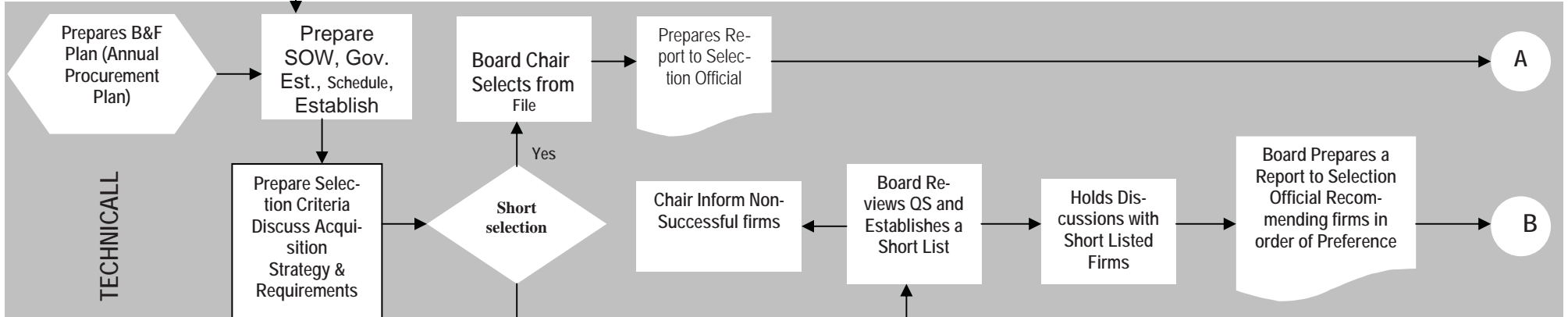


- a. Rules. The rules of the competition must be clear and enforceable. Date and time for the competition submission deadline must be stated in the document. Failure to meet the deadlines and other violations of competition rules should be grounds for disqualification.
 - b. Site Description. The site description should contain a site analysis with a detailed site plan showing topography and other physical features. The site and the areas surrounding it should be illustrated, photographed, and discussed. The availability of utilities should be illustrated and discussed.
 - c. Program of Requirements. The Program of Requirements (POR) is key to the success of the design competition. The POR should provide the goals and objectives of the project. It should have space requirements, functional relationships, and other design requirements. The POR should clearly state the design problem.
 - d. Drawings, Photographs and Maps. The NIH should provide drawings, site plans, maps and photographs necessary for the competitors to complete their submissions. The OPDIV may require the competitors to use the drawings and maps as base drawings or backgrounds for the sake of consistency in the presentation of submissions.
 - e. Submission Format. The size and number of boards or panels should be clearly stated. The OPDIV should establish the type of media permitted for the presentation of the submission. If written documents are required a format should be established.
4. Prizes and Honorariums: The overall budget should set aside funds for prizes and honorariums. There should be minimum funds set aside for three prizes. Honorable Mentions are non monetary prizes are awarded when in the judgment of the jury the submission is of such quality that it deserves recognition.
- If a two-stage competition is contemplated than monies should be set aside for honorariums to the short listed firms to offset the cost for preparing a stage two submission.
5. The Jury selects the prize winners. The Jury prepares a report to the OPDIV Selection Authority in accordance with the FAR recommending selection in order of preference. The results of the competition are made public.

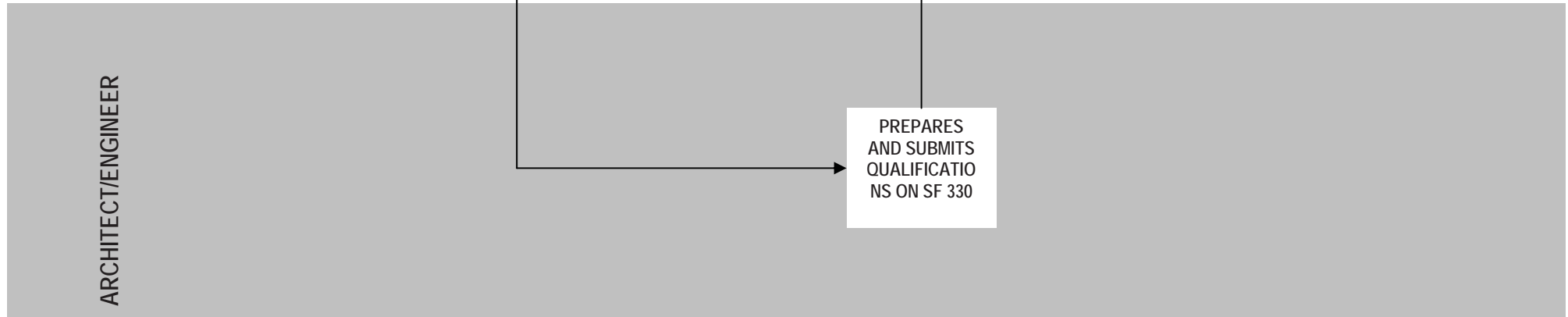
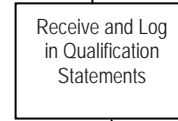
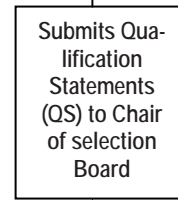
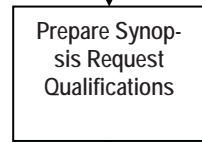




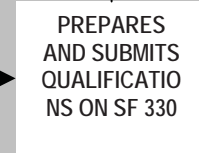
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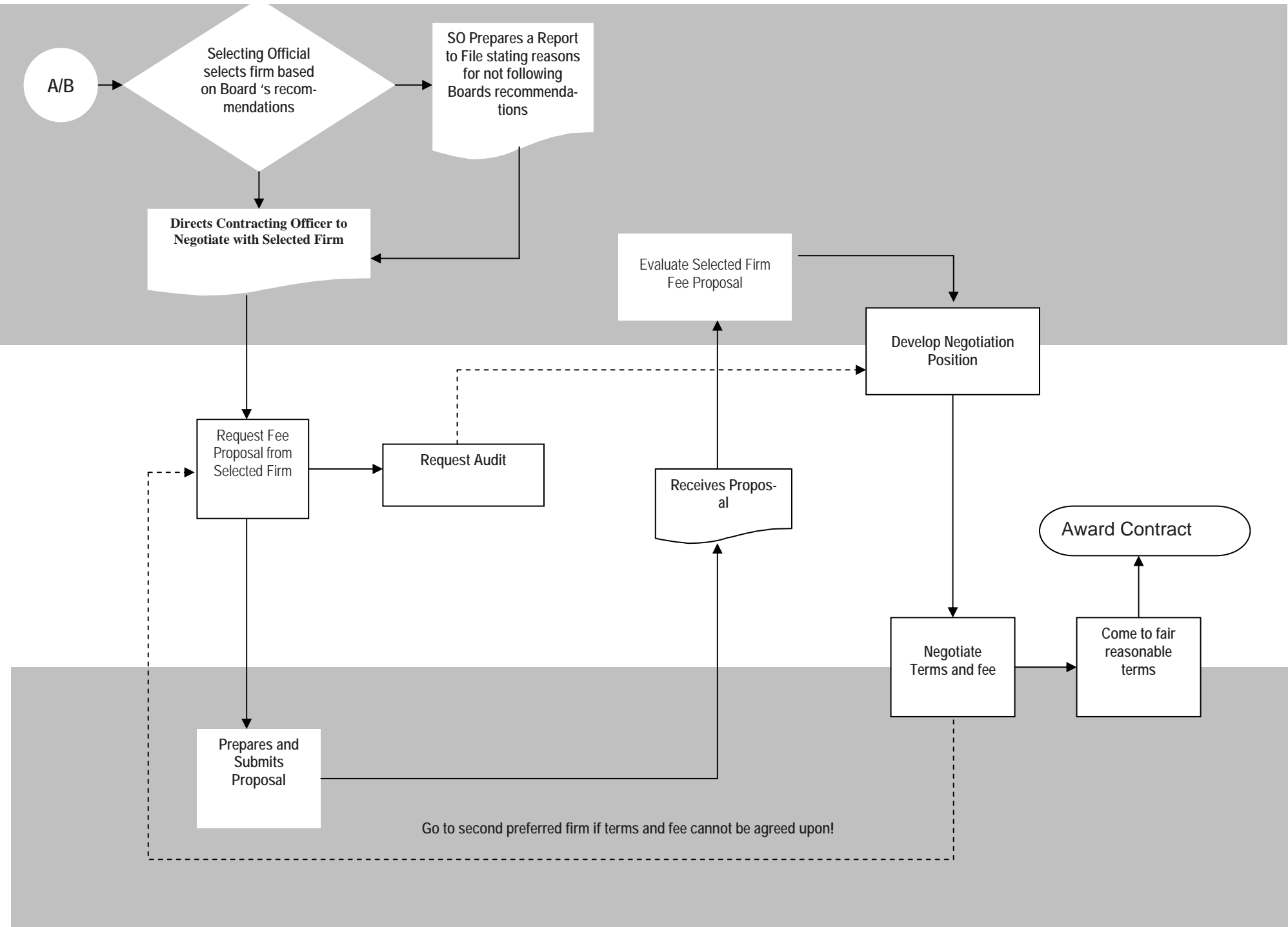


CONTRACTING OFFICER



ARCHITECT/ENGINEER







CHECKLIST TO AWARD ARCHITECT/ENGINEER DESIGN CONTRACT

1. PRIOR TO ADVERTISEMENT
 - a. Certify availability of funds (HHS 393) _____
 - b. Complete Program of Requirements (design criteria) _____
 - c. Develop A/E Statement of Work including time schedule _____
 - d. Develop estimate of facility construction costs _____
 - e. Develop estimate of A/E fee or costs _____
 - f. Develop management plan _____

2. A/E EVALUATION BOARD
 - a. Clear delegation of appointing authority _____
 - b. Appoint proper persons and numbers to serve as Board members _____
 - c. Appoint Board Chairman, an agency representative and a Recorder _____
 - d. Establish evaluation criteria. _____
 - e. Establish numerical weighting factors. _____

3. ADVERTISEMENT
 - a. Announce in Fed Biz Ops (Old: Commerce Business Daily) _____
 - b. Include clear statement of project _____
 - c. Do not include cost estimate _____
 - d. Include selection evaluation criteria in descending Order of importance _____
 - e. Emphasize special requirements _____

4. PROCEDURE OF THE EVALUATION BOARD
 - a. Establish pre-screening criteria and pre-screen A/E Firm fairly _____
 - b. All members shall evaluate all A/E firms. _____



- c. Minimize discussions on A/E firm qualifications _____
- d. Post all A/E firms scores _____
- e. Rank according to numbers of 1st, 2nd, 3rd and 4th place
 Votes not by numerical values _____
- f. Determine list of finalists _____
- g. Conduct equal time A/E firm interviews. _____
- h. Provide necessary information to the approving authority
 and obtain approval. _____
- i. Document all actions. _____

5. NEGOTIATIONS

Make certain the following items have been satisfied prior to negotiation meetings.

- a. Approval of A/E Selection by the approving authority. _____
- b. Funds are available _____
- c. Government Project Manager assigned _____
- d. Program of Requirements furnished to A/E Firm _____
- e. A/E Statement of Work furnished to A/E firm. _____
- f. A/E fee or costs estimated by government _____
 (Prefer A/E uses same format for estimate)
- g. Facility Construction cost estimate completed. _____

6. A/E CONTRACT AWARD

Upon successful negotiations, the following items must be satisfied:

- a. For Project where fees exceed \$100,000; conduct
 audit to confirm basis of figures used in negotiations. _____
- b. Document agreement of all parties on contract content
 including payment and time schedule. _____
- c. File one copy of contract with original signatures, and
 give two copies to the paying authority. _____



A/E Selection Criteria Guidance

Selection Criteria FAR 36.602-1a

Selection criteria are spelled out in the FAR 36.602-1a; however, the selection board is given some latitude. The evaluation criteria will be listed in the announcement, in descending order of importance. The following is the criteria found in the FAR.

- a. Professional qualifications necessary for satisfactory performance of required services;

Are the key members qualified to practice in their assigned disciplines?

Are they registered?

Do they have the necessary experience to do the job?

- b. Specialized experience and technical competence in the type of work required, including, where appropriate, experience in energy conservation, pollution prevention, waste reduction, and the use of recovered materials:

Does the team as a whole have the experience to design of the proposed building type?

What is the quality of the team's experience?

What is the success and performance of the buildings that they have designed?

How successful were their building designs in conserving energy?

How successful were their building designs in pollution prevention?

How successful were their building designs in waste reduction?

How successful were their building designs in the use of recovered material?

- c. Capacity to accomplish the work in the required time;

Does the team have the necessary resources to do the work?

What projects are in the pipeline that may compete with your project for resources?

Will they need to hire additional staff?

- c. Past performance on contracts with government agencies and private industry in terms of cost control, quality of work, and compliance with performance schedules. (Note: cost control, quality of work, compliance with schedules can not be adequately addressed in the qualification statements and should be addressed in the interview.)

Does the team have experience with federal, state or local governments?

What is the quality of the team's work? (Look for design, professional and trade society awards)

- d. Location in the general geographical area of the project and knowledge of the locality of the project; provided, that application of this criterion leaves an appropriate number of qualified firms, given the nature and size of the project; and

Where is the team located in relationship to NIH? (Note: The Washington Baltimore CMSA has one of the largest concentrations of A/Es in the nation.)

- e. Acceptability under other appropriate evaluation criteria.

Consider construction administration as an optional service.



Consider Equal Employment Opportunity as a selection criterion for the following reasons: Affirmative Action is a performance requirement of the contract under Executive Order 11246 or FAR 22.8- Equal Employment Opportunity (Contract Compliance). Sub Contracting Plans are used to enforce the equal opportunity provisions of the FAR; however, A/E selection is based on qualification and it is difficult to require a subcontracting plan after you selected the highest qualified firm based on their proposed team, which includes subcontractors. Do not resort to quotas. Let the market place dictate compliance.

Interview Criteria

The Board is required to hold discussions (interviews) with at least three of the most highly qualified firms regarding concepts and the relative utility of alternative methods of furnishing the required services. There is no rule that requires that interview follows the criteria for the qualification statements. Note item e: Acceptability under other appropriate evaluation criteria. If the evaluation criteria for interviews are different than that required for the qualification statements then it should be put into the public announcement. The following is recommended evaluation criteria that may be used to evaluate the interviews.

a. Management

How will the team be organized for the project?

Does the team have a quality control program?

What is the team's record on cost control and what is their ratio for cost of change orders to the total cost of the project?

(Note it should be 5% or less)

What teams record for on time performance?

b. Staff

Does the project manager have the knowledge, skills and ability to lead the project?

Do the team members have the knowledge, skills and ability to manage and produce the project?

Are all of the lead-disciplines licensed to practice in the state where the work is to be done?

Can they get reciprocity?

Has this team work together before?

c. Design

Does the team understand the scope of work? Be aware of hidden agendas where the team challenges the scope of work in an aggressive way. It is ok to question the scope to get a better understanding of the scope's intent; however, you don't want a team that will not follow the scope or the Government's instructions.

What is the teams approach to site planning issues?

What is the team approach to the overall design of the building? The pervious two questions are subjective.

Does the team have a subject matter expert to address specific design issues?

d. Contract Documents



What is the teams approach to contract documents? Be sure that the project manager knows what the contract documents are.

How are contract documents coordinated between the disciplines?

What is the quality of the firm and team's contract documents?

e. Construction Administration

How does the team conduct bid openings?

What is the team's experience with construction administration?

How does the team handle disputes between the Government and the construction contractor?

How does the team process shop drawings?

How does the team process field and change orders?

How does the team ensure open communications between the Government, the construction contractor and its self?





Sample Selection Evaluation Form

Ratings: Excellent = 4, Good = 3, Fair = 2, Poor = 1, and Unacceptable = 0
Rating times the weight = the score

Name & Location of Firm								
	Weight	Criteria	Score	Rating/Remarks	Score	Rating/Remarks	Score	Rating/Remarks
Qualifications		Staff Capability						
		Staff Registration						
		Staff Experience						
		Sub Total						
Experience		Experience. w/ Building Type						
		Quality of Experience.						
		Building Performance						
		Sustainable Design						
	Sub Total							
Past Performance		Federal Government						
		State Government						
		Local Government						
		Private Sector						
		Awards						
	Sub Total							
Capacity		Team Resources						
		Workload						
		Staff Availability						
		Sub Total						
Location		Wash Metro Area						
		Mid Atlantic Region						
		CONUS						
		Sub Total						
Other								
		Sub Total						
		Total						



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SECTION 5-3 STREAMLINE NIH A/E SELECTION PROCESS

5-3-00	Policy
10	Procedures
20	Guidance and Information (Reserve)
30	Reporting Requirements
X5-3-A	Interim A/E selection Report Form

5-3-00 POLICY

The selection of NIH architect/engineers (A/E) shall be in accordance with 48CFR36.6 or (FAR 36.6).

A. SELECTION AUTHORITY

The selection authority shall review the recommendations of the evaluation board and shall, with the advice of appropriate technical and staff representatives, make the final selection. This final selection shall be a listing, in order of preference, of the firms or teams considered most highly qualified to perform the work. If the firm or team listed as the most preferred is not the firm or team recommended as the most highly qualified by the evaluation board, the selection authority shall provide for the contract file a written explanation of the reason for the preference.

The selection authority shall not add firms or teams to the selection report. If the firms or teams recommended in the report are not deemed to be qualified or the report is considered inadequate for any reason, the selection authority shall record the reasons and return the report through channels to the evaluation board for appropriate revision.

All firms or teams on the final selection list are considered "selected firms or teams" with which the contracting officer may negotiate in accordance with 36.606.

The NIH A/E Selection Authority shall be the Director of the Office of Research Facilities Development and Operations approved by the Director of the National Institutes of Health.

B. CHAIR OF THE A/E NIH SELECTION BOARD

The Chairperson of the NIH A/E Selection Board provides oversight of the A/E selection process. The Chairperson of the NIH A/E Evaluation Board for all contracts will assist the Director of the Office of Research Facilities Development and Operations or designee in appointing the members of the board. The Chairperson will also recommend the assistance of other technical personnel (non-voting technical advisors) who may make a substantial contribution to the evaluation process.

The Chairperson of the NIH A/E Selection Board reviews and approves the short-list of firms or teams to be interviewed. The Chairperson shall be the Director of the Division of Property Management approved by the Director of the Office of Research Facilities Development and Operations.

C. EVALUATION BOARDS

The Evaluation Board for architect-engineer services shall be established according to FAR 36.602-2. The Evaluation Board shall consist of the Project Officer, his or her immediate supervisor and the Chairperson of the NIH A/E Selection Board.



Under the general direction of the head of the contracting activity, an evaluation board shall perform the following functions (FAR 36.602-3)

1. Review the current data files on eligible firms or team and responses to a public notice concerning the particular project.
2. Evaluate the firms or teams in accordance with the criteria.
3. Recommend to the Chairperson, firms or teams to be interviewed

D. EVALUATION CRITERIA

In accordance with FAR 36.602-1a; the following criteria is mandatory

1. Professional qualifications necessary for satisfactory performance of required services;
 2. Specialized experience and technical competence in the type of work required, including, where appropriate, experience in energy conservation, pollution prevention, waste reduction, and the use of recovered materials:
 3. Capacity to accomplish the work in the required time;
 4. Past performance on contracts with government agencies and private industry in terms of cost control, quality of work, and compliance with performance schedules.
 5. Location in the general geographical area of the project and knowledge of the locality of the project; provided, that application of this criterion leaves an appropriate number of qualified firms or teams, given the nature and size of the project; and
 6. Acceptability under other appropriate evaluation criteria.
- 6a. Equal Employment Opportunity EO 11246 and FAR 22.8

E. SELECTION BOARDS (PANELS)

The Chairperson of the NIH A/E Selection Board will establish an Ad Hoc A/E Selection Board for each architect-engineer contract acquisition. The A/E Selection Board shall consist of a minimum of three members. The members should be experienced design professionals in architecture and engineering. At least one member shall be a registered architect or engineer. The Project Officer shall chair the proceedings of the interview. The board may also include members representing the program users to be housed in the facility, operations and maintenance, agency planning and other specialized support functions. Under the general direction of the head of the contracting activity, an evaluation board shall perform the following functions (FAR 36.602-3).

1. Hold discussions (interviews) with at least three of the most highly qualified firms or teams regarding concepts and the relative utility of alternative methods of furnishing the required services.
2. Prepare a selection report for selection authority recommending, in order of preference, at least three firms or teams that are considered to be the most highly qualified to perform the required services. The report shall include a description of the discussions and evaluation conducted by the board to allow the selection authority to review the considerations upon which the recommendations are based.



F. INTERVIEW CRITERIA

The Board is required to hold discussions (interviews) with at least three of the most highly qualified firms or teams regarding concepts and the relative utility of alternative methods of furnishing the required services. There is no rule that requires that interview follows the criteria for the qualification statements. Note item 6: Acceptability under other appropriate evaluation criteria. If the evaluation criteria for interviews are different than that required for the qualification statements then it should be put into the public announcement. The following is recommended evaluation criteria that may be used to evaluate the interviews.

1. Management and Project Control
2. Staff
3. Design Approach
4. Contract Documents
5. Construction Administration
6. Pertinent Experience
7. Facilities

G. APPOINTMENT OF BOARD MEMBERS

The Director of the Office of Acquisitions shall approve all members of the A/E Evaluation and A/E Selection Boards with the concurrence of the Chairperson of the A/E Selection Board.

5-3-10 PROCEDURES

A. PUBLIC ANNOUNCEMENTS (Pursuant to FAR 36.601-1)

The Government shall publicly announce all requirements for architect-engineer services and negotiate contracts for these services based on the demonstrated competence and qualifications of prospective contractors to perform the services at fair and reasonable prices. The announcement is usually advertised in the FedBizOpps. The Government can also advertise in local newspapers or professional journals. If the Government wants to ensure adequate competition they may conduct an outreach and communicate directly with firms or teams; however, the outreach should be done only after the FedBizOpps advertisement has been published. Announce the selection criteria in order of importance. The A/E Selection Board and the Selecting Official cannot deviate from the order of importance. For example the Selection Official selects firm or team x that is the third selected firm or team on the list for having the best-cost control system; however, cost control is of minimum importance. The first and second selected firms or teams have grounds for a protest.

List all design disciplines required to do the work. If a fire protection engineer is required then that discipline should be listed. Be very clear on submittal requirements and due dates. If the qualification statements are due in to Office of Acquisition at 5:00 pm, then the announcement should read 5:00 pm local



time. The Contracting Officer receives and logs in the qualifications statements SF 330. See Exhibit X4-7A for an example of a FedBizOpps Announcement:

B. PROCESSING FEDBIZOPPS

The FedBizOpp announcement is prepared by the Project Officer and reviewed and approved by the contracting Officer and is sent to FedBizOpps by the Office of Acquisitions.

C. RECEIPT OF A/E QUALIFICATION STATEMENTS (SF 330)

The Office of Acquisitions will receive the Architect-Engineer Qualification Statements (SF 330) and certify that they are responsive to the requirements of the public announcement. The Office of Acquisitions will submit all responsive qualification statement to the Chairperson of the NIH A/E Selection Board for evaluation and selection.

D. EVALUATION OF A/E QUALIFICATIONS (Pursuant to FAR 36.602-3)

The Designated Project Officer shall review, evaluate and rank all A/E qualification statements SF 330s and prepare a report recommending a short list of A/E firms or teams that are in the competitive range. The Project Officer will submit it to his or her immediate supervisor. The supervisor will review the report for consistency, fairness, reasonableness and compliance with the FAR. Upon the supervisor's concurrence the report is submitted to the Chairperson of the A/E Selection Board for approval.

E. DISCUSSIONS (INTERVIEW) (Pursuant to FAR 36.602-3 (c))

The Project Officer acting as the chair of the A/E Selection Panel will notify all A/E firms or teams in the competitive range that they are to be interviewed and make arrangements to schedule the interview. The Project Officer shall submit all pertinent documents such as scopes of work, reports, surveys, etc. to each firm or team that is to be interviewed. The short listed A/E firms or teams should given sufficient time to prepare for the interview. All firms and teams shall be allowed the same amount of time for the interviews and the interviews should be conducted at the A/E's facilities.

F. SELECTION (Pursuant to FAR 36.602-4)

At the conclusion of the last interview the A/E Selection Panel shall rank the firms or teams in the order of preference. The Project Office or Panel Chair will telephone the Chairperson of the NIH Architectural Selection Board and inform them of the Panel's reasons for selection. The Chairperson of the NIH of the A/E Selection Board will record the reasons for section on the Telephonic Approval Form (X4-7-B). The Chairperson of the A/E Selection Board will concur with Panel's reasons for selection and submit the Telephonic Approval Form to the Section Official for Approval. Once the Selection Official signs the Telephonic Approval it constitutes the selection of the A/E firm or team. The Contracting Officer is authorized to commence negotiations. The Telephonic Approval is an interim selection report required by FAR 36.602-3(d). The Panel Chair will prepare a final selection report to the Selection Official for the Chairperson of the NIH A/E Selection Board signature.

G. SHORT SELECTION PROCESS (Pursuant to FAR 36.602-5)

The short selection process is for A/E contracts that do not exceed the simplified acquisition threshold.

There are two ways to apply the short selection process.



Selection by the Board (Pursuant to FAR 36.602-5(a))

The board shall review and evaluate architect-engineer firms in accordance with 36.602-3, except that the selection report shall serve as the final selection list and shall be provided directly to the contracting officer. The report shall serve as an authorization for the contracting officer to commence negotiations.

Selection by the Chairperson of the Board (Pursuant to FAR 36.602-5 (b))

When the board decides that formal action by the board is not necessary in connection with a particular selection, the following procedures shall be followed:

1. The chairperson of the board shall perform the functions required in 36.602-3.
2. Selection authority shall review the report and approve it or return it to the chair-person for appropriate revision.
3. Upon receipt of an approved report, the chairperson of the board shall furnish the contracting officer a copy of the report, which will serve as an authorization for the contracting officer to commence negotiations.

H. COLLECTING DATA ON AND APPRAISING FIRMS QUALIFICATIONS (Pursuant FAR 36.603)

1. Establishing Offices

The Chairperson of the NIH A/E Selection Board shall maintain offices to receive and maintain data on firms wishing to be considered for Government contracts.

2. Qualifications Data

To be considered for architect-engineer contracts, a firm must file with the appropriate office or board the Standard Form 330, "Architect-Engineer and Related Services Questionnaire".

3. Data files and the classification of firms

Under the direction of the Chairperson of the A/E Selection Board shall maintain an architect-engineer qualifications data file. The Chairperson of the A/E Selection Board shall review the SF 330 filed, and shall classify each firm with respect to- location, specialized experience, professional capability, and capacity, with respect to the scope of work that can be undertaken.

4. Currency of files

The Chairperson of the A/E Selection Board shall review and update each file at least once a year. This process should include:

- a. Encouraging firms to submit annually an updated statement of qualifications and performance data on a SF 330.
- b. Reviewing the SF 330 and, if necessary, updating the firm's classification.
- c. Recording any contract awards made to the firm in the past year.



- d. Assuring that the file contains a copy of each pertinent performance report.
- e. Discarding any material that has not been updated within the past three years, if it is no longer pertinent.
- f. Posting the date of the review in the file.

5. Use of Data Files

Evaluation boards and other appropriate Government employees, including contracting officers, shall use data files on firms.

5-3-30 REPORTING REQUIREMENTS

The Telephonic Approval shall serve as an interim selection report. Pursuant to FAR 36.602-3(d) the Panel Chair will prepare a final selection report to the Selection Official for the Chairperson of the NIH A/E Selection Board signature. The Project Officer shall provide a copy of all supporting documentation to the Contracting Officer and the originals to the Chairperson of the NIH A/E Selection Board.



Interim Report
A/E Selection
Project Name

Name of Person Calling

Date and Time

A/E Selected – Name and Address of Company

Number of Firms Interviewed

Reasons for Selection

Approval by the Chairperson of the NIH A/E Selection Board

Date and Time

Approval of the Selection Authority

Date and Time





SECTION 5-4 ORDERING A/E SERVICES FROM EXISTING A/E IDIQ CONTRACTS

5-4-00	Policy (Reserved)
10	Procedures
20	Guidance and Information (Reserved)
30	Reporting Requirements (Reserved)

5-4-10 PROCEDURES

A. ORDERING A/E SERVICES FROM EXISTING IDIQ CONTRACTS.

1. The PO completes the RFCA. The RFCA includes the following:
 - Justification for A/E Selection, when ordering from a multi-award contract.
 - A/E Statement of Work
 - Government estimate.
 - RFCA Memorandum including RQM (see C-230 Funding Request).
2. The PO submits the RFCA to A/E & Construction Contracting Branch.
3. The CO/CS reviews the RFCA package(s) for completeness.
4. The CO/CS prepares the task order file (including the RFP) and sends the RFP to the contractor.
5. The CO/CS receive the task order proposal and provide a copy to the PO for technical evaluation.
6. The PO reviews the A/E's proposal, compares the proposal to the government estimate, and completes a technical analysis, if necessary. If the PO determines that the A/E's proposal can be accepted as submitted, the PO notifies the CO in writing that acceptance of the A/E's proposal is recommended, if necessary.
7. If the PO determines that the A/E's proposal cannot be accepted as submitted, the PO notifies the CO that negotiation is required. Provides Technical Analysis (if required)
8. The PO and the CO conduct negotiations as per the FAR 36.6.
9. The CO/CS completes the task order file including the summary of negotiations and submits the file for Pre-Award review.
10. The CO issues a Record of Call and provides a copy to the PO.





SECTION 5-5 DESIGN – CHANGE ORDER

5-5-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)

5-5-00 POLICY

This Section defines the process for handling and implementing a design change order (modifications). Change orders should be avoided and judiciously issued, particularly if they change scope, budget or schedule of the project. Maintaining scope, cost and schedule is a very important performance measure on HHS' scorecard and should not be taken lightly. The HHS Real Property Asset Management Plan (RAMP) states the following: *“As signatories to the FPAA, the OPDIV Board Member, OPDIV Project Director, and OPDIV Project Manager are held accountable for delivering the approved project within the defined scope, budget and schedule.”* It is very important that the project's requirements are fully defined before awarding an A/E contract.

A. APPLICABILITY

This procedure applies to design projects at NIH owned or leased facilities.

B. RESPONSIBILITIES

- The PO is responsible for incorporating contract changes and obtaining review and approval from NIH organizations identified in Section 5-7 that are applicable to the project.
- If a Facility Project Approval Agreement (FPAA) is required for this project and there is any increase beyond the reported Schedule or Budget, the PO and supervisor together with ORF management shall revise FPAA for approval from HHS. (Typically applies to large size project).
- If is a Capital Project, the PO is responsible for the requirements set forth in the FeMop and LeMop policy.

5-5-10 PROCEDURES

1. The A/E submits a written request to the PO for a change to the design project. The PO reviews the proposed change for its merits and determines whether it is required. If the requested change is required, the PO reviews the project budget with supervisor and determines whether the existing contract can be modified to accommodate the change.
2. If the requested change is outside the scope of the project a new contract is needed unless a Justification for Other than Full and Open Competition is provided.
3. All change order projects require PO: to review budget, schedule and impact of the change order and request approval from Supervisor prior to initiating a RFCA change order process. Substantial changes typically result from changes in program requirements (which will require a Project Plan update, a request for additional FFS and funding prior to proceeding with the request).
4. If the change is substantial, and it is a Capital Project: 1st PO reviews Project Management Plan – “Change Order” discusses Change Order request with the CO.



5. If the requested change can be handled by modifying the existing contract, the PO prepares the RFCA and submits it to procurement. The RFCA includes the following:
 - Government Estimate
 - SOW
 - A brief description of why a change is necessary (unforeseen site conditions, program change, impact of other construction project, etc)
 - RFCA Memorandum including RQM (funding authorization) the Change Order Number shall be shown in funding request memorandum
6. If the design changes impacts: life safety, fire prevention, environmental or health and safety requirements (but not limited to), the PO shall consult with applicable authorities and request review and approval prior to issuing RFCA to CO.
7. Emergency Change: If the change is an emergency, or is time-critical, the PO notifies the CO, and the CO makes a unilateral modification to the contract. In the meantime, the PO prepares the RFCA that includes items listed in 5-5-10.1 and forwards it to the CO.
8. Non Emergency/ Not Substantial Change: If the change is not an emergency, and is not substantial, the PO initiates unilateral/bilateral modification process by preparing a RFCA that includes items listed in 5-5-10.1
 - a. The PO notifies the CO, and the CO requests a cost proposal from the A/E.
 - b. The A/E submits the proposal to the CO.
 - c. The CO forwards the proposal to the PO.
 - d. The PO evaluates the proposed change and prepares a technical analysis, if necessary. If the PO determines that the proposal can be accepted as submitted, the PO notifies the CO in writing that acceptance of the proposal is recommended, if necessary.
 - e. If the PO determines that the proposal cannot be accepted as submitted, the PO notifies the CO that negotiation is required. The PO and CO hold the negotiations as per FAR 36.6.
 - f. If an agreement on the price is not reached, the CO may make a unilateral modification to the contract or seek other alternatives.
 - g. If the PO, CO, and A/E agree on the price, the CO makes a bilateral modification to the contract.
9. Non Emergency/ Substantial Change. If the change is not an emergency but is substantial, the PO initiates RFCA change order, modification process; substantial changes typically result from changes in program requirements (which will require a Project Plan update).
 - a. The PO prepares the RFCA and forwards it to the CO. The CO prepares the solicitation and forwards it to the A/E.
 - b. The A/E submits the proposal to the CO.
 - c. The CO forwards the proposal to the PO.
 - d. The PO evaluates the proposal to determine if it is acceptable. If the proposal is not acceptable, the PO returns proposal to the A/E for revisions.
 - e. If the proposal is acceptable, the PO prepares a technical analysis, if necessary. If the PO determines that the proposal can be accepted as submitted, the PO notifies the CO in writing that acceptance of the proposal is recommended, if necessary.
 - f. If the PO determines that the proposal cannot be accepted as submitted, the PO notifies the CO that negotiation is required. PO and CO conduct negotiation as per FAR 36.6.
 - g. If an agreement on the price is not reached, the CO may make a unilateral modification to the contract or seek other alternatives. When agreement is reached, the CO modifies the existing contract accordingly.



- h. After negotiations, CO will take action regarding issuance of the modifications to the contract.
- i. If an agreement on the price is not reached, the CO may make a unilateral modification to the contract or seek other alternatives such as the “5-6 A/E Contractor’s Dispute Resolution”.
- j. If the PO, CO, and A/E agree on the price, the CO makes a bilateral modification to the contract.

5-5-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Section 1-12 Project Plan
- Section 5-2 Architect Engineer Selection Process
- Section 5-6 Contractor Dispute Resolution

B. RELEVANT DOCUMENTS

- Federal Acquisition Regulations
- JOFOC Manual

C. RECORDS

- FPAA – if applicable
- FeMop- if applicable
- LeMop- if applicable
- Scope of Work
 - -Program of Requirements -if applicable
- Independent Government Cost Estimate
- Funding document- RFCA
- A/E Fee Proposal
- Technical Evaluation (if required)
- Record of Negotiation – If applicable
- Record of Contract Action Award





SECTION 5-6 A/E CONTRACTOR DISPUTE RESOLUTION

5-6-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)

5-6-00 POLICY

This Section defines the steps required to process and resolve disputes.

A. APPLICABILITY

This procedure applies to all design projects in ORF.

B. RESPONSIBILITIES

- The Project Officer's (PO) responsibilities include: reviewing the Request for Equitable Adjustment (REA), determining if it is valid, notifying the Contracting Officer (CO) of the validity of the REA, initiating a modification if it is supported by the REA, notifying his/her supervisor of the potential for a claim, working with the CO in negotiating or litigating the claim, requesting additional funds to cover the settlement agreement amount, and recommending approval of final payment.
- The CO's responsibilities include: receiving the REA from the contractor and forwarding it to the PO, notifying the contractor as to the validity of the REA, notifying legal counsel of possible litigation, leading the negotiation and litigation process on claims, modifying the contract, requesting that PO obtain additional funding for final payment.
- The PO's supervisor's responsibilities include notifying the management chain of command, as appropriate, that there is a potential for a claim to be filed on the project if the REA is denied.

5-6-10 PROCEDURES

1. The PO receives the contractor's REA from the CO and reviews it and the supporting material for merit.
2. The PO requests additional information as required to determine if the REA is valid and the amount reasonable.
3. If the documentation supports a modification to the contract, the PO notifies the CO and initiates a modification as appropriate.
4. The CO negotiates an equitable adjustment with the contractor, if necessary. The CO modifies the contract according to terms of the equitable adjustment. Upon final resolution, either through litigation or negotiation, the CO requests final payment and release of claims.
5. If necessary, the PO initiates requests for additional funding to cover final agreed contract costs.
6. The PO reviews final payment and release of claims with the settlement agreement and recommends approval if payment is consistent with the agreement.
7. The CO distributes final payment to the contractor and requests release of claims.



8. If the documentation does not support a modification to the contract, the PO notifies the CO that the REA should be denied. The CO notifies the contractor that the REA is not valid. The PO notifies his/her supervisor of potential for a claim. The supervisor notifies the management chain of command as appropriate. The CO notifies the legal counsel of possible litigation as necessary.
9. If a claim is filed, the CO and PO develop and implement a resolution strategy. The CO takes the lead in managing the negotiation and litigation process.

5-6-20 GUIDANCE AND INFORMATION

A RECORDS

- Request for Equitable Adjustment
- Contractor Claim
- Funding Document



SECTION 5-7 DESIGN MANAGEMENT, DESIGN REVIEW AND THE PERMIT PROCESS

5-7-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)
5-7-00	POLICY

This Section defines the design review process of design documents (i.e. construction drawings, specifications, etc.) and the coordination requirements for all design projects that require A/E design services. The NIH has the overall responsibility to provide Government oversight for the design of an HHS/NIH facility. The NIH review and comment on the Architect/Engineers (A/E) design submittal is vital to the success of the project.

The A/E is contractually responsible to design the project within the specified scope, budget and schedule. This is not only a Government requirement, but it is a common practice within the industry. The NIH shall ensure that the A/E fulfills their contractual responsibility to deliver a design of the approved HHS facility within scope, budget and schedule. This section applies to design-bid-build and design-build delivery systems.

A. APPLICABILITY

1. Permit Review Board Reviews: All projects, with an overall cost of **\$250,000 or more and, as follows**, must be submitted to the **Permit Review Board (PRB)** for review, *regardless of cost*:

Architecture – any project with changes in egress path

Structural – any project requiring structural design other than simple equipment or furnishings anchorage

Mechanical - changes involving the installation of Air Handlers using outside air and Exhaust fans; pumping systems which hydronically separate the facility from the campus loop (bridge-tender); any changes in mechanical air handling systems other than just ductwork and diffuser relocations.

Electrical – any project changing egress lighting; any project with more than two additional branch circuits any project with circuitry over 20A., 120V. and all three phase circuits; any project with modifications to distribution system; any project that adds normal or emergency load beyond what is currently used in same project space.

BSL/ABSL 3 or BSL/ABSL 4 laboratories

All vivarium projects

B. ADDITIONAL APPLICABLE REVIEWS:

1. All projects regardless of size must be reviewed and approved by the Office of Research Services (ORS) Division of Fire Marshall (DFM) per the *NIH Manual Issuance 1370 – Fire Protection & Life*



Safety Building Permit Process,

<http://www1.od.nih.gov/oma/manualchapters/management/1370/main.html>

2. All project involving **laboratory designs** must be reviewed and approved by the ORS Division of Occupational Health and Safety (DOHS) and other members of the Permit Review Board identified during the project development phase.
3. All projects in the **Clinical Center Complex (CCC)** which consist of Bldg. 10, CRC, 10A, INVIVO (NMR) and 10B must be reviewed and approved by the ORF Office of Hospital Physical Environment (OHPE) for compliance with the Joint Commission on Accreditation of Healthcare Organization (JCAHO) guidelines. The procedures for this process are outlined under Section 3-10 of the FDM, *Clinical Center Complex (CCC), Building 10 Interim Life Safety Measures (ILSM), Construction Risk Assessment (CRA)*.
4. Properties eligible for National Register of Historic Places: Consult with the *NIH Historic Preservation Officer*, at DTR, ORF if project involves any effect or modifications to the following historic districts and buildings that are eligible for the National Register:
 - 4.1 On the NIH Bethesda Campus:
 - NIH Historic Core District
 - NIH Officer Quarters District
 - Convent of the Sisters of Visitation, Bldg. 60
 - The Wilson Estate, Bldg 15K
 - George Freeland Peter Estate, Bldgs. 16 & 16A
 - NIH Historic Core, Buildings 1, 2, 3, 4, 5, 6 & 8
 - Officers' Quarters, Buildings 15B1, B2, C1, C2, D1, D2, E1, E2, F1, F2, G1, G2, H & I, the Surgeon General's House and the NIH Director's House
 - Memorial Laboratory, Bldg 7
 - The National Library of Medicine (strong historical significance, but not 50 years old), Bldg 38

All new construction must be reviewed by the NIH Historic Preservation Officer, The Maryland State Historic Preservation Officer and NCPC Historic Preservation Officer to determine their effect on historic property.

- 4.2 At the Rocky Mountain Laboratory Historic District in Hamilton, Montana:
 - Buildings 1, 2, 3, 5, 6, 7, A, 9 & 11.

5. Architectural Design Review Board (ADRB): This requirement applies to new buildings, or projects that impact or alter the any aspect in the exterior and major public spaces of existing and new building. At 15% and 35% design submission, the PO shall schedule a review meeting with the Chairperson of the ADRB in Division of Facilities Planning (DFP) for review and approval.

6. Division of Facilities Planning (DFP):

Room Numbering: If the design requires assignment of room numbers, or the modification of room numbers, the PO shall provide floor plans to the DFP at the 35% and 95% design stages. Prior to submitting plans to DFP, PO shall verify that the Plans include proposed room numbering, in accordance with the *NIH Room Numbering Guidelines*.

Staging and Mobilization Plan: Before finalizing the design, the PO submits a Site Selection Request form, "Staging and Mobilization Plan" to the DFP for use of temporary space to use for staging during construction, if necessary.



National Capital Planning Commission (NCPC): All NIH projects in the National Capital listed on Federal Capital Improvement Program must be reviewed by NCPC

Facility Numbers for Equipment: The A/E shall, before the completion of 95% submission, obtain Facility Numbers for the new and replaced equipment from the Facility Administration Branch and include them on all equipment schedules for labeling of the equipment by the contractor during construction. A/E shall also include all existing facility numbers for equipment to be demolished on the demolition drawings.

7. Landscaping: If the PO determines the project will involve the removal of trees, the PO contacts the Landscape Architect in the Facilities Stewardship Branch for approval.

C. FOR PROJECTS BELOW **\$250,000**,

The Program Manager/Project Officer is responsible for handling technical reviews

D. THE PERMIT REVIEW BOARD (PRB)

1. The Permit Review Board (PRB) consists of members from the following offices:

- - ORF Division of Technical Resources (DTR)
- - ORF Division of Facilities Planning (DFP)
- - ORF Division of Environmental Protection (DEP)
- - ORF Division of Property Management (DPM)
 - i. ORF Facilities Stewardship Branch (FSB), DPM
 - ii. Utilities Operation Branch (UOB), DPM
- - ORF Office of Hospital Physical Environment (OHPE)
- - ORS Division of Occupational Health and Safety (DOHS)
- - ORS Division of Radiation Safety (DRS)
- - ORS Division of the Fire Marshal (DFM)
- - ORS Division of Physical Security Management (DPSM)
- - Center for Information Technology (CIT)
- - Office of Facility Management, Clinical Center (CC)

E. COORDINATION:

- -Hardware & Card Key System: The PO coordinates hardware (locks, keys, and card key systems) with NIH Locksmith Chief and CCTV with the AO and the Division of Physical Security Management, ORS to determine the building's security requirements during design. Individual ICs may enhance the security to their individual areas. The AO is informed and made aware of their responsibility, which is to issue a "DELPRO" request during construction for installation of locks.
- -LAN/telecommunications: The PO notifies the AO to coordinate the LAN/ telecommunications and security access requirements and during design. The PO shall ensure that the A/E ascertains and advises PO if there is any Security, Data, LAN, or Telecommunications cabling which may be affected by the planned construction activity. PO and A/E shall review and coordinate LAN/telecommunications requirements with CIT.
- -Commissioning: During design, a specialist provides input identifying criteria and critical requirements for validating system and equipment performance. The PO ensures that the A/E includes commissioning plan criteria and requirements into specifications and drawings.



- - Variance Request to the NIH Design Requirements Manual (DRM): If a design requires a variance to the DRM, the PO submits the Variance Request form to the Variance Coordinator, DTR in accordance with the requirements in the procedure in the DRM.

F. RESPONSIBILITIES

1. The **PO** is responsible for managing the overall design review process by:

- -Informing PRB and other reviewing offices outlined in B.1 through B.7, of upcoming design submissions.
- -Establishing A/E Design Submission Requirements and Deliverables based on feedback from the PRB and other reviewing offices.
- -Reviewing all A/E submissions to ensure that they are complete as per the contract requirements and the A/E Checklist found in Appendix A
- -Disseminating appropriate number of design documents to the appropriate reviewing offices for review and comment.
- -Obtaining review comments from the reviewers and forwarding the comments to A/E.
- -Once NIH review comments have been provided to the A/E, ensure that A/E responses are provided to the original reviewing offices before A/E proceeds to subsequent submissions [Non compliance to NIH design requirements ...denial of invoices].
- -Obtaining required reviews and approval from the PRB reviewing offices and other applicable organizations (such as the National Capital Planning Commission, SHPO, local jurisdictions, etc.)
- -Once design is complete, obtaining approval/signatures from the PRB.

2. The PRB and other reviewing offices are responsible for:

- -Providing timely responses to the PO.
- -Reviewing design documents/submissions.
- -Providing review comments to the PO within the established review period.
- -Reviewing A/E responses to the review comments and providing timely back-check responses (to the PO).
- -Assisting the PO in obtaining resolution to their review comments when a conflict or dispute arises.

G. ACCEPTANCE

The A/E and PO shall obtain all permits and acceptances in accordance with 5-7-10-D

5-7-10 PROCEDURES

The NIH determines the number of design submittals based on size and complexity of the project. The Project Officer (PO) holds and chairs design review meetings with technical and program review staffs at each specified design submittal stage. The A/E and the PO shall certify that the project is within the scope, schedule and budget per the approved FPPA when applicable at each submittal. If a submittal is found to be deficient and does not meet contractual obligations, the Government must reject the submittal. The A/E will revise and resubmit the submittal at no additional cost to the Government.



A. PRE-DESIGN: ESTABLISH DESIGN SUBMISSION REQUIREMENTS & REVIEW PROCESS:

1. Upon determining the Scope of Work of the project the PO must:

Initiate an e-mail (or via Constructware) notifying the PRB coordinators, both primary and alternate (Exhibit X5-7-B) and any additional reviewing offices of upcoming project. Exhibit X5-7-D Project Plan/Develop Review Matrix (outlined in Exhibit X5-7-B) must be attached to this e-mail.

For buildings either on or eligible for the Historical Register, consult with the NIH Historic Preservation Officer regarding historic preservation requirements.

Establish the number of design submissions and review period based on size, complexity and budget of the project. On small projects, a minimum of 10 working days of review time and two submissions (not including the final submission) are recommended.

POR

- 15% - design concept
- 35% - design development
- 50% - design progress
- 75% - design progress
- 100% - design construction documents
- Final - construction documents

Compile all applicable A/E Design Directives/Requirements such as the Design Requirement Manual (DRM), the NIH CAD Standards, etc. and any building specific requirements such as moratoriums, integrity guidelines, etc.

2. The PRB and other reviewing offices must provide a response to the PO (via e-mail) within **3 calendar days** upon receipt of initial e-mail notification of upcoming project. All reviewing offices must inform the PO:

- If their office will be reviewing the design documents
- Required number of copies
- Location where the hardcopies are to be sent.

This information will assist the PO in establishing the AE Deliverables (such as the number of hardcopies, submission levels). [If project is of a larger size, longer review period is required to ensure thorough review].

B. DESIGN: DESIGN REVIEW REQUIREMENTS AND DESIGN REVIEW PROCESS:

1. Once the design contract has been awarded by the CO, the PO schedules the design kick-off meeting and shall invite the customer and any required reviewing offices (identified in Exhibit X5-7-B above) to the meeting. The meeting is to verify the scope of work, and ensure that the A/E understands the NIH project requirements.
2. Upon receiving the design submission, the PO verifies that the submission is complete and includes all the contracted deliverables (specs, estimate, calculations, etc.) are complete as per the contract requirements and the A/E Checklist found in Appendix A
3. If a submission is found to be deficient and does not meet contractual obligations, the PO as the representative of the Government, must reject the submission. The PO returns it to the A/E with the deficiencies outlined and directs the A/E to revise and resubmit the submission at no additional cost to the Government. The PO does not proceed with the review process until all components are provided.



A/E invoices should not be approved for payment until the A/E has met their deliverables; denial of A/E submission is justification for denial of payment.

4. Once the design document has been accepted by the PO as complete, the PO disseminates copies to all the reviewing offices, both internal and outside organizations such as the NCPC, etc.
5. When necessary, the PO holds design review meetings with program review staff at specified design submission stage. The A/E and the PO shall certify that the Project is within the scope, schedule and budget per the approved FPPA
6. [After the 15% submission, and prior to final design, the PO submits a request for obtaining temporary space to use for staging during construction (if required).]
7. At 35% and 100% submission - PO managing a Capital Project is required to prepare a package for the Division Director and ORF Director for sign off.
8. All reviewing offices must document their review comments on the *ORF/ORS Design Review Comment Form* (See Exhibit X5-7-B) which are then sent to the PO within the agreed upon review time-frame. If the PO considers that any assigned member in the PRB is not complying with stipulated time frame and the project is being delayed, the PO's Supervisor should 1st attempt to resolve the issue(s) with the PRB reviewer's supervisor. If no resolution is achieved it is then recommended that the PO's supervisor request a meeting with the Dispute Resolution Board.
9. PO receives written review comments from all reviewing offices and verifies that comments are within the scope of the project. If a submission has serious/numerous errors and/or omissions, the reviewer should recommend that the PO reject the submission and require that the A/E correct deficiencies and resubmit the documents (at no cost to the government). If the PO decides to proceed in approving a submission that a PRB reviewer recommends rejecting, the PO must have concurrence from his/her supervisor. The PO would remain responsible for ensuring that concerns raised by the PRB are addressed and resolved.
10. All review comments are forwarded to the A/E for review and response by the PO. The A/E must accept or reject comments within 5 working days. The A/E responses are documented on the *ORF/ORS Design Review Comment Form*, along with a response code. The form is sent back to the PO (in the original excel format). All comments must be noted with one of the following Response Code:
 - A: Agree. And will note how he is going to incorporate.
 - D: Do Not Agree. Shall provide written explanation
 - I: Information Only. No action required.All accepted comments must be incorporated into the next design submission.
11. The PO receives the ORF/ORS Design Review Comment Form with the review comments and the A/E's response(s), in its original excel format. The PO shall ensure that the A/E has addressed all review comment and forwards them to the original reviewing offices for back-checking. The PO as required may set up a meeting to resolve issues.
12. The original reviewing office reviews and provide a response within the agreed upon timeframe. All comments are to be noted as:
 - Accepted and the A/E is authorized to proceed to the next submission and to invoice work through that submission, or
 - Rejected for reasons specified and the A/E is required to resubmit. Approval of payment would not be authorized until resubmission was received, reviewed and found acceptable.
13. If any reviewer takes exception to the responses given to their comments by the A/E, and/or if the A/E and/or PO cannot reach resolution with the reviewer, the PO should take the lead and resolve issues through meetings with the reviewer and A/E. If they are still unable to reach a resolution, the PO may contact the Chief, TSB, DTR for assistance in resolving any outstanding issues.
14. All comments are forwarded back to the A/E for incorporation into the next submission.
15. The above steps B.2 through B.14 are repeated for each design submission. Failure to incorporate comments would be a cause for rejecting a submission.
16. The PO monitors the design progress against the Project Plan.



17. At the appropriate major submission or design change, the PO/designated representative obtains the approval of the customer representative.
18. For the final submission, the PO checks to ensure that all comments are resolved and requirements of the Project Plan are met.

C. COMMENT REVIEW - DISPUTE RESOLUTION BOARD:

1. If the A/E and reviewer cannot reach a resolution, the PO shall address the issue(s) with their supervisor so that the supervisor could attempt to resolve the issue(s) with the PRB reviewer's supervisor. If the Supervisor cannot reach an agreement, then they shall request for a Dispute Resolution Board Meeting with the DTR, TSB Chief.
2. The Dispute Resolution Board shall consist of upper management representatives from ORF and ORS as required. The PO, A/E and PRB reviewer who made the comment shall present both arguments; however, these individuals will not be voting members on the resolution board. The PO documents the decisions made by the Board. If the A/E's position is upheld, the PO may initiate a variance request and forward it to the DTR for the record. If the A/E's position is not upheld, the PO directs the A/E to comply with the reviewer's comment.

D. DESIGN ACCEPTANCE

1. The PO shall obtain a Fire Marshal's signature and permit for all projects.
2. The PO shall obtain signature of other reviewing offices.
3. Final acceptance must be obtained from the Contracting Officer in accordance with FAR 46.502 before the IFB is issued or project commences with construction.

5-7-20 GUIDANCE AND INFORMATION

A. ROLES AND RESPONSIBILITIES

Architect/Engineer - The A/E shall submit completed progress designs in accordance with their contract to the Government for review and comment. The A/E shall not proceed to the next phase of project design until written approval of the current submittal is received from the approval authority.

Project Officer - The Project Officer (PO) serves as the Contracting Officer's Technical Representative (COTR). The PO leads, directs and controls the Government's activities as they relate to the design review of an HHS facility. The PO is the focal point for the Government and as the COTR, the PO serves as the Government's authorized representative with respect to communicating and distributing comments to the A/E. The PO holds and chairs design review meetings with OPDIV program and technical staff to evaluate design review comments. The PO determines if the review comments are within the scope of the A/E's contract. If comments are not within the scope, the PO will reject the comments and does not forward them to the A/E.

OPDIV Technical Review Staff - The OPDIVS are encouraged to select senior design discipline experts who have experience in preparing contract documents to assist the PO in reviewing and evaluating the A/E's work. The technical review staff should be very familiar with the A/E scope and contract, and should be allowed to interact with the A/E when it is appropriate. Comments should be recommendations and suggestions to ensure the success of the project. Comments that are directives should be avoided unless items within the design submittal are not in accordance with the scope of contract.

OPDIV Program Staff - Care and deference must be given to OPDIV Program staff as the end-users, customers, and clients. However, they are not the A/E's customer or client. The A/E's client is the Contract-



ing Officer (CO) or the COTR acting as the CO's designated representative. OPDIV program staffs are generally not familiar with the A/E contract and their comments may be programmatic without consideration of A/E - Government contractual obligations. Care must be taken to ensure the OPDIV program staff's comments are within contract scope. OPDIVs are encouraged to establish internal procedures to ensure that the PO is the communications conduit between the program staff and the A/E.

B. RELATED PROCEDURES

- Section 1-12 Project Plan
- Section 5-3 Architect Engineer Selection Process

C. RECORDS

- Design Review Comments and Responses
- Environmental Protection checklist (if applicable)
- Dispute Resolution decision, if applicable
- Project Specific Variances to the NIH Design Requirement Manual (if applicable)
- Copy of latest approved design documents (may include POR, studies, plans, specifications, cost estimates, etc.)
- Meeting minutes (if applicable)
- Architectural Design Review Board approval (ADRB), if applicable
- Fire Marshal's Permit
- Chief of the Technical Support Branch's acceptance
 - -Division of Occupational Health and Safety's acceptance
- Chief Engineer's Final Acceptance.
- Staging / Mobilization Plan (if applicable)



NIH POLICY MANUAL
1370- Fire Protection and Life Safety Building Permit Process
Issuing Office: OD/OM/ORS/DFM- Telephone: 301-496-0487
Release Date: 3/11/2008

1. Explanation of Material Transmitted: This new chapter outlines policies and procedures, and describes individual and organizational responsibilities for obtaining approval from the NIH Division of the Fire Marshal (DFM) before beginning any construction, renovation or major equipment installation in any NIH facilities located at the NIH Bethesda, Maryland; NIHAC Poolesville, Maryland; NCI-Ft. Detrick Frederick, Maryland; NIEHS Research Triangle Park, North Carolina; and Rocky Mountain Laboratories Hamilton, Montana campuses. This chapter does not apply to NIH leased space and facilities.

2. Filing Instructions:

Insert: NIH Manual Chapter 1370 dated 3/11/2008

PLEASE NOTE: For information on:

- Content of this chapter, contact the issuing office listed above.
 - NIH Manual System, contact the Office of Management Assessment, OM, on (301) 496-4606.
 - On-line information, enter this URL: <http://www1.od.nih.gov/oma/manualchapters/>
-

A. Purpose:

This chapter ensures all NIH facilities are designed and constructed to meet the International Building Code (IBC), the National Fire Codes, the NIH Design Requirements Manual, other nationally recognized codes and standards (e.g., The Joint Commission standards for the accreditation of the NIH hospital) and the Public Buildings Amendments of 1988 (Public Law 100-678), "Compliance with Nationally Recognized Codes."

B. Background:

Proper fire protection and life safety is ensured in construction projects, renovations or major equipment installations through oversight by the local fire safety "Authority Having Jurisdiction" (AHJ) at various stages of the project. The NIH Division of the Fire Marshal (DFM), Office of Research Services (ORS), as the designated AHJ for all fire-safety matters at the NIH, accomplishes this mission through: (1) design reviews, (2) fire protection construction submittal reviews and (3) construction inspections, both in-progress and at the completion of the project.

C. Policy:

This policy establishes the requirement for any individual or organization planning construction, renovation, or major equipment installations to obtain the approvals outlined below before any work commences for any and all covered projects. Specific fire protection requirements for the design or planning phase, the construction phase, and the project completion phase are outlined in Appendices 1 - 5.

Violations of this policy may result in disciplinary action, the severity of which will vary depending upon the nature of the infraction.

D. References:

1. International Building Code (IBC): available in hard copy in DFM, ORS.
2. National Fire Protection Association (NFPA), National Fire Codes: available in hard copy in DFM, ORS.
3. NIH Design Requirements Manual (<http://orf.od.nih.gov/PoliciesAndGuidelines/DesignPolicy/>.)



4. Public Buildings Amendments of 1988 (Public Law 100-678), "Compliance with Nationally Recognized Codes." (http://www.gsa.gov/gsa/cm_attachments/GSA_BASIC/PUBLIC_BUILDINGS_ACT_OF_1959_R2F-a9-m_0Z5RDZ-i34K-pR.doc).
5. NIH Manual Chapter 1743, "Keeping and Destroying Records," Appendix 1, NIH Records Control Schedule: <http://www1.od.nih.gov/oma/manualchapters/management/1743/>

E. Definitions:

1. **Authority Having Jurisdiction (AHJ):** The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure. At the NIH the AHJ has been designated as the Director, Division of the Fire Marshal or his/her designee.
2. **Design Review:** The process of review and approval of the scope of work, plans and specifications for construction, alteration and renovation.
3. **Fire Protection Construction Submittal Review:** The process of review and approval of a contractor's working drawings, calculations and material data for fire protection related system and equipment installations.
4. **Major Equipment Installation:** The installation of a new piece of equipment that may have an adverse impact on existing features of fire safety. This includes equipment that requires a new penetration be made through existing fire rated walls and floors for piping and conduit; equipment that may impair or block existing sprinkler protection due to the size and location of the equipment with respect to existing sprinkler heads; and equipment that may increase ambient noise to a level where existing fire alarm indicating devices can no longer be heard.

F. Responsibilities:

1. The Director, Division of the Fire Marshal will:
 - a. Serve as the designated local fire safety AHJ for the NIH regarding all fire safety matters. In the absence of the Director, he/she may designate another senior DFM staff member to serve as the AHJ. The AHJ is responsible for granting approval before any construction, renovation or major equipment installation is begun in any NIH facilities located at the NIH Bethesda, Maryland; NIHAC Poolesville, Maryland; NCI-Ft. Detrick Frederick, Maryland; NIEHS Research Triangle Park, North Carolina; and Rocky Mountain Laboratories Hamilton, Montana campuses. This chapter does not apply to NIH leased space and facilities.
 - b. Review and approve design documents, Statements of Work, and fire protection construction submittals for construction, renovation, or major equipment installations in accordance with Section G. Reviews will be completed by the DFM within 14 calendar days from the date the complete review package is received by the DFM. If design documents, Statements of Work, and fire protection construction submittals are disapproved by the DFM, the DFM will provide a reason to support this determination.
 - c. Conduct pre-occupancy/final inspections for compliance with the IBC, the National Fire Codes, and the NIH Design Requirements Manual in accordance with Section G.
 - d. Establish and maintain fire safety policies and procedures for the NIH.
 - e. Assess and enforce equivalent fire protection systems or measures in existing facilities when activities for construction create code deficiencies.



2. The Office of Research Facilities Development and Operations will:
 - . Submit for DFM review and approval design documents, Statements of Work, and fire protection construction submittals for construction, renovation, or major equipment installations in accordance with Section G.
 - a. Ensure the IC and/or OD Offices do not occupy newly constructed or renovated space prior to having the DFM conduct a pre-occupancy/final inspection in accordance with Section G.

3. All Institutes/Centers (ICs) and OD Offices will:

- . Submit for DFM review and approval design documents, Statements of Work, and fire protection construction submittals for construction, renovation, or major equipment installations in accordance with Section G.
- a. Ensure they do not occupy newly constructed or renovated space prior to having the DFM conduct a pre-occupancy/final inspection in accordance with Section G.

G. Procedures:

1. **Design or Planning Phase:** Any individual or organization including but not limited to the Office of Research Facilities Development and Operations, the Center for Information Technology or other Institute or Center personnel engaged in construction, renovation, or major equipment installation must submit design and/or planning drawings, specifications, and Statements of Work for review to the DFM based on the size and scope of the project as described below.
 - a. **Projects having an estimated cost of construction over \$25,000.** All design submissions must be reviewed by the NIH DFM.
 1. Per the NIH Design Requirements Manual all designs for new structures (including designs for new wing additions or other additions to existing structures that modify the height and area or change the use group) and modifications, renovations, and alterations that include the addition or modification of fire protection systems or egress components must have a "Fire Protection Engineering Analysis" performed by a registered Fire Protection Engineer at the concept and final design phase.
 2. All final design submissions must be approved by the NIH DFM prior to being released for bid.
 3. The review process is valid for only one year. Thus, a previously approved project that has not been activated for more than one year must be sent for a new review by the DFM to ensure compliance with current codes and the NIH Design Requirements Manual before it is considered for release. Reviews of previously approved projects will be expedited by the DFM and will be completed within 7 calendar days from the date the complete review package is received by the DFM. If the design documents are disapproved by the



DFM, the DFM will provide a reason to support this determination.

4. If a design is amended during the advertisement/award period, the DFM must review the scope of the amendment and provide written verification that the amendment does not adversely impact fire protection or life safety and will not result in a code compliance issue.
 5. Only DFM approved final design documents must be used on the construction site. DFM final design approval will consist of a signed stamp on the cover sheet of the final design documents.
 6. To assist the Project Officer in complying with this policy, a list of the usual project elements reviewed by the DFM to ensure code compliance (but not a complete list) is included in Appendix 1.
- b. **Projects having an estimated cost of construction under \$25,000.** The Statement of Work or design documents (if any) must be reviewed by the DFM if the project includes any of the project elements described below:
1. Construction, demolition or removal of walls. The DFM will ensure compliance with the NFPA 101 Life Safety Code and will determine any impact on sprinkler systems;
 2. Removal or installation of doors. The DFM will ensure compliance with the NFPA 101 Life Safety Code and will determine if any doors must be fire rated;
 3. Relocation, removal or installation of sprinklers and standpipes. The DFM will ensure compliance with NFPA 13 and NFPA 14;
 4. Relocation, removal or installation of fire alarm devices. The DFM will ensure compliance with NFPA 72;
 5. Penetration of walls or floors. The DFM will determine if required fire barriers are being penetrated and if fire stopping is required;
 6. All final Statements of Work or final design documents that require a DFM review based on the aforementioned elements must be approved by the DFM prior to procurement or being released for bid; and
 7. Only the DFM approved Statement of Work or final design documents must be used on the construction site. DFM final Statement of Work approval will consist of a signed stamp on the cover sheet of the final Statement of Work.

2. Construction Phase

- a. **Change Orders:** Any individual or organization including but not limited to the Office of Research Facilities Development and Operations, the Center for Information Technology or other Institute or Center personnel engaged in construction, renovation, or major equipment installation, must submit to the DFM for review any proposed change order affecting the project elements identified in Appendix 1. Change order reviews will be expedited by the DFM



and will be completed within 7 calendar days from the date the complete change order package is received by the DFM. If the change order is disapproved by the DFM, the DFM will provide a reason to support this determination.

- b. **Required Fire Protection Construction Submittal Reviews:** Any individual or organization including but not limited to the Office of Research Facilities Development and Operations, the Center for Information Technology or other Institute or Center personnel engaged in construction, renovation, or major equipment installation, must provide to the DFM fire protection construction submittals concerning the project elements outlined in Appendix 2.
 1. All fire protection construction submittals must be reviewed and approved by the DFM prior to installation; and
 2. Only the DFM approved fire protection construction submittals including but not limited to sprinkler and fire alarm shop drawings must be used on the construction site. DFM fire protection construction submittal approval will consist of a signed stamp on the cover sheet of the shop drawings and/or product data.

- c. **Required In-Progress Construction Inspections:**
 1. Any individual or organization including but not limited to the Office of Research Facilities Development and Operations, the Center for Information Technology or other Institute or Center personnel engaged in construction, renovation, or major equipment installation must request DFM construction inspections for all projects that contain any of the project elements outlined in Appendix 3. These items must be inspected prior to “close-in.”; and
 2. Depending on the scope of the project there may be many “in-progress” inspections before the final inspection.

- d. **Required Fire Protection System Inspections and Acceptance Tests:** Any individual or organization including but not limited to the Office of Research Facilities Development and Operations, the Center for Information Technology or other Institute or Center personnel engaged in construction, renovation, or major equipment installation must request DFM construction inspections for all projects which contain any of the project elements outlined in Appendix 4. These items must be inspected and tested prior to scheduling a final inspection of the entire project.

3. Project Completion Phase

- a. **Required Fire Protection Pre-Occupancy/Final Inspection:** Any individual or organization including but not limited to the Office of Research Facilities Development and Operations, the Center for Information Technology or other Institute or Center personnel engaged in construction, renovation, or major equipment installation must obtain



a DFM pre-occupancy/final inspection approval memorandum for all projects prior to final payment to the construction contractor. (See Appendix 5).

H. Records Retention and Disposal:

All records (e-mail and non-e-mail) pertaining to this chapter must be retained and disposed of under the authority of the [NIH Manual Chapter 1743](#), "Keeping and Destroying Records," Appendix 1, NIH Records Control Schedule, Section 2600 Procurement, Property and Supply Management, B. Public Buildings and Space including all other items that apply.

NIH e-mail messages: NIH e-mail messages (messages, including attachments, that are created on the NIH computer systems or transmitted over the NIH networks) that are evidence of the activities of the agency or have informational value are considered Federal records. These records must be maintained in accordance with current NIH Records Management guidelines. Contact your IC Records Officer for additional information.

All e-mail messages are considered Government property, and if requested for a legitimate Government purpose, must be provided to the requester. Employees' supervisors, the NIH staff conducting official reviews or investigations, and the Office of Inspector General may request access to or copies of the e-mail messages.

E-mail messages must also be provided to the Congressional Oversight Committees, if requested, and are subject to the Freedom of Information Act requests. Since most e-mail systems have back-up files that are retained for significant periods of time, e-mail messages and attachments are likely to be retrievable from a back-up file after they have been deleted from an individual's computer. The back-up files are subject to the same requests as the original messages.

I. Management Controls:

The purpose of this chapter is to provide guidance to NIH personnel for obtaining the required NIH Division of the Fire Marshal approvals before beginning any construction, renovation or major equipment installation projects.

1. **Office Responsible for Reviewing this Chapter:** Through this manual issuance, the DFM is responsible for ensuring that management controls are implemented and working.
2. **Frequency of Review:** Ongoing.
3. **Method of Review:** The DFM will maintain oversight and ensure compliance with this policy by assessing documentation obtained through their routine fire protection and life safety surveys of NIH facilities as well as by monitoring DFM monthly performance data in conjunction with the ORFDO project status database.
4. **Review Reports:** Reports are sent to the Associate Director for Research Services; Associate Director for Research Facilities Development and Operations; and the Deputy Director for Management, NIH. Issues of special concern will be brought immediately to the attention of the Associate Director for Research Services.



Appendix 1 - PROJECT ELEMENTS EXAMINED DURING DESIGN REVIEWS

PROJECT ELEMENT	AREA OF DFM REVIEW
New or Modification of an Existing Fire Pump	Submit preliminary design calculations, equipment location, piping diagrams.
Building Structure	DFM must verify the structural fire resistance meets the requirements of the International Building Code (IBC) based on the IBC's height and area limits. DFM will verify the adequacy of fire resistive materials proposed for application to structural steel.
Fire Suppression Systems: Sprinkler work involving the alteration or addition of sprinklers; or new (or modified) wet chemical (kitchen hood), CO ₂ , or other suppression systems.	Submit preliminary design calculations, points of tie-in, equipment specifications.
Fire Alarm System modification or addition	Submit system and device layout diagrams, riser diagram, equipment specifications and catalog data.
Underground Fire Mains and/or Fire Hydrants	Submit points of tie-in, equipment specifications, design piping layout diagrams.
Fire Extinguisher(s)/Cabinet(s)	Review Fire Extinguisher(s) size and type of agent as well as placement (travel distance) per NFPA 10 and NIH DP&G requirements.
Fire Door(s)/Assembly(ies)	Review Fire Door(s)/Assembly(ies) ratings as well as proper hardware per NFPA 80.
Fire Damper(s)	Review Fire Damper(s) ratings as well as proper installation details per NFPA 90A.
Exterior Site Work	Review exterior site work to ensure fire hydrant and fire department connection locations are accessible and fire department access routes/fire lanes are not impeded.
Floor plan modifications and/or additions which affect required <i>means of egress and exit</i> requirements, the addition, deletion, moving or penetration of smoke or fire barriers and rated shafts, as well as, changes in occupancy use groups.	Submit floor plans with rated barriers identified and occupancies shown. As a practical guide only, submit all projects involving: new structures/additions, wing/floor renovations, multiple lab module renovations, lab/office conversions, and renovations where walls or shafts are added/moved/removed.
HVAC Modifications	Submit system layout diagrams, riser diagrams, fire/smoke damper locations to ensure proper duct enclosure and/or equipment to maintain fire barrier ratings. Any revisions to a smoke control system must be reviewed.
Temporary enclosures which affect required <i>means of egress or exit</i> requirements.	Submit floor plans with required <i>means of egress or exit</i> requirements shown to ensure proper egress is maintained. As a practical guide only, submit all projects involving temporary structures which affect required <i>means of egress or exit</i> requirements. This includes temporary construction walls, asbestos abatement enclosures, temporary exits and doors.



Revised or new lighting plans.	Submit lighting plans to ensure proper emergency illumination of the egress paths, including exit signs.
--------------------------------	----------------------------------------------------------------------------------------------------------

Appendix 2 -CONSTRUCTION PHASE PROJECT ELEMENTS

PROJECT ELEMENT	CRITERIA FOR APPROVAL
Fire stopping Material	Underwriters Laboratories (UL) listed fire stopping material and products cited must be specifically listed for the intended use and have the proper hourly rating.
Spray-On Fireproofing Material	UL listed cementitious material with the proper application thickness shown for the intended fire resistance rating.
Fire Door(s)/Assembly(ies) - existing installations/ replacements. (New installations are reviewed for location)	UL listed, the DFM will verify: a) proper hourly rating for intended use. b) hardware is UL listed or meets NFPA 80. c) certification for fire rated glazing and maximum size.
Fire Damper(s)	UL listed, the DFM will verify: a) does not exceed the maximum listed size. b) leakage rating (if combination fire/smoke type). c) proper listed application. d) installation details are in accordance with SMACNA®.
Fire Wall System(s)	Meets UL listed design criteria (shown on approved contract drawings).
Flammable Liquids Cabinet(s)	UL listed and provided in every laboratory module.
Fire Pump(s) and Fire Pump Controller(s)	UL listed. Submit catalog data, shop drawings, calculations, piping diagrams, and certified pump curve(s).
Fire Suppression and Standpipe Systems - Sprinkler work involving the alteration or addition of four or more sprinklers, standpipes, wet chemical, and/or CO ₂ , .	Submit equipment, piping plans and hydraulic calculations per NFPA 13, NFPA 14, NFPA 17A, and NFPA 12 (as applicable).
Fire Alarm System(s)	Submit equipment catalog data, shop drawings of point to point wiring diagrams and device installation drawings indicating conduit runs and wiring color code scheme on a floor plan location drawing. Include backup



	battery calculations.
Underground Fire Main(s) and Fire Hydrant(s)	Submit equipment and piping layout drawings.
Smoke Control System modifications	Submit proposed changes.

Appendix 3 -IN-PROGRESS INSPECTION

PROJECT ELEMENT	SCOPE/FOCUS OF DFM IN-PROGRESS INSPECTION
Fireproofing Material	Inspect conformance to listed installation instructions including verification of proper depth of material before wall installation or other construction that covers the fireproofing. DFM's inspection is concerned with the area of coverage and the removal of material for attachments to the steel – the contractor is required to engage an independent testing company to check depth and adhesion of the fireproofing. (Material which will not be concealed can be inspected at the final inspection but the P.O. should allow time for corrective actions for any deficiencies found.)
Firestopping Material	Inspect conformance to listed installation instructions including verification of proper depth of material before wall installation or other construction that covers the firestopping. (Material which will not be concealed can be inspected at the final inspection but the P.O. should allow time for corrective actions for any deficiencies found.)
Sprinklers and Standpipes	Inspect sprinkler piping for proper size, spacing, hangers before the ceiling is installed. This inspection will normally be performed after the as-built sprinkler drawings have been received. (If done after ceiling installation the contractor will have to remove tiles near every sprinkler head to permit this verification.)
Fire dampers	Fire dampers installed at duct penetrations of shafts must be initially inspected before the shaft is closed in since there are items within the shaft which would not be accessible after the shaft is closed up. (The damper drop test, however, must be performed after all work is complete.)
Shaft wall systems	The inner layer of core board must be inspected before the outer layer(s) of sheetrock are installed.
Underground piping	Thrust blocks must be inspected before they are buried.



Appendix 4 - REQUIRED FIRE INSPECTION SYSTEM INSPECTIONS AND ACCEPTANCE TESTS

PROJECT ELEMENT	SCOPE/FOCUS OF DFM INSPECTION AND TESTING
Sprinklers and Standpipes	<p>If there was new underground piping installed the DFM must witness the flushing required by NFPA 24. Fire hydrants must be flow tested.</p> <p>The DFM must be invited to witness the flushing of the sprinkler and standpipe piping required by NFPA 13 and 14 but if not available the test can be witnessed by the P.O. or a P.O. designee.</p> <p>The DFM must be invited to witness the hydrostatic testing of the sprinkler and standpipe piping required by NFPA 13 and 14 but, if not available, the test can be witnessed by the P.O. or a P.O. designee.</p> <p>For a pre-action or other sprinkler system involving an interface with the fire alarm system, the suppression system must not be tested until the fire alarm system is being tested.</p>
Fire Alarm	<p>The DFM must witness a test of every new/relocated device impacted by the project. The test will include all new/relocated sprinkler alarm and supervisory devices.</p> <p>The test must include interface with other systems controlled by the fire alarm system such as duct detector shutdown of an air handler.</p> <p>The test will also verify proper interaction with security hardware/systems if this is part of the project.</p> <p>The fire alarm as-built drawings must be provided to the DFM before the test for verification.</p> <p>The P.O. must not schedule this test until the contractor has performed their own initial, preliminary test of the system.</p>
Fire Pump	<p>The DFM must witness a test of every new/relocated fire pump in accordance with the requirements of NFPA 20, with the test being performed by a manufacturer's representative.</p> <p>The P.O. must not schedule this test until the contractor has performed their own initial, preliminary test of the fire pump.</p>
Kitchen Fire Suppression System	<p>Simulated discharge of the agent must be part of the test (usually a gas cylinder discharging with balloons placed over the discharge nozzles).</p>



	<p>Shut off of power and fuel supplies must be verified.</p> <p>Monitoring by the fire alarm system must be verified.</p>
Gaseous Fire Suppression System	<p>A room integrity (leakage) test must be performed before the final acceptance test is scheduled. This test must be witnessed by the DFM.</p> <p>Simulated discharge of the agent must be part of the test (usually a gas cylinder discharging with balloons placed over the discharge nozzles).</p> <p>Shut off of power and any other required actions must be verified.</p> <p>Monitoring by the fire alarm system must be verified.</p>

Appendix 5 - REQUIRED FIRE PROTECTION PRE-OCUPANCY/FINAL INSPECTION

INSPECTION ELEMENT	SCOPE/FOCUS OF DFM INSPECTION
Fireproofing Material	Inspect conformance to listed installation instructions including verification of proper depth of material.
Fire Wall System(s)	Inspect conformance to listed installation instructions.
Flammable Liquid Cabinet(s)	Inspect conformance to listed installation instructions and presence of one or more in all laboratories using chemicals.
Fire Extinguisher(s)/Cabinet(s)	Inspect item(s) for conformance to NFPA 10 requirements as well as NIH DP&G requirements.
Fire Doors/Frames	Proper installation and operability per the requirements of NFPA 80.
Fire Dampers	Proper installation and successful drop test.
Sprinkler Systems	All escutcheons installed, no sprinklers painted. Validation of as-built record drawings, hangers - if not performed earlier – usually for labs with no ceiling.
Exit signs	Installed per contract, not obstructed by other equipment.
Emergency lighting	Installed per contract, verify not on any switches.



Interior finishes	Comply with the NFPA 101 Life Safety Code.
Electrical wiring	Comply with NFPA 70.
Exits and exit access	Required width, door swing per the NFPA 101 Life Safety Code.



PERMIT REVIEW BOARD (PRB) COORDINATORS

Division	Group Name	Location Bldg #/Room #	Primary Rep.	Contact Info	Alternate Rep.	Contact info
OFFICE OF RESEARCH FACILITIES (ORF)						
Division of Technical Resources Historic Preservation Officer	DTR	13/211	Neetha Varghese Angela Watson	301-594-3327	Tracie Washington	301-496-2705
Division of Environmental Protection	DEP	13/	Jim Carscadden Michelle Coley	301-451-6466 301-496-7775	Ed Pfister Kenny Floyd	301-496-7775 301-496-3537
Division of Facility Planning	DFP	31/	Walter Armstrong	301-496-5037		
Division of Property Mgmt. (DPM) Facilities Stewardship Branch	FSB	13/	Jim Lewis	301-435-2047	Ramin Zandpour	301-594-6534
Utilities Operation Branch	UOB		Greg Leifer	301-402-2100	Dan Moses	301-402-2848
Building Mgmt. Team	BMT		Jimmy Ray Smith	301-496-5083	Donna Phillips	301-496-5083
Grounds Maintenance Team	GMT		Lynn Mueller	301-496-4817		301-496-4817
Technical Support Team (TST)	TST		Rob Spetzler	301-435-6501	Vilas Sawant	
OFFICE OF RESEARCH SERVICES (ORS)						
Division of Occupational Health and Safety Community Health Branch, OSHB (Pest Mgmt.)	DOHS CHB	13/	Dr. Randy Larsen Herb Jacobi	301-451-5805 301-496-4294	Rand Mortimer Trevor Lubbert	301-402-2682 301-496-4294
Division of Radiation Safety	DRS		Adel Baryoun	301-496-5774	Nancy Newman	301-496-5774
Division of the Fire Marshal	DFM		Sam Denny	301-496-0487	J.P. McCabe	301-496-0487
Division of Physical Security Mgmt.	DPSM		Lou Klepitch	301-402-1973		
CENTER FOR INFORMATION TECHNOLOGY (CIT)						
Center for Information Technology	CIT		Anthony Trang	301-594-7411	Marcus Trevino	301-594-9462
FOR BUILDING 10 ONLY						
??? Office of Facility Mgmt, CC (for CC space only)	CC		Jim Wilson	301-496-2862	Ray Bowen	301-496-2862
ORF Office of Hospital Physical Environment	DPM/OHPE		Tony Francis	301-594-6472		
ORF Facility Mgr.			Carl Watson Rob Spetzler John Samssock/Angelo Parker	301-496-9428		
CC Maintenance Team						



Memorandum of Agreement
Office of Research Facilities
Permit Review Process

The Office of Research Facilities (ORF) is responsible for stewardship of the design, construction, maintenance and operations of NIH facilities. One of ORFs primary responsibilities in this role is to help ensure that research is conducted in state-of-the-art facilities that are safe, efficient and fully support the NIH mission. This is partially achieved by development of design policies and guidelines that are unique to NIH operations and use of technical reviews to validate project compliance with applicable building codes, standards and guidelines.

ORFs Permit Review Process as identified in the Quality System Manual (QSM) (<http://qualtrax.od.nih.gov/Quality/ASP/Default.asp?PageID=10000500>) is the technical review tool used to provide the checks and balance necessary in helping to ensure that all projects meet established technical requirements.

Technical Reviews are conducted by members of the Design Review Board (DRB) which include Organization and Subject Matter Experts based on the nature of the work performed. General DRB membership includes ORF and Office of Research Services (ORS) representatives as follows:

1. ORF Division of Technical Resources (DTR)
2. ORF Division of Facilities Planning (DFP)
3. ORF Office of Hospital Physical Environment (OHPE)
4. ORF Facilities Stewardship Branch (FSB)
5. ORF Division of Environmental Protection (DEP)
6. ORS Division of Occupational Health & Safety (DOHS)
7. ORS Division of Radiation Safety (DRS)
8. ORS Division of the Fire Marshal (DFM)
9. ORS Division of Physical Security Management (DPSM)
10. NIH Center for Information Technology (CIT)
11. CC Office of Facility Management (OFM)

Specific technical review requirements that support ORFs stewardship and Permit Review Process follow.

ORF's Permit Process applies to all projects with an overall cost of **\$250,000** or more and the following, **regardless of cost:**

- A. 1.1-Architecture – any projects with changes to the egress path; any changes in buildings listed or are being considered for the Historical Register; (changes to the exterior and major public spaces of existing buildings must be reviewed by the ADRB).
- 1.2 - Structural – any project requiring structural design other than simple equipment or furnishings anchorages.
- 1.3 - Mechanical – changes involving the installation of Air Handlers using outside air and Exhaust Fans; pumping systems which hydronically separate the facility from the campus loop (bridge-tender).
- 1.4 - Electrical – any project changing egress lighting; any project with more than two additional branch circuits; any project with circuitry over 20A., 120V. and all three phase circuits; any project with modifications to distribution system or high/medium voltage switchgear and Automatic Transfer Switches, generators; any project that adds normal or emergency load beyond what is currently used in same project space.



Memorandum of Agreement
Office of Research Facilities
Permit Review Process

1.5 All BSL/ABSL 3 or BSL/ABSL 4 laboratories.

1.6 All vivarium projects.

- B. All projects regardless of size must be reviewed and approved by the ORS DFM, per the NIH Manual Issuance 1370 - Fire Protection & Life Safety Building Permit Process (<http://www1.od.nih.gov/oma/manualchapters/>)
- C. All projects involving laboratory designs must be reviewed and approved by ORS DOHS and other members of the DRB identified as part of the project development phase.
- D. All projects in the Clinical Center Complex (CCC) must be reviewed and approved by ORF/OHPE for compliance with the Joint Commission on Accreditation of Healthcare Organization (JCAHO) guidelines. The procedures for this process are outlined under section C-420 Clinical Center Complex (CCC), Building 10 Interim Life Safety Measures (ILSM), Construction Risk Assessment (CRA) of the QSM and must be coordinated with ORF OHPE.
- E. For projects below \$ 250,0000, the Program Manager/Project Officer is responsible for handling technical reviews. Attachment # 1 is provided to support this effort.

The guidelines described above are intended for use by all individuals involved with the design and construction of projects on NIH campuses.

By my signature below, I understand and agree to follow the Permit Process procedures described above and as identified in ORFs QSM C-430 which addresses the Permit Process.

_____/ S /

Farhad Memarzadeh, Director DTR

_____/ S /

Robert McDonald, Director, DPM

_____/ S / 8 / 21 / 08

Dan Wheeland, Director ORF (

Program Manager, DPM

Project Officer, DPM



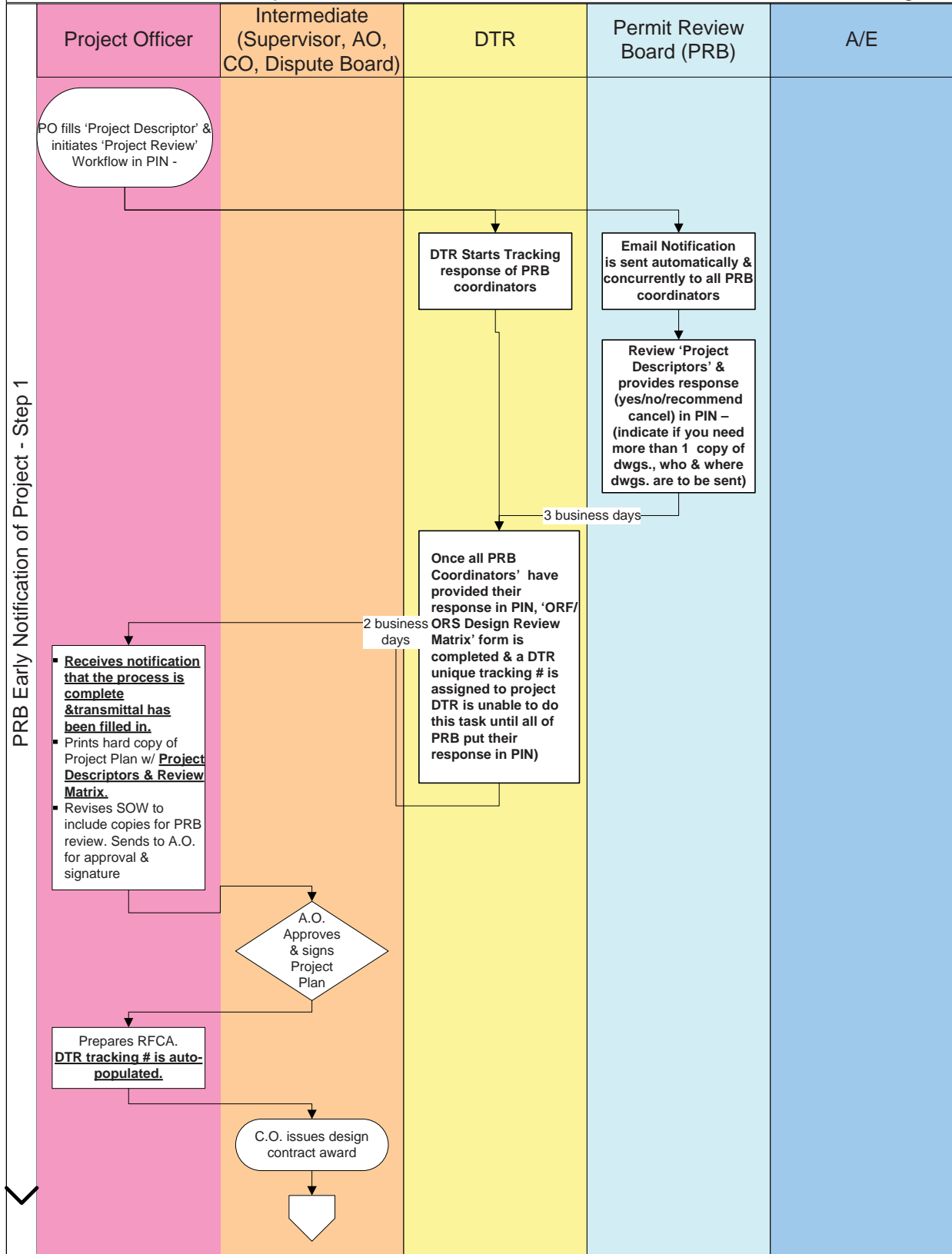
Work Request # _____ DTR Tracking # _____				PRB Design Review Matrix <small>* Prior to Design Kick Off Meeting, PO shall obtain all reviewers names if previously not identified.</small>		
Project Title _____						
Project Officer _____				Reviewer*	Delivery Address *	Recommendations for Statement of Work
Policy Review Board Organizations	Review Required	No Review Required	Recommend Cancelled			
Office of Research Facilities						
Division of Technical Resources						
Architectural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Structural	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Civil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Mechanical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Electrical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Plumbing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Historical Preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Division of Facilities Planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Division of Environmental Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Division of Property Management						
Utilities Operation Branch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Facilities Operations Branch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Clinical Center Mgmt. Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Building Mgmt. Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Technical Support Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Shops (Locks/Elevator Group) Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Grounds Maintenance Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Facilities Stewardship Branch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Building Mechanical Systems Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Building Electrical Systems Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Office of Research Services						
Division of Occupational Safety & Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Community Health Branch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Division of Radiation Safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Division of the Fire Marshall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Division of Physical Security Mgmt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

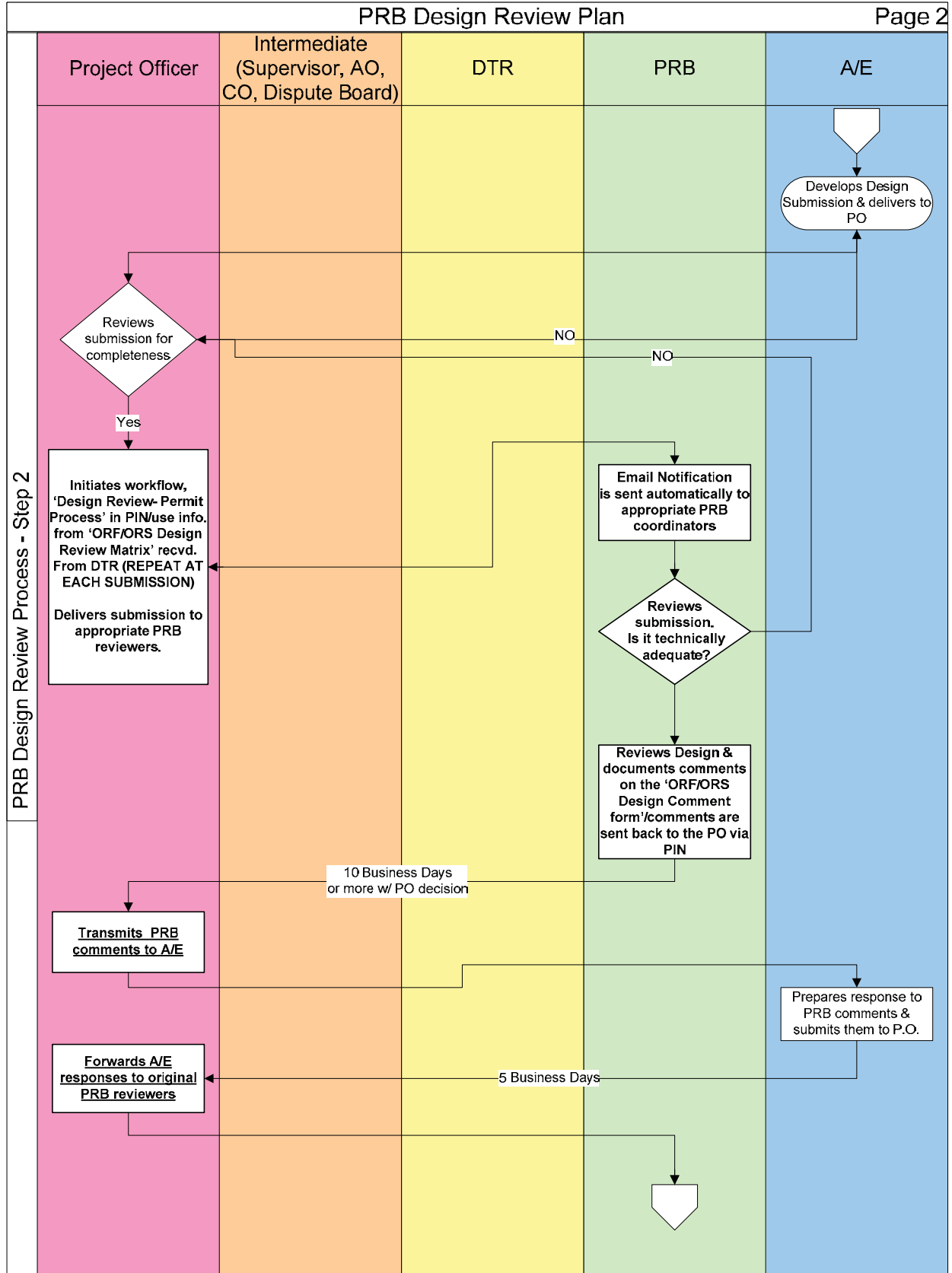


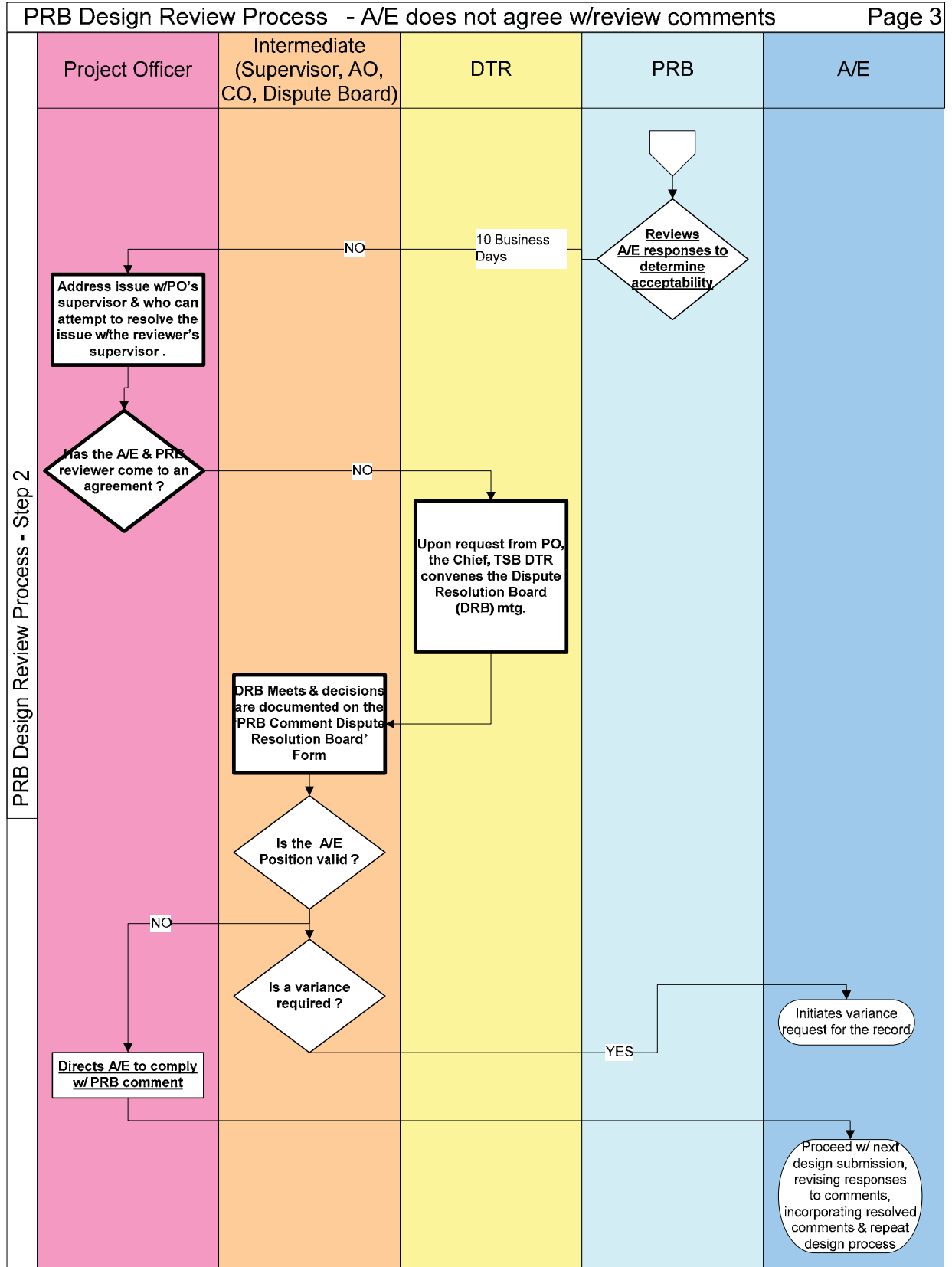
Work Request # _____ DTR Tracking # _____ Project Title _____ Project Officer _____			<h2>PRB Design Review Matrix</h2> <p style="color: red; font-size: small;">* Prior to Design Kick Off Meeting, PO shall obtain all reviewers names if previously not identified.</p>			
Policy Review Board Organizations	Review Required	No Review Required	Recommend Cancelled	Reviewer*	Delivery Address *	Recommendations for Statement of Work
Center for Information Technology						
Video and Cable Mgmt. Branch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Office of Facility Mgmt, Clinical Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
COMPLIANCE W/ ORF FUNDING REGULATIONS:		<input type="checkbox"/> yes	<input type="checkbox"/> no			



STEP 1 - Establish 'Project Review Matrix' - WHO are the reviewers ? Page 1











DIVISION OF TECHNICAL RESOURCES

PRB COMMENT DISPUTE RESOLUTION BOARD

<p>_____</p> <p>Drawing Reference:</p> <p>_____</p> <p>Spec. Section Reference:</p> <p>_____</p> <p>Discipline of Comment:</p> <p>_____</p> <p>Reviewer's Name:</p> <p>_____</p> <p>Submittal Review %</p>	<p>To: Appeal Board Members</p> <p>DTR _____</p> <p>Program Manager _____</p> <p>PRB Organization _____</p> <p>From: _____</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; border-bottom: 1px solid black;">Project Officer</td> <td style="width: 33%; border-bottom: 1px solid black;">Team</td> <td style="width: 33%; border-bottom: 1px solid black;">Date</td> </tr> <tr> <td style="border-bottom: 1px solid black;">A/E Name</td> <td style="border-bottom: 1px solid black;">Phone</td> <td style="border-bottom: 1px solid black;">Fax</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Work Request Number</td> <td colspan="2" style="border-bottom: 1px solid black;">DTR Tracking Number</td> </tr> </table>	Project Officer	Team	Date	A/E Name	Phone	Fax	Work Request Number	DTR Tracking Number	
Project Officer	Team	Date								
A/E Name	Phone	Fax								
Work Request Number	DTR Tracking Number									

Project Title _____ New Construction Yes No

Building Number _____ Did A/E Comply with Guidelines Yes No

Write Review Comments as Written by Reviewer.

A/E Response Provided	NIH Response to A/E Response
-----------------------	------------------------------

Appeal Board Resolution and Approvals

Log # : _____

Resolution:



Will a change be required to Policy Guidelines? Yes No Is a Variance required? Yes No

APPROVALS

DTR _____
Name Signature Date

Program Manager _____
Name Signature Date

PRB Organization _____
Name Signature Date



SECTION 5-8 EVALUATION AND ENFORCEMENT OF A/E CONTRACT PERFORMANCE

5-8-00	Policy
10	Procedures
20	Guidance and Information (Reserve)
30	Reporting Requirements (Reserve)

5-8-00 POLICY

This Section defines the steps required by the PO for determining the performance of the A/E contractor's performance.

A. APPLICABILITY

This procedure applies to all POs who provide project management of design and construction services in NIH-owned facilities.

B. RESPONSIBILITY

The A/E contractor is responsible for producing a complete, coordinated and correct set of contract documents suitable for construction of the project in accordance with their contract. The A/E contractor is also responsible for ensuring that the project is within scope, schedule and budget.

5-8-10 PROCEDURES

The PO evaluates the A/E contractor's scheduled submission according to the criteria contained in the contract, statement of work and A/E Checklist of Services as well as Federal Laws and Regulations

A. VERIFICATION

The Project Officer shall verify that the contract requirements are met at each design submission. The A/E contractor shall provide a signed certification that the design submittal is within scope, schedule and budget.

B. GOVERNMENT QUALITY ASSURANCE

The PO with the assistance of the Division of Technical Resources (DRT) the NIH Fire Marshall, Division of Environmental Protection, Division of Facilities Planning and the CO shall determine how the Government quality assurance will be performed for each project.

1. Provide written notification to the A/E contractor for any design or contract deficiency that is found during the design review process.
2. Comments to correct design deficiencies or to improve design quality and bilaterally agreed upon by the A/E contractor and the Government and so long as they don't adversely affect scope, schedule or budget shall be interpreted as required by the contract.



C. DEFAULT

If an A/E contractor fails to submit the design that is within scope, schedule or budget and fails conform to contract requirements or submit a deficient design the PO shall reject the submittal.

1. Should the A/E contractor's design submittal be reject twice a "Cure Notice" should be prepared. The PO helps the CO draft a "Cure Notice" to the contractor requesting that the A/E contractor cure the nonconforming conditions.
2. Should the A/E contractor fail to cure the contract deficiency then the PO helps the CO draft a "Show Cause" letter to the contractor. This letter asks the A/E contractor to provide cause as to why the contractor should not be defaulted.
3. If the A/E contractor does not provide adequate cause to prevent default, the CO defaults the contractor and issues termination for cause and the default to the contractor.



ARCHITECT-ENGINEER CONTRACT	1. CONTRACT NO.
	2. DATE OF CONTRACT
3a. NAME OF ARCHITECT-ENGINEER	3b. TELEPHONE NO. <i>(Include Area Code)</i>
3c. ADDRESS OF ARCHITECT-ENGINEER <i>(Include ZIP Code)</i>	

4. DEPARTMENT OR AGENCY AND ADDRESS *(Include ZIP Code)*

5. PROJECT TITLE AND LOCATION

6. CONTRACT FOR *(General description of services to be provided)*

7. CONTRACT AMOUNT *(Express in words and figures)*

8. NEGOTIATION AUTHORITY

9. ADMINISTRATIVE, APPROPRIATION, AND ACCOUNTING DATA



10. The United States of America (called the Government) represented by the Contracting Officer executing this contract, and the Architect-Engineer agree to perform this contract in strict accordance with the clauses and the documents identified as follows, all of which are made a part of this contract:

If the parties to this contract are comprised of more than one legal entity, each entity shall be jointly and severally liable under this contract. The parties hereto have executed this contract as of the date recorded in Item 2.

SIGNATURES		NAMES AND TITLES <i>(Typed)</i>
11. ARCHITECT-ENGINEER OR OTHER PROFESSIONAL SERVICES CONTRACTOR		
A		
B		
C		
D		
12. THE UNITED STATES OF AMERICA		
		Contracting Officer



STIPULATION 1 GENERAL PROVISIONS

1.1 Basic Definitions

“Architect-engineer services” as defined in 40 U.S.C. 541, means:

- A. Professional services of an architectural or engineering nature, as defined by State law, if applicable, which are required to be performed or approved by a person licensed, registered, or certified to provide such services;
- B. Professional services of an architectural or engineering nature performed by contract that are associated with research, planning, development, design, construction, alteration, or repair of real property; and
- C. Such other professional services of an architectural or engineering nature, or incidental services, which members of the architectural and engineering professions (and individuals in their employ) may logically or justifiably perform, including studies, investigations, surveying and mapping, tests, evaluations, consultations, comprehensive planning, program management, conceptual designs, plans and specifications, value engineering, construction phase services, soils engineering, drawing reviews, preparation of operating and maintenance manuals, and other related services.

“Construction” means construction, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other real property. For purposes of this definition, the terms “buildings, structures, or other real property” include but are not limited to improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, cemeteries, pumping stations, railways, airport facilities, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, canals, and channels. Construction does not include the manufacture, production, furnishing, construction, alteration, repair, processing, or assembling of vessels, aircraft, or other kinds of personal property.

“Contract” is intended to refer to a contract for A/E services.

“Contracting Officer” is authorized to enter into a contact on behalf of the Government.

“Contractor” (Sometimes referred to as the “Contractor” or “DB”)

“Contract Documents” are the Program of Requirements, , Scope of Work, and Design Requirements Manual, NIH Office Fit-Out Guidelines, NIH Public Space Fit-Out Guidelines, NIH Amenities Guidelines Record Drawings

“Deliverables” is the sum of the drawings, specifications, models, etc., prepared by the offeror in response to a Request for Proposal.

“Design” means defining the construction requirement (including the functional relationships and technical systems to be used, such as architectural, environmental, structural, electrical, mechanical, and fire protection), producing the technical specifications and drawings, and preparing the construction cost estimate.

“A/E” as used means combining design and construction in a single contract with one contractor.

“Contractor” means the Contractor.

“Design Proposal” is that portion of a A/E proposal which contains design factors, usually including function, layout, materials, aesthetics and specifications. Design proposal falls under the general category of qualitative evaluation factors.

“FAR” means Federal Acquisition Regulations

“Firm” means any individual, partnership, corporation, association, or other legal entity permitted by law to practice the professions of architecture, engineering or related field. It also means any individual, partnership, corporation, association, or other legal entity permitted by law to construct facilities.

“Government” The entity for which the project is being built and with whom the Contractor will be in privity of contract

“Offeror” is one of the selected respondents to participate in the RFP Phase (2) of the A/E competition. The offerors are the only ones eligible to submit a proposal.

“Performance Specifications” is a specification expressed in terms of an expected outcome or acceptable performance standard. Often used in design-build criteria to articulate the Government’s requirements.

“Plans and specifications” means drawings, specifications, and other data for construction.

“Record drawings,” means drawings submitted by a contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract.

“Shop drawings,” means drawings submitted by the construction contractor or a subcontractor at any tier showing in detail--

- A. The proposed fabrication and assembly of structural elements,
- B. The installation (i.e., form, fit, and attachment details) of materials or equipment, or



C. Both.

1.2 Design Proposal

1.2.1 Award: The Government will award the contract to the selected Architect-Engineer to design the project.

1.2.2 Preliminary Evaluation: The Contractor shall provide a preliminary evaluation of the Government's Program of Requirements, and Statement of Work.

1.2.3 Site Visit: The Contractor shall visit the site, become familiar with local conditions with local conditions, and correlate observable conditions with Government's Program of Requirements, Performance Specifications and Project Budget.

1.3 Specifications and Drawings for Construction.

The Contractor shall prepare specifications and drawing in accordance with the statement of work, programs of requirements and applicable NIH design requirements, policies, procedures and guidelines.

1.3.1 Copyrights As prescribed in *FAR 27.409(i)*, FAR Clause 52.227-17 (c) --(1) is inserted:

Data first produced in the performance of this contract. (i) The Contractor agrees not to assert, establish, or authorize others to assert or establish, any claim to copyright subsisting in any data first produced in the performance of this contract without prior written permission of the Contracting Officer. When claim to copyright is made, the Contractor shall affix the appropriate copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to such data when delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. The Contractor grants to the Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable, worldwide license for all such data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government.

1.4 Laws and Regulations for Federal Construction

1.4.1 Labor Laws: FAR 22.4 Labor Standards for Contract Involving Construction applies to A/E services. 22.400 Scope of subpart. FAR 22.6 Walsh-Healey Public Contracts Act also applies to A/E services. Equal Employment Opportunity as specified in FAR 22.8 applies to – A/E services.

1.4.2 Environmental Laws: The following environmental laws apply to A/E services: Clean Air Act (42 U.S.C. 7401 et seq.); Clean Water Act (33 U.S.C. 1251 et seq.); Executive Order 11738, September 10, 1973 (38 FR 25161, September 12, 1973); and Environmental Protection Agency (EPA) regulations (40 CFR Part 32).(National Environmental Protection Act)

1.4.3 Energy Conservation Laws: The following energy conservation laws apply to A/E services: Energy Policy and Conservation Act (42 U.S.C. 6361(a)(1)) and Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.); National Energy Conservation Policy Act (42 U.S.C. 8253 and 8262g); Executive Order 11912, April 13, 1976; Executive Order 12759, Sections 3, 9, and 10, April 17, 1991; and Executive Order 12902, March 8, 1994.

1.4.4 Use of Recovered Materials: Contractor shall be in compliance with the following regulations: Resource Conservation and Recovery Act of 1976 (RCRA), as amended (Solid Waste Disposal Act, 42 U.S.C. 6901, et seq.) and Executive Order 12873, dated October 20, 1993.

1.4.5 Buy American Act – Construction Materials: The Buy American Act (41 U.S.C. 10) and Executive Order 10582, December 17, 1954 (as amended). These apply to contracts for the construction, alteration, or repair of any public building or public work in the United States.

1.4.6 Metric Conversion Act The Metric Conversion Act of 1975, as amended by the Omnibus Trade and Competitiveness Act of 1988 (15 U.S.C. 205a, et seq.), designates the metric system of measurement as the preferred system of weights and measures for United States trade and commerce, and it requires that each agency use the metric system of measurement in its acquisitions, except to the extent that such use is impracticable or is likely to cause significant inefficiencies or loss of markets to United States firms. Requiring activities are responsible for establishing guidance implementing this policy in formulating their requirements for acquisitions.

1.4.7 Equal Opportunity: Equal Employment Opportunity is required under Executive Order 11246 (EO 11246), as amended. It is an Act to ensure compliance with the regulations of the U.S. Department of Labor to promote the full realization of equal employment opportunity for all persons, regardless of race, color, religion, sex, or national origin. This EO is also known as Contract Compliance. With respect to construction the EO has prescribe guidelines. See FAR 22.804-2 "Construction." Non construction contracts that in any 12-month period, total, or can reasonably be expected to total, \$50,000 or more, is required to develop a written affirmative action program for each of its establishments within 120 days from the commencement of its first such Government contract, subcontract. See FAR 22.804-1.

1.4.9 Other Applicable Federal Regulations: Services delivered by A/E contractor shall be in accordance with all applicable Federal Regulations including but not necessarily limited to the following: Uniformed Federal Accessibili-



ty Standards, OSHA (29CFR 1910); The National Historic Preservation Act of 1966 (36 CFR 800); The Archeological and Historic Preservation Act; *etc.*

1.5 NIH Design Policies and Guidelines

1.5.1 Reserved for Agency Specific Guidelines: Animal Care: Services delivered by A/E contractor shall be in accordance with the latest edition "Guide for the Care and Use of Laboratory Animals," plus, the U.S. Public Health Service (PHS) and the American Association for Accreditation of Laboratory Animal Care (AAALAC) accreditation standards.

1.5.2 Biosafety: Services delivered by A/E contractor shall be in accordance with the latest edition of HHS Publication "Biosafety in Microbiological and Bio-medical Laboratories, 3rd Edition, May 1988.

1.5.3 NIH Design Requirements Manual: Services delivered by A/E contractor shall be in accordance with the NIH Design Requirements Manual (Laboratories and Animal Research Facilities)

1.5.4 NIH Office Fit-Out Guidelines: Services delivered by A/E contractor shall be in accordance with the NIH Office Fit-Out Guidelines (Administrative Space)

1.5.5 NIH Public Space Fit-Out Guidelines: Services delivered by A/E contractor shall be in accordance with the NIH Public Space Fit-Out Guidelines (Public Space)

1.5.6 NIH Amenities Guidelines: Services delivered by A/E contractor shall be in accordance with the NIH Amenities Guidelines (cafeterias, day care centers, fitness center, etc.)

1.5.7 NIH Interior Signage Manual: Services delivered by A/E contractor shall be in accordance with the NIH Interior Signage Manual (interior signage and way finding)

1.5.5 Local Building Codes and Ordinances: The agency derives its authority from the Congress of the United States of America and is not subject to the laws, codes and ordinances of any jurisdiction of lesser authority unless the Congress defers authority to the states or local governments. The agency will comply with local codes and ordinances so long as they are deemed necessary and reasonable and consistent with its mission. Facility improvements design A/E services shall be in accordance with the applicable standards of the local model building code having jurisdiction, National Fire Protection Association (NFPA) such as the Life Safety Code (NFPA 101), and Standard for the Installation of Sprinkler Systems (NFPA 13). The agency is not required to secure building or occupancy permits from local or state authorities; however, The agency may request certificate of safety inspection for various building subsystems such as elevators from local authorities.

STIPULATION 2 THE GOVERNMENT

2.1 Responsibilities

2.1.1 Contracting Officer's Technical Representative: The Government's Contracting Officer shall designate a representative to act on the Government's behalf with respect to technical matters of the project. The Contracting Officer's Technical Representative (COTR) The COTR manages the project on behalf of the contracting officer to ensure compliance with the terms of the contract. The COTR does not have the authority to modify or change a contract. The Government or such authorized representative will examine documents submitted by the Contractor and will render decisions in a timely manner and in accordance with the schedule accepted by the Government. The Government may obtain independent review of construction documents or other design documents submitted by the Contractor by a separate architect, engineer, contractor or cost estimator under contract to or employed by the Government. Such independent reviews will be undertaken at the Government's expense in a timely manner and will not delay the orderly progress of the work.

2.1.2 Government Information: The Government shall provide full information in a timely manner regarding requirements for the Project, including a written Facility Program of Requirements and Performance Specifications which will set forth the Government's objectives, schedule, constraints and criteria.

2.1.3 Physical Data: As prescribed in FAR 36.504, FAR Clause 52.236-4 is inserted:

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by the Government: *The Government will provide the Contractor with the following: topographic map showing existing contours, natural features and man-made improvements; soil report including soil boring logs and location; and underground utility plans with profiles and inverts.*

(b) Transportation facilities The Government will not provide parking for the Contractor or their Subcontractors. The Contractor shall secure a site for employee parking and provide a bus to bring employees to the site and return and pick up employees and take them away from the site. The Government will not provide parking for the Contractor's bus.

(c) The Government will provide the Contractor and their Subcontractors' employees with temporary identification badges for access to the site.

STIPULATION 3 CONTRACTOR



3.1 Services and Responsibilities

3.1.1 Requirements for Registration of Designers As prescribed in *FAR 36.609-4*, FAR Clause 52.236-25 is inserted:

The design of architectural, structural, mechanical, electrical, civil, or other engineering features of the work shall be accomplished or reviewed and approved by architects or engineers registered to practice in the particular professional field involved in a State or possession of the United States, in Puerto Rico, or in the District of Columbia.

3.1.2 Acts and Omissions The Contractor shall be responsible to the Government for acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons, including design professionals, performing any portion of the Contractor's obligations under the agreement.

3.1.3 Site Investigation and Conditions Affecting the Work As prescribed in *FAR 36.503*, FAR Clause 52.236-3 is inserted:

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

3.2 Basic Services

3.2.1 Contractor Representative: The Contractor shall designate a representative subject to the approval of the Government authorized to act on the Contractor's behalf with respect to the project.

3.2.1.1 Superintendence by the Contractor As prescribed in *FAR 36.506*, FAR Clause 52.236-6 is inserted:

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

3.2.2 General Submittals: The Contractor shall submit construction documents for the review and approval by the Government. Construction Documents may include drawings, specifications, and other documents and electronic data setting forth in detail the requirements for construction of the work, and shall:

1. be consistent with the Program of Requirements and Performance Specifications;
2. provide information for the use of those in the building trades; and
3. include documents customarily required regulatory agency approvals.

3.3 Optional Services

3.3.1 Public Hearings: Providing services in connection with a public hearing, arbitration proceeding or legal proceeding except where the Contractor is a party thereto.

3.3.2 Assistance: Providing assistance in the utilization of equipment or systems such as preparation of operation and maintenance manuals, training personnel for operation and maintenance, and consultation during operation.

STIPULATION 4 TIME

4.1 General: Unless otherwise indicated the Government and the Contractor shall perform their perspective obligations as expeditiously as is consistent with reasonable skill and care and the orderly progress of the Project.

4.2 Period of Performance: The period of performance for basic award is ___ calendar days from the date of Award.

4.3 Use and Possession Prior to Completion As prescribed in *FAR 36.511*, FAR Clause 52.236-11 is inserted:

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to



take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

4.4 Suspension of Work As prescribed in *FAR 42.1305(a)*, *FAR Clause 52.242-14 (modified)* is inserted for solicitations and contracts when a fixed-price A/E contract is contemplated:

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(c) A claim under this clause shall not be allowed--

(1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and

(2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

4.5 Stop-Work Order As prescribed in *FAR 42.1305(b)*, the following *FAR Clause 52.242-15* is inserted. The "90-

day" period stated in the clause may be reduced to less than 90 days.

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

4.6 Government Delay of Work As prescribed in *FAR 42.1305(d)*, *FAR Clause 52.242-17* is inserted in solicitations and contracts when a fixed-price contract is contemplated for supplies other than commercial or modified-commercial items. The clause use is optional when a fixed-price contract is contemplated for services, or for supplies that are commercial or modified-commercial items.



(a) If the performance of all or any part of the work of this contract is delayed or interrupted (1) by an act of the Contracting Officer in the administration of this contract that is not expressly or implied authorized by this contract, or (2) by a failure of the Contracting Officer to act within the time specified in this contract, or within a reasonable time if not specified, an adjustment (excluding profit) shall be made for any increase in the cost of performance of this contract caused by the delay or interruption and the contract shall be modified in writing accordingly. Adjustment shall also be made in the delivery or performance dates and any other contractual term or condition affected by the delay or interruption. However, no adjustment shall be made under this clause for any delay or interruption to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(b) A claim under this clause shall not be allowed--

(1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved; and

(2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the delay or interruption, but not later than the day of final payment under the contract.

STIPULATION 5 PAYMENT

5.1 Payments under Fixed-Price A/E Contracts. As prescribed in *FAR 32.111(a)(5)*, [FAR Clause 52.232-5](#) is inserted:

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the prescribed certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.



(f) Final payment. The Government shall pay the amount due the Contractor under this contract after--

- (1) Completion and acceptance of all work;
- (2) Presentation of a properly executed voucher; and
- (3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation because of un-definitive work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on un-definitive contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

- (1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and
- (2) Deducted from the next available payment to the Contractor.

5.2 Prompt Payment for A/E Contracts As prescribed in FAR 32.908(b), FAR Clause 52.232-27 is inserted:

Notwithstanding any other payment terms in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in section 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project:

(A) The due date for making such payments shall be 14 days after receipt of the payment request by the designated billing office. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date shall be the 14th day after the date of the Contractor's payment request, provided a proper payment request is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, shall be as specified in the contract or, if not specified, 30 days after approval for release to the Contractor by the Contracting Officer.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract):

(A) The due date for making such payments shall be either the 30th day after receipt by the designated billing office of a proper invoice from the Contractor, or the 30th day after Government acceptance of the work or services completed by the Contractor, whichever is later. If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date shall be the 30th day after the date of the Contractor's invoice, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) On a final invoice where the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance shall be deemed to have occurred on the effective date of the contract settlement.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(2)(i) through (a)(2)(ix) of this clause. If the invoice does not comply with these requirements, it shall be returned within 7 days after the date the designated billing office received the invoice, with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a)(4) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of mailing or transmission.)



(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., prompt payment discount terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.

(viii) For payments described in subdivision (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Any other information or documentation required by the contract.

(x) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

(3) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority (e.g., tariffs). This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about

January 1 and July 1. The interest penalty shall accrue daily on the invoice principal payment amount approved by the Government until the payment date of such approved principal amount; and will be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice principal payment amount and will be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(2) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in subdivision (a)(1)(ii) of this clause, Government acceptance or approval shall be deemed to have occurred constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. In the event that actual acceptance or approval occurs within the constructive acceptance or approval period, the determination of an interest penalty shall be based on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days.

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be



payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(5) Prompt payment discounts. An interest penalty also shall be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(6) Additional interest penalty. (i) A penalty amount, calculated in accordance with subdivision (a)(6)(iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor--

(A) Is owed an interest penalty of \$1 or more;

(B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with subdivision (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be required. Contractors shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) Demands must be postmarked on or before the 40th day after payment was made, except that--

(1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or

(2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii)(A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty except--

(1) The additional penalty shall not exceed \$5,000;

(2) The additional penalty shall never be less than \$25; and

(3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a)(4)(iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a)(6)(iii)(A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payments--(1) Due dates for recurring financing payments. If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the [insert day as prescribed by Agency head; if not prescribed, insert 30th day] day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(2) Due dates for other contract financing. For advance payments, loans, or other arrangements that do not involve recurring submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(3) Interest penalty not applicable. Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an



interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to include a payment clause and an interest penalty clause conforming to the standards set forth in subparagraphs (c)(1) and (c)(2) of this clause in each of its subcontracts, and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) A copy of any notice issued by a Contractor pursuant to subdivision (d)(3)(i) of this clause has been furnished to the Contracting Officer.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the sub-

contractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to subparagraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under subparagraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefore must be recovered from the Government because of a reduction under subdivision (e)(5)(i)) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under subparagraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--



(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under subdivision (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under subparagraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under subdivision (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under subdivision (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. A written notice of any withholding shall be issued to a subcontractor (with a copy to the Contracting Officer of any such notice issued by the Contractor), specifying--

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the United States is a party. The United States may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime Contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the United States for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

5.3 Discounts for Prompt Payment. As prescribed in *FAR 32.111(c)(1)*, *FAR Clause 52.232-8* is inserted:

(a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a prompt payment discount in conjunction with the offer, offerors awarded contracts may include prompt payment discounts on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the agency annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day.

5.4 Statutory Cost limitations. Contracts for A/E services shall not be awarded at a cost to the Government--



- A. In excess of statutory cost limitations, unless applicable limitations can be and are waived in writing for the particular contract; or
- B. Which, with allowances for Government-imposed contingencies and overhead, exceeds the statutory authorization?

Solicitations containing one or more items subject to statutory cost limitations shall state--

- A. The applicable cost limitation for each affected item in a separate schedule;
- B. That an offer which does not contain separately-priced schedules will not be considered; and
- C. That the price on each schedule shall include an approximate apportionment of all estimated direct costs, allocable indirect costs, and profit.

The Government shall reject an offer if its prices exceed applicable statutory limitations, unless laws or agency procedures provide pertinent exemptions. However, if it is in the Government's interest, the contracting officer may include a provision in the solicitation which permits the award of separate contracts for individual items whose prices are within or subject to applicable statutory limitations.

The Government shall also reject an offer if its prices are within statutory limitations only because it is materially unbalanced. An offer is unbalanced if its prices are significantly less than cost for some work, and overstated for other work.

5.4.1 The contracting officer shall not negotiate a price or fee that exceeds the following statutory limitations, imposed by 10 U.S.C. 2306(e) and 41 U.S.C. 254(b): For architect-engineer services for public works or utilities, the contract price or the estimated cost and fee for production and delivery of designs, plans, drawings, and specifications shall not exceed six (6) percent of the estimated cost of construction of the public work or utility, excluding fees.

STIPULATION 6 PROTECTION OF PERSONS AND PROPERTY

Not used

STIPULATION 7 INSURANCE AND BONDS

7.3 Workers' Compensation Insurance. As prescribed in FAR 28.309, FAR Clause 52.228-4 is inserted:

The Contractor shall (a) provide, before commencing performance under this contract, such workers' compensation insurance or security as the Defense Base Act (42 U.S.C. 1651, et seq.) requires and (b) continue to maintain it until performance is completed. The Contractor shall insert, in all subcontracts under this contract to which the Defense Base Act applies, a clause similar to this clause (including this sentence) imposing upon those subcontractors this requirement to comply with the Defense Base Act.

7.2 General Liability The Contractor and subcontractors shall have bodily injury liability insurance coverage written on the comprehensive form of policy of at least \$100,000.00 per occurrence, bodily injury and property damage combined and \$356,000.00 general (annual) aggregate.

7.3 Automobile Liability The Contractor and subcontractors shall be required to have automobile liability insurance written on the comprehensive form of policy. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing the contract. Policies covering automobiles operated in the United States shall provide coverage of at least \$ 50,000.00 for each accident (bodily injury and property damage combined).

STIPULATION 8 CHANGES IN THE WORK

8.1 Changes--Fixed-Price. As prescribed in FAR 43.205(a)(1), FAR Clause 52.243-1 is inserted. The 30-day period may be varied according to agency procedures.

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

- (1) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the Government in accordance with the drawings, designs, or specifications.
- (2) Method of shipment or packing.
- (3) Place of delivery.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.

(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.



(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

(f) No services for which an additional cost or fee will be charged by the Contractor shall be furnished without the prior written authorization of the Contracting Officer.

STIPULATION 9 INSPECTION & ACCEPTANCE

9.1 Acceptance of Contract Documents: Acceptance of contract documents shall follow the process outline in Chapter 5, Section 7 of the NIH Facilities Development Manual.

9.2 Professional Stamping of Drawings: All final contract documents (plans) shall be signed and seal by architect or engineer of record in their licensed discipline.

9.3 Government Acceptance: The required signatures shall be affixed to the contract documents in accordance with Chapter 5, Section 7 of the Facilities Development Manual

STIPULATION 10 DISPUTE RESOLUTION

10.1 Disputes As prescribed in *FAR 33.215*, FAR Clause 52.233-1 is inserted.

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph (d)(2) of this clause. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by

complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) Contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim--

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using--

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use ADR. If the Contractor refuses an offer for alternative disputes resolution, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request. When using arbitration conducted pursuant to 5 U.S.C. 575-580, or when using any other ADR technique that the agency elects to handle in accordance with the ADRA, any claim, regardless of amount, shall be accompanied by the certification described



in subparagraph (d)(2)(iii) of this clause, and executed in accordance with subparagraph (d)(3) of this clause.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date that the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in FAR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

STIPULATION 11 MISCELLANEOUS PROVISIONS

11.1 Subcontracts for Design Services As prescribed in FAR 44.204(b), FAR Clause 52.244-4 is inserted:

Any design subcontractors and outside associates or consultants required by the Contractor in connection with the services covered by the design portion of the contract will be limited to individuals or firms that were specifically identified and agreed to during negotiations. The Contractor shall obtain the Contracting Officer's written consent before making any substitution for these subcontractors, associates, or consultants.

11.2 Other Contracts. As prescribed in FAR 36.508, FAR Clause 52.236-8 is inserted:

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other Contractor or by Government employees.

11.3 Authorization and Consent. As prescribed in FAR 27.201-2(a), FAR Clause 52.227-1 is inserted:

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machi-

nery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent herein above granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold); however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

11.4 Notice and Assistance Regarding Patent and Copyright Infringement. As prescribed in FAR 27.202-2, FAR Clause 52.227-2 is inserted:

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at FAR 2.101.

11.5 Value Engineering As prescribed in FAR 48.201(f), FAR Clause 52.248-2 is inserted:

(a) General. The Contractor shall (1) perform value engineering (VE) services and submit progress reports as specified in the Requirements; and (2) submit to the Contracting Officer any resulting value engineering proposals (VEP's). Value engineering activities shall be performed concurrently with, and without delay to, the schedule set forth in the



contract. The services shall include VE evaluation and review and study of design documents immediately following completion of the 35 percent design state or at such stages as the Contracting Officer may direct. Each separately priced line item for VE services shall define specifically the scope of work to be accomplished and may include VE studies of items other than design documents. The Contractor shall be paid as the contract specifies for this effort, but shall not share in savings which may result from acceptance and use of VEP's by the Government.

(b) Definitions. "Life cycle cost," as used in this clause, is the sum of all costs over the useful life of a building, system or product. It includes the cost of design, construction, acquisition, operation, maintenance, and salvage (resale) value, if any.

"Value engineering," as used in this clause, means an organized effort to analyze the functions of systems, equipment, facilities, services, and supplies for the purpose of achieving the essential functions at the lowest life cycle cost consistent with required performance, reliability, quality, and safety.

"Value engineering proposal," as used in this clause, means, in connection with the contract, a change proposal developed by employees of the Federal Government or Contractor value engineering personnel under contract to an agency to provide value engineering services for the contract or program.

(c) Submissions. After award of a A/E contract the Contractor shall--

(1) Provide the Government with a fee breakdown schedule for the VE services (such as criteria review, task team review, and bid package review) included in the contract schedule;

(2) Submit, for approval by the Contracting Officer, a list of team members and their respective resumes representing the engineering disciplines required to complete the study effort, and evidence of the team leader's qualifications and engineering discipline. Subsequent changes or substitutions to the approved VE team shall be submitted in writing to the Contracting Officer for approval; and

(3) The team leader shall be responsible for pre-study work assembly and shall edit, reproduce, and sign the final report and each VEP. All VEP's, even if submitted earlier as an individual submission, shall be contained in the final report.

(d) VEP preparation. As a minimum, the Contractor shall include the following information in each VEP:

(1) A description of the difference between the existing and proposed design, the comparative advantages and disadvantages of each, a justification when an item's function is being altered, the effect of the change on system or facility performance, and any pertinent objective test data.

(2) A list and analysis of design criteria or specifications that must be changed if the VEP is accepted.

(3) A separate detailed estimate of the impact on project cost of each VEP, if accepted and implemented by the Government.

(4) A description and estimate of costs the Government may incur in implementing the VEP, such as design change cost and test and evaluation cost.

(5) A prediction of any effects the proposed change may have on life cycle cost.

(6) The effect the VEP will have on design or construction schedules.

(e) VEP acceptance. Approved VEP's shall be implemented by bilateral modification to this contract.

STIPULATION 12 TERMINATION OF THE AGREEMENT

12.1 Termination for Convenience of the Government

As prescribed in *FAR 49.502(a)(1)*, FAR Clause 52.249-1 is inserted:

The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the rights, duties, and obligations of the parties, including compensation to the Contractor, shall be in accordance with Part 49 of the Federal Acquisition Regulation in effect on the date of this contract.

12. 2 Default As prescribed in *FAR 49.504(c)(1)*, FAR Clause 52.249-10 is inserted:

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--



(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include--

- (i) Acts of God or of the public enemy,
- (ii) Acts of the Government in either its sovereign or contractual capacity,
- (iii) Acts of another Contractor in the performance of a contract with the Government,
- (iv) Fires,
- (v) Floods,
- (vi) Epidemics,
- (vii) Quarantine restrictions,
- (viii) Strikes,
- (ix) Freight embargoes,
- (x) Unusually severe weather, or
- (xi) Delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors-Builders or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

(d) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

**STIPULATION 13
FAR CLAUSES INCORPORATED BY
REFERENCE**

As prescribed in FAR 52.107(b), the following clauses are inserted:

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given

in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

- 52.203-3 Gratuities.
- 52.203-7 Anti-Kickback Procedures.
- 52.204-3 Taxpayer Identification.
- 52.204-4 Printing/Copying Double-Sided on Recycled Paper.
- 52.204-5 Women-Owned Business.
- 52.204-6 Data Universal Numbering System (DUNS) Number.
- 52.209-5 Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters.
- 52.209-6 Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment.
- 52.211-13 Time Extensions.
- 52.215-2 Audit and Records--Negotiation.
- 52.222-4 Contract Work Hours and Safety Standards Act--Overtime Compensation.
- 52.222-7 Withholding of Funds.
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SECTION 5-9 ENVIRONMENTAL PERMITTING/APPROVALS

5-9-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)

5-9-00 POLICY

This Section describes the requirements for obtaining environmental permits, approvals and/or clearances. The approving authority may be a federal, state, local agency or a NIH “agency”.

A. APPLICABILITY

This procedure applies to all ORF projects.

B. RESPONSIBILITIES

The Project Officer is responsible for meeting with the Division of Environmental Protection (DEP) to review the scope of his/her project and to assess the need for environmental permits, approvals or clearances.

It is the responsibility of the DEP to remain current on all environmental laws, regulations, guidelines which affect the NIH and to advise Project Officers on how those laws, regulations, and/or guidelines will affect his/her project.

It is the Project Officer’s responsibility to follow through with the decisions of the meeting with the exception that all contact with approving agencies shall be through and by the DEP. It is the responsibility of the DEP to acquire all permits/approvals on behalf of NIH. It is the responsibility for the Project Officer to assist in the preparation of permit applications as identified in the initial meeting with DEP.

5-9-10 PROCEDURES

- 1 The Project Officer prepares their project scope/plan to use in discussions with the DEP.
- 2 The Project Officer contacts the DEP to schedule a meeting to review the project to review the environmental aspects of the project. Project Officer and DEP shall develop a list of required permits.
- 3 As the project progresses, DEP shall be given the opportunity to review the work (including design reviews identified in Design Review Matrix, an attachment to the Project Plan) to ensure environmental compliance.

5-9-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Project Plan
- Design Review and Permitting

B. Relevant Documents

- Division of Environmental Protection Checklist of Required Permits/Approvals



- Division of Environmental Protection Brief Guide to Environmental Compliance
 - Division of Environmental Protection Division of Environmental Protection Program, Activities and Responsibilities
- C. Records
- Checklist of Required Permits (if applicable)

NIH Facilities Development Manual



Chapter 6 Construction



SECTION 6-1 CONSTRUCTION ACQUISITION PLANNING

6-1-00	Policy
10	Procedures (Reserved)
20	Guidance and Information
30	Reporting Requirements
X6-1-A	Sample NIH Design Acquisition Planning Worksheet

6-1-00 POLICY

In accordance with FAR Part 7 and HHS policy, NIH shall perform acquisition planning for all acquisitions in order to provide for -

- Acquisition of commercial items or, to the extent that commercial items suitable to meet the Government's needs are not available, non-developmental items, to the maximum extent practicable; and
- Full and open competition or, when full and open competition is not required in accordance with Part 6, to obtain competition to the maximum extent practicable, with due regard to the nature of the supplies or services to be acquired.

Acquisition planning for federally-owned real property assets shall integrate the efforts of all personnel responsible for significant aspects of the acquisition. The purpose of this planning is to ensure that the Government meets its needs in the most effective, economical, and timely manner. In order to facilitate attainment of the acquisition objectives, the plan should identify those milestones at which decisions should be made. The plan should address all the technical, business, management, and other significant considerations that will control the acquisition. The specific content of plans will vary, depending on the nature, circumstances, and stage of the acquisition. The acquisition plan should include the following:

- Acquisition background and objectives that includes statement of need; applicable condition; life-cycle cost; performance characteristics; trade-offs; risks; and acquisition streamlining;
- Plans of action that includes sources, competition, source-selection procedures, acquisition considerations, budgeting and funding, product or service descriptions, priorities, allocations, and allotments, contractor versus government performance, inherently governmental functions, logistics considerations, government-furnished property, government-furnished information, environmental and energy conservation objectives, security considerations, contract administration, other considerations, and milestones for the acquisition cycle.

6-1-20 GUIDANCE AND INFORMATION

- Acquisition plans should include applicable provision of HHSAR Part 307 HHS Acquisition Plans.

See Chapter 4 Section 4-1 for acquisition planning procedures, guidance and information.

6-1-30 REPORTING REQUIREMENTS

On projects requiring the Department's approval, a submittal of the Acquisition Plan is not required. However, the analysis/documentation supporting the chosen acquisition methodology using PDCS or a similar tool shall be forwarded to OFMP with the initial FPAA submittal. OFMP may require that the NIH submit the detailed acquisition plan as additional justification.





SAMPLE NIH CONSTRUCTION ACQUISITION PLANNING WORKSHEET

1. Construction Service Descriptions

The Contractor shall construct and deliver the General Laboratory for Cellular Biology located on NIH's Bethesda Campus. The structure will consist of 215,000 gross square feet of space.

2. Background and Objectives

The General Laboratory for Cellular Biology (GLCB) will house the staff of a special task force created by a Presidential Commission on Health. This task force is composed of eminent scientists from different Institutes (ICs), within the National Institutes of Health (NIH). The Task Force is charged with the responsibility to find the cause and cure of a recently discovered virus that attacks the human immune system.

The GLCB will accommodate 7 laboratories, shared analytical laboratories, and support space. The laboratory facility will house the staff of the Scientific Director, administrative space associated with the laboratories as well as ancillary space. There will also be an animal research facility associated with the GLCB.

3. Applicable Conditions (State all significant conditions affecting the acquisition)

This project will be procured under 48 CFR Part 36.3 Two Step Design-Build, as required by the Office of the Secretary. In Phase I, a maximum of three offerors will be selected based on their qualifications to proceed on to Phase II. Each offeror will be required to provide a design solution and given a stipend of \$ 50,000 to defray the cost of the design solution. One offeror will be selected based on their design solution and their proposal to design, construct and deliver the GLCB.

4. Cost: Set forth the established cost goals for the acquisition and the rationale supporting them, and discuss related cost concepts to be employed

\$ 142,860,000.00 will be funded by B&F
\$ 16,000,000.00 will be funded by the ICs

5. Performance Characteristics:

Construction Documents
Complete set of plans and specifications prepared by Pyramid Architects

Performance Specification
Use existing NIH Specifications and the NIH Design Requirements Manual



6. Delivery or performance-period requirements: Describe the basis for establishing delivery or performance-period requirements. Explain and provide reasons for any urgency if it results in concurrency of development and production or constitutes justification for not providing for full and open competition.

The scheduled for the construction of the GLCB is as follows:

IFB	2 months
Construction	18 months
Activation & Occupation	6 months

The GLCB is urgently needed to house a taskforce to find the cause and cure of a recently discovered virus that attacks the human immune system. This is a Presidential Initiative that has the full backing of Congress.

7. Trade-offs: Discuss the expected consequences of trade-offs among the various cost, capability or performance, and schedule goals.

At this time there are no expected consequences of trade-offs among the various cost, capability or performance, and schedule goals. The project is fully funded and supported. More than adequate human capital and financial resources have been assigned to this project.

8. Risks: Discuss technical, cost, and schedule risks and describe what efforts are planned or underway to reduce risk and the consequences of failure to achieve goals. If concurrency of development and production is planned, discuss its effects on cost and schedule risks.

The Government proposes to enter into a firm fixed-price contract with the successful offeror to design, construct and deliver GLCB where the offeror or contractor assumes the risk for cost and schedule.

The Government is liable for different site condition and program changes.

9. Acquisition streamlining: If specifically designated by the requiring agency as a program subject to acquisition streamlining, discuss plans and procedures to -- Encourage industry participation by using:

Draft Solicitations

Pre-solicitation Conferences

Other Means of Stimulating Industry Involvement

The Government proposes to hold a pre-solicitation conference to assure that qualified entities are aware of the solicitation and special requirements of the project

The Government proposes to advertise in trade journals and other media published by professional societies such as The General Contractor's Association, etc., to assure that qualified entities are aware of the solicitation.



<p>10. Sources: Indicate the prospective sources of supplies and/or services that can meet the need. Consider required sources of supplies or services. Include consideration of small business, small disadvantaged business, and women-owned small business concerns.</p> <p>The Government proposes full and open competition. Full and open competition does not preclude small business, small disadvantaged business, and women-owned small business concerns from competing for this contract so long as they can meet the bonding requirements of the Miller Act and other representations and certifications.</p>	
<p>11. Competition: Describe how competition will be sought, promoted, and sustained throughout the course of the acquisition. If full and open competition is not contemplated, cite the authority in 6.302, discuss the basis for the application of that authority, identify the source(s), and discuss why full and open competition cannot be obtained.</p> <p>The Government proposes full and open competition</p>	
<p>12. Source-selection procedures:</p> <p>Seal Bid <input type="checkbox"/> yes <input type="checkbox"/> no Representations and Certifications Required <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p><input type="checkbox"/> Construction management plan; <input type="checkbox"/> Financial strength; <input type="checkbox"/> Resources; <input type="checkbox"/> Past performance; <input type="checkbox"/> Other appropriate factors (List below)</p>	
<p>13. Lowest Responsible Bid</p> <p><input type="checkbox"/> Fixed Price <input type="checkbox"/> Weighted Criteria Process</p>	<p>14. Contracting considerations</p> <p><input type="checkbox"/> Firm-Fixed-Price Contract <input type="checkbox"/> Incentive Contract <input type="checkbox"/> Cost Plus Fixed Fee Contract <input type="checkbox"/> Indefinite-Quantity Contract <input type="checkbox"/> Multiple Award Preference</p>
<p>15. Budgeting and Funding:</p> <p>Government Estimate Completed. <input type="checkbox"/> yes (Attach Government Estimate) <input type="checkbox"/> no See A/E final estimate and FPAA</p>	



<p>16. Priorities, allocations, and allotments: When urgency of the requirement dictates a particularly short delivery or performance schedule, certain priorities may apply. If so, specify the method for obtaining and using priorities, allocations, and allotments, and the reasons for them</p> <p>Not Applicable</p>	
<p>17. Contractor versus Government performance: Address the consideration given to OMB Circular No. A-76</p> <p>This project will give full consideration to OMB Circular No. A-76 and the President's Management Agenda with respect to Competitive Sourcing.</p>	
<p>18. Inherently governmental functions</p> <p>A. All acquisition services are inherently governmental. B. All project management, project oversight, and project monitoring is inherently governmental. C. All evaluation of contractor performance is inherently governmental.</p>	
<p>19. Management information requirements: Discuss, as appropriate, what management system will be used by the Government to monitor the contractor's effort.</p> <p>The Contracting Officer is responsible for administering the contract. The Project Officer who is the Contracting Officer's Technical Representative (COTR) under the direction of the Contracting Officer is responsible for monitoring the contractor's performance.</p>	
<p>20. Logistics considerations</p>	
<p>20A. The assumptions determining contractor or agency support, both initially and over the life of the acquisition, including consideration of contractor or agency maintenance and servicing</p> <p>The Office of Acquisitions has the capability to support, both initially and over the life of the acquisition, including consideration of contractor or agency maintenance and servicing.</p>	<p>20B. The reliability, maintainability, and quality assurance requirements, including any planned use of warranties</p> <p>The proposal or contract has provision and clauses addressing reliability, maintainability, and quality assurance requirements, including any planned use of warranties.</p>
<p>20C. The requirements for contractor data (including repurchase data) and data rights, their estimated cost, and the use to be made of the data</p> <p>The proposal or contract has provision and clauses addressing the requirements for contractor data (including repurchase data) and data rights, their estimated cost, and the use to be made of the data.</p>	<p>20D. Standardization concepts, including the necessity to designate, in accordance with agency procedures, technical equipment as "standard" so that future purchases of the equipment can be made from the same manufacturing source.</p> <p>GSA Schedules is encouraged for standardization. Care must be taken not to violate the Competition in Contracting Act.</p>



21. Government-furnished property: Indicate any property to be furnished to contractors, including material and facilities, and discuss any associated considerations, such as its availability or the schedule for its acquisition

During construction of the GLCB the Contractor may use NIH utilities, if available. The Contractor may use an agreed upon area to store and secure materials. The Government will provide temporary identification documents so that construction workers will have access to NIH.

22. Government-furnished information: Discuss any Government information, such as manuals, drawings, and test data, to be provided to prospective Offerors and Contractors.

The Government will make available to the Contractor the plans and specifications prepared by Pyramid Architects.

23. Environmental and energy conservation objectives.

Environmental Review Required. Yes No Note: Environmental Checklist is complete.

Energy Conservation Objectives Required. Yes No Note: Sustainability Checklist is complete.

24. Security considerations: For acquisitions dealing with classified matters, discuss how adequate security will be established, maintained, and monitored

Security will be handled in accordance Interagency Security Committee's (ISC) Design Criteria and the Division of Physical Security, ORS policies and procedures. Due to the nature of this facility policies and procedures of the Division of Occupational Safety and Health must be followed

25. Contract administration

Assigned Contracting Officer _____

Assigned Contract Specialist _____

Assigned Project Manager Alamelu Ramesh, P.E.

Project Accepted on behalf of the Government by: _____

26. Stipend Required N/A



27. Other considerations: Discuss, as applicable, standardization concepts, the industrial readiness program, the Defense Production Act, the Occupational Safety and Health Act, foreign sales implications, and any other matters germane to the plan not covered elsewhere

The following laws and Executive Orders apply to the design and construction of the GLCB:

- A. Miller Act - Performance & Payment Bonds: FAR 28.102-1(a) The Miller Act (40 U.S.C. 270a-270f) requires performance and payment bonds for any construction contract exceeding \$100,000
- B. Energy Policy and Conservation Act (42 U.S.C. 6361(a)(1)) and Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.);
- C. National Energy Conservation Policy Act (42 U.S.C. 8253 and 8262g);
- D. Executive Order 11912, April 13, 1976;
- E. Executive Order 12759, Sections 3, 9, and 10, April 17, 1991; and Executive Order 12902, March 8, 1994.
- F. The National Environmental Policy Act (NEPA) The regulations implementing NEPA were issued by the Council on Environmental Quality (CEQ) (40 CFR Parts 1500 1508). Executive Order 11214 also governs NEPA responsibilities.
- G. Clean Water Act (33 U.S.C. §§1251 et seq.)
- H. The Clean Air Act, 42 USC §§7401
- I. Architectural Barriers Act of 1968, 42 USC §§4151-4156, as defined in the Federal Management Regulation (FMR) §102.76.60 through 102.76.95 and the Architectural Barriers Act Accessibility Standard, defined as Appendices C and D, 36 CFR §1191, ABA Chapters 1, 2, and Chapters 3 through 10.
- J. Compliance with Codes and Standards: In accordance with 40 U.S.C. §3312, each HHS building should be constructed or altered, to the maximum extent feasible, in compliance with one of the nationally recognized model building codes and with other nationally recognized codes, including mechanical and electrical codes, fire and life safety codes, and plumbing codes. Due consideration should be given to all State and local zoning laws as if the project were not being constructed or altered by a Federal agency. (The Government and its contractors are not required to obtain building permits or to perform inspections.) Solicitations for design and construction of HHS buildings should contain clauses notifying prospective contractors of the statutory provisions of 40 U.S.C. §§3112 (f) and (g).
- K. FAR 22.4 Labor Standards for Contract Involving Construction applies to design-build services. 22.400 Scope of subpart. This subpart implements the statutes which prescribe labor standards requirements for contracts in excess of \$2,000 for construction, alteration, or repair, including painting and decorating, of public buildings and public works. Labor relations requirements prescribed in other subparts of Part 22 may also apply.
- L. FAR 22.4 includes the Davis-Bacon Act and the Copeland Act.
- M. FAR 22.6 Walsh-Healey Public Contracts Act also applies to design-build and construction services.
- N. Equal Employment Opportunity as specified in FAR 22.8 or Executive Order 11246 applies to all Federal contracts.
- O. 29 CFR Part 1910 -- Occupational Safety and Health Standards sets minimum design standards for facilities such as egress, fire prevention plan, ventilation etc.
- P. 29 CFR Part 1926 is the Safety and Health Regulations for Construction.
- Q. Latest edition of Biosafety in Microbiological and Biomedical Laboratories
- R. Latest edition of the NIH Design Requirements Manual



Milestones for the acquisition cycle: Address the following steps and any others appropriate:

Acquisition plan approval. [Yes](#)

Program of Requirements. [Yes](#)

Performance Specifications. [Yes](#)

Data requirements. [Yes](#)

Completion of acquisition-package preparation. [Yes](#)

Purchase request. [N/A](#)

Justification and approval for other than full and open competition where applicable and/or any required D&F approval. [N/A](#)

Issuance of synopsis. [No](#)

Issuance of solicitation. [TBD](#)

Evaluation of proposals, audits, and field reports. [No](#)

Beginning and completion of negotiations. [No](#)

Contract preparation, review, and clearance. [No](#)

Contract award. [No](#)





SECTION 6-2: CONSTRUCTION ACQUISITION PROCEDURES

6-2-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements
X6-2-A	Sample Bid Report Form

6-2-00 POLICY

This section sets forth policies, procedures and guidance for construction of federally-owned real property assets, the traditional method that utilizes two or more separate and discrete contracts to deliver a facility. Usually there is one design (architect-engineer contract) and one or more construction contracts. Under this arrangement there is no privity between the contracts. The designer who develops the plans and specification (contract documents) cannot direct or supervise construction.

Construction can be procured using sealed bids in accordance with FAR 36.1 and FAR 36.2. Construction can also be procured under FAR 36.214 Special Procedures for Price Negotiation in Construction Contracting.

6-2-10 PROCEDURES

A. PRE-ACQUISITION REVIEW (PAR) FOR CONSTRUCTION CONTRACTS –

The Contracting Officer will take charge of and manage the project acquisition and the construction contracting process. The architect/engineer is responsible for the professional quality, technical accuracy, and coordination of all services required under their contracts including adequacy of the plans and specifications. The [Office of Acquisition \(OA\)](#) is encouraged to establish a pre-acquisition review process to assure that everyone involved in the development and assembly of the construction acquisition package confirms that the package is complete and satisfactory. Under the direction of the Contracting Officer, the PAR team should consist of the Contracting Officer, Contracting Officer's technical representative, architect/engineer, OPDIV's technical review team, and the Office of General Counsel. It is recommended that the PAR team review the construction contract to assure that all applicable provisions and clauses are included. The PAR team should confirm that the construction acquisition package is in accordance with the Facility Project Approval Agreement (FPAA).

B. PRE-BID CONFERENCE –

HHS encourages holding on-site pre-bid conferences for all construction projects. The agenda will vary depending on the scope and complexity of the project. For major projects, it is recommended that [OA](#) use the services of a professional recorder to record the proceedings and send each participant a hard copy of the meeting record.

C. SUBMISSION OF BIDS OR PROPOSALS –

Consistent with FAR Part 14 or 15, as appropriate, bids or proposals must be submitted in accordance with the terms and conditions of the solicitation, which shall specify a due date, time and location for submission.



D. EVALUATION OF BIDS OR PROPOSALS –

If sealed bidding procedures are used, the contracting officer will follow evaluation requirements of FAR Part 14. If a negotiated acquisition, then the contracting officer will follow the evaluation requirements of FAR Part 15, including the provision at FAR 52.215-1, which allows for award without discussion.

E. CONTRACT AWARD –

Contract award will be made with reasonable promptness upon completion of the evaluation of the offers pursuant to the relevant FAR provisions and terms of the solicitation.

F. CONSTRUCTION CONTRACT ADMINISTRATION –

ORF shall decide the appropriate key staff for any project team depending on complexity, cost, type of construction, etc. Key team members that may be involved in construction projects are: Contracting Officer, Project Officer (COTR), Architect/Engineer, Commissioning Agent (if required) and the Construction Contractor.

1. Monitoring Schedule, Scope, and Cost: In addition to visual inspections of the work and materials, it is standard practice for project officers to measure performance of construction projects using management tools that evaluate progress with respect to schedule, scope and cost. By integrating the resultant data, useful information is derived which can be used to determine the percentage of work complete for payment purposes or to identify schedule problems that require corrective action on the part of the contractor. In so doing, the project officer is applying the most basic Earned Value principles.
2. Submittals: The need for submittals shall be determined by the [Engineering Activity \(EA\)](#), as required by the appropriate acquisition regulation, the contract, and the pre-construction conference agenda. Typically, submittals take one or more of the following forms: shop drawings, plans, diagrams, catalog submittals, color charts, samples, mock-ups, safety plans, testing plans, test results, disposal plans, coordination drawings, production plant visits, as-built drawings, and other associated information. Substitutions may be allowed only at the discretion of the Contracting Officer. The [EA](#) shall define the scope, process, elements, and documentation of the submittal approval activity.
3. Contractor Payments: Contractor progress or partial payments are usually made periodically (monthly) during the progress of the Project. The amount of payment is usually based upon the contract amount, an approved schedule of values, an approved progress schedule, project officer verification of the value of work-in-place and stored materials, satisfactory progress on the approved progress schedule, and project officer recommendation to the Contracting Officer for payment. From time to time, payments may be reduced for cause, as outlined in the FAR. Approval authority for progress payments rests with the Contracting Officer.
4. Final Payment - Contractor final payment is made at the end of the Project when all provisions and requirements of the contract have been satisfactorily accomplished by the contractor. The project officer addresses construction issues and reports any deficiencies to the Contracting Officer. Approval authority of final payment rests with the Contracting Officer.



G. ACCEPTANCE:

The Contracting Officer has sole authority to grant final acceptance of any facility or portion thereof. Generally, acceptance infers approval of all work, including satisfactory correction of all the items on the deficiencies and omissions list. Acceptance of the contract work is final and conclusive, subject to certain contractual conditions such as warranties, guarantees, latent defects, etc. For this reason, a facility should not be accepted without a clear delineation in writing of any conditions or exceptions to the acceptance. Acceptance should not be granted unless all close-out items have been completed, such as O&M Manuals, as-built drawings, list of systems and equipment, attic stock, tools, maintenance parts, etc., and that all specified operator/ maintenance personnel training has been provided.

1. Warranties: The OPDIVs responsible for the Project shall appoint appropriate staff to assist the Contracting Officer in the management of the technical portion of the warranty process for the completed Project. The OPDIVs shall determine the period of time that the project officer remains involved with warranty management, before transferring the responsibility to the organization providing operations and maintenance functions for the facility.
2. Closeout Documents: All documents required by the contract including, but not limited to, Guarantees and Warranties, Commissioning Reports, Record Drawings, Operation and Maintenance Manuals, and Training Documents, shall be provided as specified prior to contract closeout. Each OPDIV shall prepare a format to assure that all contracts are closed out and all funds are disbursed or de-obligated from the project.
3. Training: Training of Operations and Maintenance Staff to operate and maintain the new facility and sophisticated building systems and equipment is very important to the activation of the facility. Provisions for adequate operation and maintenance training should be provided for in the specifications or in the general provision of the contract. The contract should require the contractor to provide a detailed training plan based on actual submitted manufacturer's recommendations for review and approval by the COTR. Provisions for training the operators/ users in the care and use of equipment should also be included in the contract. Training should occur prior to acceptance of the work by the Government.

6-2-20 GUIDANCE AND INFORMATION

A. PREPARATION AND PUBLICIZING SOLICITATIONS

1. Preparation and Publicizing Solicitations: Solicitations must describe the requirements of the Government clearly, accurately, and completely. Unnecessarily restrictive specifications or requirements that might unduly limit the number of bidders or offerors are prohibited. The solicitation should include all documents (whether attached or incorporated by reference) that prospective bidders or offerors submit with their bid or proposal.
 - a. Solicitations must be publicized pursuant to the requirements of FAR 5.2. Publication must provide sufficient time to enable prospective bidders or offerors to prepare and submit bids or proposals. Projects above OPDIV approval authority may not be advertised without an approved Facility Project Approval Agreement.
2. In addition, all HHS construction shall be executed in compliance with applicable Federal Acquisition Regulations plus Executive Orders, laws, and regulations relating to 1) labor, 2) energy, water conservation, sustainability, and/or other environmental matters; 3) safety; 4) building codes; and 5) fiscal responsibility.



B. GENERAL CONSTRUCTION PROCUREMENT GUIDANCE

The procurement of construction should be in accordance with the acquisition plan. There are only two basic types/ major categories of contracts. They are Fixed Price and Cost-Reimbursement. Generally, firm-fixed priced contracts shall be used to acquire construction, FAR 36.207. Firm-fixed-price contracts shall be used when the method of contracting is sealed bidding, FAR 14.104. FAR 16.2 addresses incentives and economic price adjustments in fixed-price contracts.

1. A firm-fixed-price contract provides for a price that is not subject to adjustment, except for appropriate modifications. This contract type places upon the contractor maximum risk and full responsibility for all costs and resulting profit or loss. It provides maximum incentive for the contractor to control costs and perform effectively, while imposing a minimum administrative burden upon the contracting parties.
2. Fixed-price contracts with economic price adjustment may be used for construction in certain circumstances as outlined in FAR 36.207(c) and when authorized in accordance with FAR 16.203.
3. Justification is required for other than firm-fixed-price contracts for construction, except on projects contracted with tribes on P.L. 93-638. The basis for using incentives or economic price adjustments in a fixed-price construction contract shall be documented in the acquisition plan.

C. ORDERING FROM AN EXISTING CONSTRUCTION IDIQ CONTRACT

1. The PO prepares the Request for Contract Action (RFCA). The RFCA for an order on an existing IDIQ contract includes:
 - Scope of Work – plans and specifications, engineering sketches, or narrative description of the work
 - Independent Government Estimate
 - RFCA Memorandum including RQM (funding authorization)
 - Justification (when ordering non competitively from a multiple award TOC only)
 - Copy of DPPA Building Permit (for projects over \$250K)
 - (Optional) Memorandum quantifying the value of liquidated damages to be assessed (FAR 11.5)
2. The PO's supervisor reviews and approves the RFCA. The PO submits the RFCA to the CO.
3. The CO/CS reviews the RFCA package for completeness.
4. The CO/CS prepares the task order file including the Request for Proposal (RFP) and sends the RFP to the contractor.
5. The CO/CS receives the task order proposal and provides a copy to the PO for technical evaluation.
6. If needed, the PO reviews the proposal, compares the proposal to the government estimate, and completes a technical analysis.
7. The government needs to review the reasonableness of the proposal and act accordingly.
8. If needed, the government conducts negotiations as per the FAR 15.



- 9 The CO/CS completes the task order file including the summary of negotiations and submits the file for Pre-Award review.
- 10 The CO issues a Record of Call and provides a copy to the PO.

D. CONTRACTS AWARDED BY NON-COMPETITIVE NEGOTIATION

(Applies to 8(a) contracts and other justified sole source procurements, the contract types may be either IDIQ or standalone contracts).

1. The PO prepares the RFCA. The RFCA includes:
 - Scope of work – Plans and specs, engineering sketches, or narrative description of the work
 - Independent Government Estimate
 - RFCA Memorandum including RQM (funding authorization)
 - Justification (JOFOC) - Not required for 8(a) negotiated contracts
 - Copy of DPPA Building Permit (for projects over \$250K)
 - (Optional) Memorandum quantifying the value of liquidated damages to be assessed (FAR 11.5)
2. For 8(a) contractor under \$3,000,000, the PO evaluates potential 8(a) contractors based on past performance, relevant experience, and capability. The PO provides the name of the best-qualified contractor to the CO.
3. The POs' supervisor reviews and approves the RFCA. The PO submits the RFCA to the A/E & Construction Contracting Branch.
4. The Office of Acquisitions, ORF reviews the RFCA package for completeness.
5. The CO/A/E & Construction Contracting Branch Chief reviews the JOFOC and forwards it to the appropriate levels of authority for approval. The CO follows the procedures set forth by the JOFOC manual.
6. The A/E & Construction Contracting Branch CO/CS, in coordination with the PO prepares an acquisition plan per FAR 7.1.
7. The CO/CS prepares the contract file including the RFP, obtains the appropriate authorizations and reviews from the SBA, NIH SBO and DAPE.
8. The CO requests a proposal from the selected contractor. The CO receives and forwards a copy of the contractor's proposal to the PO for review.
9. The PO prepares a technical analysis of the contractor's proposed level of effort and materials. The PO recommends adjustments to the proposal and identifies areas for discussion and provides this to the CO as input to the pre-negotiation position. The PO may recommend accepting the contractor's proposal if he determines that it is fair and reasonable.
10. The CO/CS performs a cost and/or price analysis.



11. The CO and PO determine if discussions with the contractor are necessary. The CO schedules the discussions. The CO prepares the pre-negotiation position using the PO's technical evaluation.
12. Following discussions, the contractor submits a revised proposal. The PO completes a technical evaluation of the revised proposal and recommends accepting the proposal or additional discussion.
13. If the final negotiated amount exceeds up-front funding, the PO requests additional funding. The PO forwards the approved funding document to the CO upon receipt. See note 4.3.16.
14. The CO/CS completes the contract file and submits the file for the Pre- Award review(s).
15. The CO awards the construction contract. The CO and PO hold a preconstruction meeting. Once the contractor submits the appropriate performance and payment bonds, and certificate of insurance, the CO issues the NTP.

E. CONTRACTS AWARDED BY COMPETITIVE NEGOTIATION- (BEST VALUE):

The contract types may be either IDIQ or standalone contracts.

1. The PO determines the technical evaluation criteria for the solicitation. The technical criteria must include the following:
 - Capability to perform similar size work in the required time frame
 - Contractor's relevant experience
 - Qualifications of key personnel
 - Past performance – references
 - Quality Control
 - Additional technical criteria may be included. Examples of additional criteria may be: schedule/work sequence, safety record, and General Contractor's previous experience with subcontractors, management plan, quality control plan, cost control history and subcontracting plan. Weighting of the technical criteria should reflect the requirements of the project.
2. The PO recommends members of the Technical Evaluation Board to the ORF Division Director, who appoints members to the Technical Evaluation Board in Writing. The PO normally chairs the board.
3. The P.O. prepares the RFCA, which includes:
 - Scope of Work (Plans and specs, or engineering sketches and narrative description)
 - Draft FEDBIZ OPPS solicitation notices
 - Independent Government estimate
 - RFCA Memorandum including RQM (funding authorization)
 - Proposed technical evaluation criteria
 - Memorandum quantifying the value of the liquidated damages to be assessed (FAR 11.5)
4. The CO/CS reviews the RFCA package for completeness.
5. The PO in coordination with the CO/ CS prepares an acquisition plan per FAR 7.1.



6. The PO and CO develops the criteria for evaluating the cost portion of the proposals. Cost can be evaluated in one of two ways.
 - Contractors can be evaluated technically, and award made to the lowest cost qualified proposal. (Lowest price technically acceptable) (Far 15.101-2)
 - Cost is evaluated as a trade off factor with the technical proposal. (Trade off Process) (FAR 15.101-1)
7. The PO and CO finalizes the FEDBIZ OPPTS announcement for the project. If the contract may be awarded without discussions with the contractors, the FEDBIZ OPPTS announcement must so state.
8. The CO/CS prepares the solicitation file and obtains the appropriate authorizations and reviews from the SBA, NIH SBO and DAPE.
9. The CO/CS posts the solicitation on the A/E & Construction Contracting Branch Website.
10. The PO or A/E prepared and forwards to the CO any amendments to the solicitation.
11. The CO issues amendments as necessary via the Office of Acquisitions, ORF Website.
12. The CO receives contract proposals and forwards to the Technical Evaluation Board for review and evaluation.
13. The Technical Evaluation Board rates the proposals against the technical evaluation criteria. The PO reports the results to the CO.
14. The CO performs a cost and/or price analysis of the cost proposal and combines with the technical evaluation to determine the competitive range (short listed firms).
15. The CO and PO determine if discussions with the contractor are necessary. The CO schedules the discussions. The CO prepares the pre-negotiation position using the PO's technical evaluation.
16. Following discussions, the contractor submits a revised proposal. The PO completes a technical evaluation of the revised proposal and recommends accepting the proposal or additional discussion.
17. If the final negotiated amount exceeds up-front funding, the PO requests additional funding. The PO forwards the approved funding document to the CO upon receipt. See note 4.3.16
18. The CO/CS completes the contract file and submits the file for the Pre- Award review(s).
19. The CO awards the construction contract. The CO and PO hold a preconstruction meeting. Once the contractor submits the appropriate performance and payment bonds, and certificate of insurance, the CO issues the NTP.
20. If upon completion of negotiations sufficient funding is not available. The CO will make appropriate adjustments in accordance to the best course of action that will be in the best interest to the government.



F. SEAL BID ACQUISITION:

1. The P.O. prepares the RFCA, which includes:
 - Scope of Work (Plans and specs, or engineering sketches and narrative description)
 - Draft FEDBIZ OPPS solicitation notices
 - Independent Government estimate
 - RFCA Memorandum including RQM (funding authorization)
 - Memorandum quantifying the value of the liquidated damages to be assessed (FAR 11.5)
2. The CO/CS reviews the RFCA package for completeness.
3. The PO in coordination with the CO/ CS prepares an acquisition plan.
4. The PO and CO finalizes the FEDBIZ OPPS announcement for the project.
5. The CO/CS prepares the solicitation file and obtains the appropriate authorizations and reviews from the SBA, NIH SBO and DAPE.
6. The CO/CS posts the solicitation on the Office of Acquisitions, ORF- Website.
7. If required, the PO or A/E prepares and issues clarifications or changes to the construction documents and forwards them to the CO. The CO issues the amendments as necessary via the Office of Acquisitions-ORF Website.
8. The CO Schedules Opening Bid Date.
9. The CO receives contractor's proposals on Bid opening day prior to the scheduled time. As scheduled, the CO opens Contractors Bids.
10. Contractor is selected based on the lowest price.
11. The CO/CS completes the contract file and submits the file for the Pre- Award review(s).
12. The CO awards the construction contract. The CO and PO hold a preconstruction meeting. Once the contractor submits the appropriate performance and payment bonds, and certificate of insurance, the CO issues the NTP.
13. If the lowest price contractor selected at Bid opening sufficient funding is not available. The CO will make appropriate adjustments in accordance to the best course of action that will be in the best interest to the government.
14. If protests are received from non selected contractors, the CO evaluates the validity of the protest and follows FAR regulation requirements.

G. SAFETY

The EA should assure that the Contractor is in compliance with federal and state safety regulations as they relate to construction. Although job safety is the responsibility of the contractor, the project officer should look for unsafe or potentially unsafe conditions. Should the project officer become aware of any such conditions, the project officer should notify the Contracting Officer and the contractor. If the unsafe



condition is life threatening, the project officer should direct the contractor to take immediate action to remedy the situation, even to the point of issuing a “Stop Work Order”, if necessary. If a “Stop Work Order” is issued, the project officer should notify the Contracting Officer of the pertinent facts as soon as possible.

H. GOVERNMENT OVERSIGHT

The **CO** and **PO** are responsible for performing oversight of all aspects of the contract to assure that construction contract requirements are met:

1. Quality Assurance in accordance with FAR Part 46. Government contract quality assurance shall be performed at any stage of performance and such places as may be necessary to determine that the work conforms to contract requirements. Quality assurance surveillance plans should be prepared in conjunction with the preparation of the statement of work. The plans should specify all work requiring surveillance and the method(s) of surveillance.
2. Changes: The FPAA is a binding agreement that establishes project scope, budget, and schedule. Changes at this level of development are costly (construction phase) and should be avoided. The **OA** should have a formal change control process (See Section 6-3). Technical changes due to differing site conditions or errors and omissions by the architect/engineer or the Government should be approved at the **ORF** level. Programmatic changes should also be approved at the **OPDIV** level. The Contracting Officer is the only person with authority to issue a change or modification to the construction contract. The Contracting Officer may delegate authority to the Project Officer for field changes. If the Program of Requirements (POR) is exceeded or if the cost exceeds the limits of the FPAA, approval must be obtained through HHS using the FPAA process. The **OPDIVs** shall assure that the approved changes are properly implemented into the project. See also Section 2-3 for changes requiring Departmental approval through the FPAA.

6-2-30 REPORTING REQUIREMENTS

A. BID REPORT FOR CONSTRUCTION CONTRACTS

The **OPDIV** shall submit a bid report to the Office for Facilities Management and Policy (OFMP) at the completion of the bid/proposal evaluation process. A bid report is required only on those projects requiring HQ approval per the FPAA policy. The report is for OFMP information only. A sample bid report form is provided as Exhibit X4-6-D. The Bid Report may be in a different format such as the **OPDIV's** standard bid tabulation format as long as it contains the information included in the Exhibit.



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SECTION 6-3 CONSTRUCTION – CHANGE ORDER

6-3-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)

6-3-00 POLICY

This Section describes the process for handling and implementing a construction change order (modifications). Change orders should be avoided and judiciously issued, particularly if they change scope, budget or schedule of the project. Maintaining scope, cost and schedule is a very important performance measure on HHS' scorecard and should not be taken lightly. The HHS Real Property Asset Management Plan (RAMP) states the following: *“As signatories to the FPAA, the OPDIV Board Member, OPDIV Project Director, and OPDIV Project Manager are held accountable for delivering the approved project within the defined scope, budget and schedule.”* It is very important that the project's requirements are fully defined before awarding a construction contract.

A. RESPONSIBILITIES

- PO is responsible to assure that changes which affects life safety, fire prevention, environmental protection, occupational and radiation safety etc. are reviewed and approved by the NIH authority having jurisdiction.

6-3-10 PROCEDURES

A. GENERAL PROCEDURES

1. The contractor submits a written request to the PO for a change to the construction project.
2. The PO reviews the proposed change for its merits and determines whether it is required. If the requested change is required, the PO determines whether the existing contract can be modified to accommodate the change. If the requested change is outside the scope of the project, a new contract is needed unless a Justification for Other than Full and Open Competition is provided. .
3. If the requested change can be handled by modifying the existing contract, the PO prepares the RFCA and submits it to procurement. The RFCA package includes the following:
 - Government estimate
 - SOW
 - A brief description of why a change is necessary (design deficiency, unforeseen site conditions, program change, impact of other construction project, etc)
 - RFCA Memorandum including RQM (funding authorization)

Note: If the PO determines the change requires an A/E design then the PO must adhere to one of the following processes:

- If the change requires an A/E design and it is considered outside the A/E's scope of work, the PO reviews the Section 5-5 Design Change Order and 5-7 Design Management, Design Review and Permit Process and follows applicable procedure requirements.
- Changes which affects life safety, fire prevention, environmental protection, occupational and radiation safety etc. shall be reviewed and approved by the NIH authority having jurisdiction.



- If the change is an error or omission to the contract documents, the A/E is required to issue a clarification or modification to the contract documents by preparing the SOW and cost estimate. The A/E forwards the package to the PO who will prepare the RFCA package for the required change order.
- If the required change is not design-related, the PO prepares and completes the RFCA package for the change.
- The PO shall provide the required change order number in the Funding document (RFCA Memorandum including RQM).

4. The PO determines the appropriate modification process.

- a. **Emergency Change.** If the change is an emergency, or is time-critical, the PO notifies the CO, and the CO makes a unilateral modification to the contract. The PO will follow-up with a completed RFCA package.

B. NOT EMERGENCY/ NOT SUBSTANTIAL CHANGE.

If the change is not an emergency, and is not substantial, the PO initiates unilateral/bilateral modification process by preparing the RFCA package.

1. The PO provides a complete RFCA package to the CO, and the CO requests a cost proposal from the contractor.
2. The contractor submits the proposal to the CO.
3. The CO forwards the proposal to the PO.
4. The PO evaluates the proposed change and prepares a pre-negotiation position.
5. The PO and CO hold the negotiation meeting with the contractor; the CO documents the negotiations.
6. If there is no agreement on the price, the CO may make a unilateral modification to the contract or seek other alternatives.
7. If the PO, CO, and contractor agree on the price, the CO makes a bilateral modification to the contract.

C. NOT EMERGENCY/ SUBSTANTIAL CHANGE:

Substantial changes typically result from changes in program requirements. If the change is substantial and the PO determines the requested change is outside the scope of the project, the PO shall first discuss required changes with supervisor prior to initiating the RFCA modification process. If it is determined that the change is valid, the PO initiates the RFCA process for the change. If the requested change can be handled by modifying the existing contract, the PO prepares the RFCA and submits it to procurement.

1. The CO issues the change order to the contractor and sends a copy to the PO.



6-3-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURE

- Section 5-5 Design-Change Order

B. RELEVANT DOCUMENTS

- Federal Acquisition Regulations
- JOFOC Manual

C. RECORDS

- Plans and Specifications prepared by the A/E contractor
- Independent Government Cost Estimate prepared by the A/E contractor
- Funding Document
- Record of Contract Action Award





SECTION 6-4 SIMPLIFIED ACQUISITION / MICRO PURCHASE FOR CONSTRUCTION

6-4-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)

6-4-00 POLICY

This Section defines the process for obtaining a construction purchase order for micro purchase (<\$2,500) and simplified acquisition (>\$2,500 and <\$100,000).

A. APPLICABILITY

This procedure applies to Purchase Orders within the Micro Purchase and Simplified Acquisition Threshold of \$100,000 for all services except services provided by A/E.

B. RESPONSIBILITIES

- The Project Officer (PO) is responsible for preparing and submitting the acquisition request/information required for the purchase or the Request for Contract Action (RFCA).

6-4-10 PROCEDURES

1. The PO must develop the purchase order specifications/statement/scope of work and provide a list of recommended qualified vendors/contractors based on relevant experience or previous customer satisfaction.
2. The PO may solicit quotations from qualified contractors as described below:
 - Under \$2,500 – at least one quotes.
 - \$2,500 - \$100,000 – a minimum of 3 quotes must be obtained or a list of recommended contractors must be provided to the Purchasing Agent (Station Support Branch) to permit posting on the electronic bulletin board.
 - When it is in the best interest of the Government (e.g., urgent and compelling, contractor currently on site, continuation of previous work, etc.), one qualified contractor can be selected. However, a sole source justification must be provided along with the purchase request to support the purchase without full and open competition.
3. The PO must request and obtain a Work Request # and adequate funding (hard copy) for contract services. An independent Estimate is required for a Simplified acquisition or Micro-purchase.
4. The PO develops the purchase request and forwards through their supervisor to the Purchasing Agent (Office of Acquisitions, ORF). The purchase request consists of:

Purchase Order up to \$2,500:

- Assigned Work Request #
- Scope of Work (narrative or sketches)
- RFCA Memorandum including the RQM (funding authorization)
- Acquisition Worksheet
- Contractors quote



Purchase Order \$2,500 - \$100,000:

- Assigned Work Request #
 - Scope of Work (narrative or sketches)
 - RFCA Memorandum including the RQM (funding authorization)
 - Acquisition Worksheet
 - 3 contractor quotes, list of recommended contractors or sole source justification (JOFOC if appropriate).
 - Contractors quote (If appropriate)
5. The Purchasing Agent (PA) typically delegates authority to the PO to obtain the quotes, based on the recommended contractor source. Upon receipt of quote(s), the Purchasing Agent will notify the PO of the lowest quote and the name of the contractor.
 6. If the contractor offering the lowest quote is on the list of recommended contractors, the PO recommends award. If the contractor offering the lowest quote is not on the list of recommended contractors, the PO evaluates the contractor. If the contractor offering the lowest quote is considered qualified by the PO, the PO recommends award (in writing or by e-mail).
 7. If the contractor offering the lowest quote is not considered qualified by the PO, the PO must notify the Purchasing Agent in writing why the lowest quote is not acceptable and request that an award not be made to the lowest quote in the competition. The PO must then evaluate the next contractor offering the lowest quote. This process must continue until the lowest quote from a qualified vendor is selected.
 8. The Purchasing Agent awards the purchase order to the lowest cost qualified contractor.

6-4-20 INFORMATION AND GUIDANCE

A. RELATED PROCEDURES

- Construction Procurement

B. RELEVANT DOCUMENTS

- Federal Acquisition Regulation
- NIH Delegated Acquisition Reference Guide, Part II, Subpart 2.1

C. RECORDS

- Acquisition Work Sheet
- Scope of Work
- Government Estimate
- Funding document
- Record of Contract Action Award from Purchasing Agent
- JOFOC (if required)



SECTION 6-5 CONSTRUCTION CONTRACTOR DISPUTE RESOLUTION

6-5-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)

6-5-00 POLICY

This Section defines the steps required to process and resolve disputes.

A. APPLICABILITY

This procedure applies to all construction projects in ORF.

B. RESPONSIBILITIES

- The Project Officer's (PO) responsibilities include: reviewing the Request for Equitable Adjustment (REA), determining if it is valid, notifying the Contracting Officer (CO) of the validity of the REA, initiating a modification if it is supported by the REA, notifying his/her supervisor of the potential for a claim, working with the CO in negotiating or litigating the claim, requesting additional funds to cover the settlement agreement amount, and recommending approval of final payment.
- The CO's responsibilities include: receiving the REA from the contractor and forwarding it to the PO, notifying the contractor as to the validity of the REA, notifying legal counsel of possible litigation, leading the negotiation and litigation process on claims, modifying the contract, requesting that PO obtain additional funding for final payment.
- The PO's supervisor's responsibilities include notifying the management chain of command, as appropriate, that there is a potential for a claim to be filed on the project if the REA is denied.

6-5-10 PROCEDURES

1. The PO receives the contractor's REA from the CO and reviews it and the supporting material for merit.
2. The PO requests additional information as required to determine if the REA is valid and the amount reasonable.
3. If the documentation supports a modification to the contract, the PO notifies the CO and initiates a modification as appropriate.
4. The CO negotiates an equitable adjustment with the contractor, if necessary. The CO modifies the contract according to terms of the equitable adjustment. Upon final resolution, either through litigation or negotiation, the CO requests final payment and release of claims.
5. If necessary, the PO initiates requests for additional funding to cover final agreed contract costs.
6. The PO reviews final payment and release of claims with the settlement agreement and recommends approval if payment is consistent with the agreement.
7. The CO distributes final payment to the contractor and requests release of claims.



8. If the documentation does not support a modification to the contract, the PO notifies the CO that the REA should be denied. The CO notifies the contractor that the REA is not valid. The PO notifies his/her supervisor of potential for a claim. The supervisor notifies the management chain of command as appropriate. The CO notifies the legal counsel of possible litigation as necessary.
9. If a claim is filed, the CO and PO develop and implement a resolution strategy. The CO takes the lead in managing the negotiation and litigation process.

6-5-20 GUIDANCE AND INFORMATION

A RECORDS

- Request for Equitable Adjustment
- Contractor Claim
- Funding Document



SECTION 6-6 PRE-CONSTRUCTION ACTIVITIES

6-6-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)
6-6-00	POLICY

This Section outlines and describes the activities necessary to prepare for and initiate on-site construction activities at NIH owned and leased facilities.

A. APPLICABILITY

This procedure applies to PO that provides management of design & construction services in NIH owned and leased facilities.

B. RESPONSIBILITIES

- The PO is responsible for scheduling and completing all preconstruction activities within this procedure.

6-6-10 PROCEDURES

A. GENERAL PROCEDURES

1. Prior to pre-construction meeting, the PO completes the following:
 - a. Clearances: The PO notifies the IC point of contact about the estimated start of on-site construction and requests that the AO obtain clearances from: Division of Occupational Health and Safety, Division of Radiation Safety and Division of Environmental Protection.
 - b. Site Selection: If not already done, or if revisions are necessary the PO submits a Site Selection Request Form to the Division of Facilities Planning with a request for staging area indicating location, and temporary utility connections and awaits approval, which generally takes 2 weeks.
 - c. Telecommunication and LAN: The PO notifies the IC AO of requirements to remove/deactivate telecommunication and LAN distribution systems. If data, LAN or telecommunication is affected by the planned construction activity, CIT will need access to the site either just prior to or in the initial phase of construction in order to disconnect and remove the cabling. In order to clarify the scope and timeframe requirements of the anticipated cabling removal effort, the PO notifies the AO to initiate a telecommunications request through the CIT Help Desk allowing for 15 calendar days in advance notice. AO shall request CIT Help Desk to identify and assist in contacting the organization(s) responsible for the existing cabling and develop a cable disconnection/removal plan in coordination with the PO. Where cabling is present that is not the responsibility of CIT, one of the CIT Infrastructure Sections will identify and contact the appropriate party; e.g., the Network Infrastructure Section would contact the IC Local Area Network Coordinator if IC LAN cabling is present. The PO confirms with the IC, AO, and LAN coordinator technical and installation schedule implications of LAN.



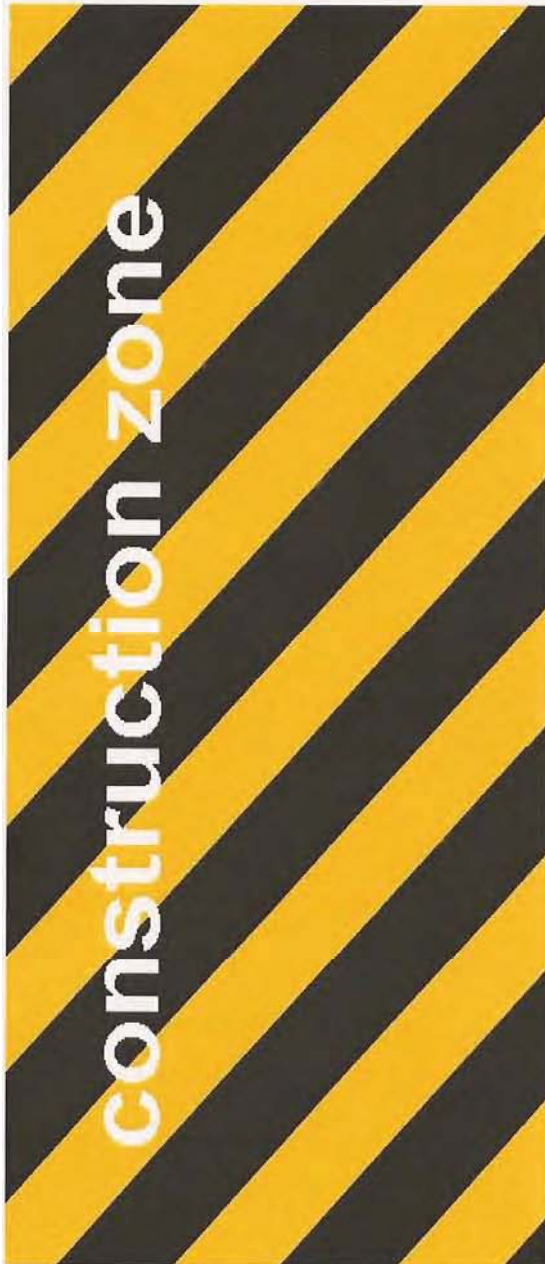
1. **Quality Assurance Plan:** The PO reviews the project construction QA plan with the A/E and CQM and ensures that it meets with customer expectations and contract document requirements.
2. **Emergency Contacts:** The PO prepares a list of emergency contacts. Contacts for the IC, contractor, security, maintenance, and grounds staff are included as appropriate to the project.
3. **Submittals:** The PO reviews the contract requirements to determine the pre-construction submittals and notes the submittals that must be approved before mobilization.
 - a. The PO assures that all pre-construction submittals are received, reviewed and receive an action of “approved” or “approved as noted”. Construction activities may not take place until approval of preconstruction submittals. Preconstruction submittals generally include the following:
 - Schedule
 - Survey and documentation of existing conditions.
 - Temporary construction (sidewalks, roads, fencing).
 - CQC plan
 - Staging/mobilization plan
 - Safety plan
 - Site mobilization plan
 - List of Subcontractors
 - Submittal log
 - Schedule of Values
4. **Pre-construction meeting:**
 - a. The PO coordinates with the CO to establish the location and time for the preconstruction meeting and develops the agenda. The PO co-chairs the pre-construction meeting with the CO.
 - b. The PO invites the contractor and the project stakeholders. These stakeholders consist of the Project Review Board (PRB) or Design reviewers (such as maintenance, Division of Fire Marshal, Division of Occupational Health and Safety, Division of Environmental Protection, facility manager etc) A/E, and CQM and customer to address construction quality control procedures.
 - c. Meeting attendees discuss the contractor’s Schedule and QC plan. The plan includes forms, submittal logs, testing, deficiency logs, inspections, and other items identified in the contract specifications.
 - d. During the pre-construction meeting or at a separate coordination meeting the PO shall review the commissioning plan with the contractor and all appropriate project stakeholders. These stakeholders consist of the Project Review Board (PRB) or Design reviewers (such as maintenance, fire marshal, safety, etc.)
 - e. The PO distributes the list of emergency contacts.
5. The meeting minutes become the record for the duration of the project.
6. **Construction Sign:** The PO posts construction project sign with contact names and phone numbers in the vicinity of the construction, generally a minimum of 2 weeks before construction begins. CCC Building 10, construction sign must incorporate ILSM & CRA check mark.



6-6-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Environmental Permitting/Approvals
- NIH Required Coordination and Permits



Work Request #:
Work Description:

Estimated Start Date:

Estimated Completion Date:

For information or problem resolution call:

Project Officer:

Phone:

Chief, Team:

Phone:

Division Chief:

ILSM:	<input type="checkbox"/>	Completed	<input type="checkbox"/>	N/A
CRA:	<input type="checkbox"/>	Completed	<input type="checkbox"/>	N/A

Construction Contractor:

After Hours Emergency Phone:

Off Campus Emergency Phone:

Website:

Building A Better NIH

Office of Research Facilities Development and Operations





SECTION 6-7 EXISTING CONDITIONS

6-7-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)

6-7-00 POLICY

This Section defines the process for identifying any extenuating and/or existing conditions in or around the work area that could have an effect on the contractor's ability to perform the work as required by the construction documents.

A. APPLICABILITY

This procedure applies to all PO responsible for the management of design & construction services at NIH owned facilities.

B. RESPONSIBILITIES

- The CO and PO is responsible for assuring a survey is conducted, and incorporating contract changes as applicable.

6-7-10 PROCEDURES

1. The existing conditions survey is accomplished prior to the onset of construction and receipt of the contractor's cost proposal.
2. The PO and the contractor should coordinate with the occupants and survey the work site via a walk-through to become familiar with all existing project conditions and to identify project conditions that are contrary to the contract documents. This identification includes but is not limited to damages inaccuracies in plans, clogged drains, missing tile etc.
3. If deviations exist the contractor shall document the survey via sketches, written description, video, and/or digital photographs, etc. The contractor shall submit the documentation for CO and PO's approval prior to start of construction.
4. The PO determines whether the contractor's survey is complete and accurate. The PO addresses any damages or deviations as noted in the survey. This may include a second walk-through with the IC, maintenance officials, Fire/Safety officials, Contracting Officer, etc.
5. The CO and PO shall determine proper responsibility and/or corrective actions required.
6. The CO administers applicable modifications to the contract.



6-7-20 INFORMATION AND GUIDANCE

A. RECORDS

- Contractor's Survey Report (when applicable)
- Sketches, written documentation, video, digital photographs etc. (if required)
 - Geotechnical Report



SECTION 6-8 SITE COORDINATION

6-8-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)

6-8-00 POLICY

This Section defines the process for obtaining temporary space outside the facility for the construction contractor to use for staging during construction.

A. APPLICABILITY

This procedure applies to all NIH projects.

B. RESPONSIBILITIES

The Project Officer is responsible for initiating the Site Selection process by filling out a Site Selection Request Form and submitting to the Division of Facilities Planning (DFP) Site Coordination official review and approval.

6-8-10 PROCEDURE

1. During the design process, the PO considers the requirements for construction staging and mobilization space, and ensures the A/E incorporates this space into the design documents. In order for approval of final design (or the scope of work for a construction project without formal design), the PO prepares a staging/mobilization plan and completes the Site Selection Request Form.
2. The PO submits the staging/mobilization plan and Site Selection Request Form to the DFP for review and distribution to NIH authorities. If a road closure is required as part of mobilization and staging, the PO includes a request along with a tentative date for temporary use of paved areas (Refer to C-660 Construction Coordination and Approvals).
3. NIH authorities comment on the submittal and recommend an action (accepted, make correction noted, disapproved, revise and resubmit, not accepted, etc.) to DFP. The DFP Site Selection Official, in turn, forwards the recommended action to the PO (a minimum review time of 14 calendar days). If the submittal is not approved, the PO revises the request, as appropriate, and resubmits it.
4. When the staging/mobilization plan and the Site Selection Request Form are approved, the PO maintains the approvals in the project file. Upon approval of the site, any restrictions for the site staging area are incorporated into the final contract documents (or the scope of work for a construction project without a formal design).

6-8-20

A. RELATED PROCEDURES

- Section 4-23 Construction Coordination & Approval
- Section 4-14 Design Management Review & Permitting



B. RELEVANT DOCUMENTS

- Temporary Construction

C. RECORDS

- Completed Site Selection Request Forms (including any revisions)
- Site Selection Request Approval (with any conditions/comments)



SECTION 6-9 CONSTRUCTION ACTIVITIES

6-9-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

6-9-00 POLICY

This Section describes the steps for initiating and completing construction of new facilities, renovations, and alterations.

A. APPLICABILITY

This procedure applies to all ORF employees who provide project management services.

B. RESPONSIBILITIES

The Contracting Officer (CO) is fully authorized to represent the government in contract matters and is the government's agent for purposes of reaching agreements, executing contracts, and making payments.

The Project Officer (as the COTAR) is responsible for successful execution of the project. The PO is also responsible for monitoring and oversight of construction for adherence to contract requirements. Those responsibilities include but not limited to the following:

- Utility shut-downs
- Road/parking/sidewalk closings
- Site work (including shrubbery/tree removal or relocation)
- Location of construction staging areas
- Contractor parking
- Work outside normal hours
- Debris/refuse removal
- Notifications to customers and affected neighboring spaces/areas as prescribed in the communication matrix
- Budget and schedule monitoring
- Quality assurance
- Changes and contract modifications
- Correction of Deficiencies and Omissions
- Approval of Payments
- Coordination with NIH organizations
- Monitoring and requesting project funding
- Managing emergencies
- The IC Administrative Officer (A/O) is responsible for gaining clearances, handling LAN and telecommunication installations, and coordinating the moves of IC staff as related to the project. The PO shall provide the A/O proper notification of the above requirements with adequate timing during all phases of construction.



6-9-10 PROCEDURES

The PO oversees construction activities to achieve beneficial occupancy of the project. Among other activities, the PO does the following:

- Maintains parameters for schedule and budgets and ensures that the construction is completed properly.
- Minimizes impacts on the NIH community.
- Ensures that customer expectations are met or exceeded.
- Ensures that submittals are tracked and monitored for actual on-site installation compliance.
- Informs the contractor of deficiencies and omissions in a timely manner.
- Conducts regularly scheduled progress meetings to review the contractor's performance and projected progress and to resolve issues.
- Documents the contractor's performance relative to the accepted schedule and schedule of values.
- Reviews and coordinates responses to the contractor's Requests for Information (RFI).
- Approves/disapproves all change requests, contract modifications, and time extensions.
- Reviews and makes recommendations on claims, and termination actions (if required).
- Reviews and processes the contractor's invoices (Application for Payment).
- Notifies IC customers of project activities and establishes a "team" relationship.
- Coordinates with other NIH organizations that affect construction. (See Construction Coordination & Approval).
- Makes executive-level briefings and presentations as required for the project.

A. QA IMPLEMENTATION PLAN:

1. The PO develops and implements the Quality Assurance (QA) plan.
2. If a QA plan is not defined, the PO establishes a basic QA plan for the project.
3. The PO or the CQM (if applicable) conducts periodic site visits in accordance with the project QA plan. The PO provides written notice to the contractor of any deficiencies and omissions D&O found during inspections that were not immediately corrected.

B. PROGRESS MEETINGS:

1. The PO notifies the CO of all progress meetings and invites all stakeholders to attend. Minutes of the meetings are kept by the PO, AE or contractor as per contract requirements. Meeting minutes are distributed to all stakeholders, whether present at the progress meeting or not.
2. Attendees of progress meetings usually include PO, AO, A/E, A/E=s representatives, contractor personnel, and each subcontractor or supplier as required, depending on the specific issues to be discussed. In general, meetings are held weekly or biweekly (depending on the complexity of the project).
3. As a minimum, the meeting must cover the following:
 - Project information
 - Attendees List
 - Status of long lead items
 - Action items, including due date for each
 - Any conflicts or discrepancies
 - Progress to date/schedule look ahead using Earned Value (EV) reports (7 day, 14 day, 30 day)
 - Construction technical matters (keep running reference log of all unsolved issues)



- New business items
- Review of submittal log taking EV into account
- Review of utility shutdown notification/logs and road closure
- Review of RFI=s log
- Review of change orders/proposal status
- Progress Payments based on EV
- Project Safety-obstructions, hazards and risks
- Next meeting schedule
- Customer complaints/damages
- Review of testing logs
- Housekeeping and progress cleaning
- Deficiencies
- Quality and work standards
- Deliveries
- Off-Site Fabrication
- Access
- Security issues
- Temporary facilities and controls
- Updating of record documents

C. SUBMITTAL REVIEW:

1. The contractor forwards submittals (shop drawings/manufacturers catalog cuts/samples) to the PO, A/E, or CQM (depending on the contract requirements). The PO, A/E, or CQM date stamps the submittals when they are received.
2. Where there are more than a few submittals involved in the project, the PO, A/E, or CQM records item in a submittal register. A list of all the subcontractors involved in the construction project also is required. Long lead items' are identified and the submittal status tracked. The submittal register is updated routinely with each submission.
3. The PO, A/E, or CQM determines if the submittal is complete before forwarding it for review.
4. The PO, A/E, or CQM distributes submittals to reviewers (A/E, CM, Fire Prevention and Life & Safety Division, etc.) and requests comments within an agreed time frame. Reviewers return comments to the PO, A/E, or CQM.
5. The PO, A/E, or CQM coordinates the comments on the submittal, recommends an action, returns the submittal to the contractor for an appropriate action and updates the submittal register. The PO, A/E or CQM marks the submittal with one of the following actions:
 - a. "Approved" or "Approved as Noted": The work covered by the submittal may proceed, provided it complies with the notations or corrections on the submittal and with the requirements of the Contract Documents.
 - b. "Approved as noted, Resubmission not required": The contractor is authorized to proceed with work as noted provided the contractor takes no exception to the notations.
 - c. "Approved as noted, Resubmission Required": The contractor is authorized to proceed with portions of the work as noted. The contractor must resubmit those items/components so noted with



additional information or requirements, for approval, before work may proceed on that portion of the submittal.

- d. "Disapproved": The submittal is incomplete or does not comply with design concept or requirements of the contract documents. No work shall proceed for this item until re-submittal with appropriate changes is approved.
- e. "Receipt Acknowledged" or no action: Submittals that are for the record or for information only or for another purpose not requiring review action.
- f. The final accepted submittal is returned to the contractor for implementation.

D. REQUESTS FOR INFORMATION (RFI)

1. An RFI may be submitted in hard copy or electronically. Upon receipt of an RFI, the PO reviews and coordinates responses to the contractor's RFIs. If the findings require a change to the contract documents, the PO prepares a change order/modification and forwards it to the CO for execution.
2. The PO or designated representative maintains a log of RFIs.

E. RECORD DRAWINGS (AS-BUILT)

1. The contractor maintains at the job site a full set of current drawings and specifications depicting as-built conditions. All deviations between the contract documents and the completed construction must be red-lined on the drawings and specifications. The deviations should be shown in the same general detail used in the contract plans. These prints must be available at all times for review by PO, CO.
2. The PO is responsible for tracking and control of all record documents. The PO shall require that as-built documents be prepared electronically. Projects that did not include electronic preparation of design documents will not require electronic as-built.
3. The PO regularly monitors the completeness and accuracy of the documents. The PO makes a notation on the inspection report about the availability of as-built drawings.

F. COMMISSIONING:

1. The PO ensures that A/E defines in the contract documents: request for 3rd party commissioning and performance testing of complex equipment and systems. All complex equipment and systems performance testing must be witnessed and verified by the PO or their designated representative.
2. Before the start of construction at the pre-construction meeting the PO reviews the commissioning plan with the contractor and project stakeholders. These stakeholders consist of the Project Review Board (PRB) or Design reviewers (such as maintenance, fire protection, safety, etc.) see C-430 Design & Design Review.
3. The commissioning agent develops start-up checklist, as identified in the commissioning plan. The PO and project stakeholders review the checklists and discuss them with the contractor.
4. The commissioning agent and contractor execute start-up checklists, as appropriate, under the direction of the PO.



5. The PO and appropriate NIH personnel approve completed checklists. The PO and commissioning agent review reports for deficiencies.
6. Upon approval of the completed start-up checklist, the contractor in coordination with the commissioning agent (CA) and PO, plans and schedules the functional performance testing.
7. The commissioning agent monitors the contractor during performance testing; records test results, and evaluate them for conformance to commissioning requirements.
8. The commissioning agent recommends approval to the PO after testing is successfully completed. The PO reviews test results with project stakeholders for concurrence.
9. The PO or designated representative reviews and accepts all final test report(s).
10. The PO schedules and establishes a training and demonstration of equipment and systems.

G. FINAL INSPECTION:

1. The contractor requests final inspection from the PO.
2. The PO meets with representatives from the office of the Fire Marshal, for the Fire Protection Final Inspection and Acceptance Test. The PO is responsible for ensuring that the contractor has performed all fire protection tests and that the area is ready for inspection. Prior to start of the final inspection, the PO ensures that all submittals have been accepted, and that all requirements of the contract have been met, including:
 - O&M manuals (spare parts)
 - As-built drawings
 - Test reports (air and water, etc.)
 - Warranties
 - Submittals
 - Demonstration & Training for maintenance staff
 - Commissioning
3. The PO, CO, IC point of contact, and others, as appropriate, conduct the final inspection. All remaining D&O are documented.
4. The PO forwards the list D&O (punch list) to the contractor for resolution. In addition, projects within the Clinical Center Hospital require that the PO forwards material certification and final punch-list to CCOFM and request CC Certificate for Occupancy.
5. The contractor forwards for the PO's review a list of corrective actions and expected execution dates. The PO determines if the space is suitable for beneficial occupancy.
6. If the punch-list is not complete prior to beneficial occupancy, the PO documents any remaining D&O in a letter to the contractor and requests correction.



H. Beneficial Occupancy:

2. The PO prepares a memorandum, with final punch-list items attached, stating beneficial occupancy of the space. The occupancy memorandum is forwarded to the IC, project stakeholders and the contractor.
3. The PO and customer point of contact work closely together to ensure smooth and orderly move-in. For larger projects, coordinated occupancy should be discussed early in the design phase and verified during the construction phase.

I. FINAL PUNCH-LIST ITEMS ARE CORRECTED:

1. The contractor notifies the PO that final punch-list items are complete.
2. The PO schedules a final walk-through with the project stakeholders for the final inspection.
3. The PO certifies that all punch-list items are complete. The PO notifies the CO, customer, contractor, and project stakeholders in writing of construction completion.
4. The PO ensures that all project signage is removed and, for exterior signage, ensures that grass areas are filled and restored.

6-9-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Section 4-19 Existing Conditions Survey
- Section 4-20 Site Coordination
- Section 4-22 Evaluation and Enforcement of Contractor Quality Control
- Section 4-23 Construction Coordination and Approval
- Section 4-24 Payments and Construction Schedule

B. RELATED DOCUMENTS

- Contract documents
- NIH Design Requirements Manual Section on Commissioning

6-9-30 REPORTING REQUIREMENTS

A. RECORDS

- Commissioning and Performance Testing Reports (if applicable)
- D&O Reports (if required)
- Final Punch-list
- Fire Prevention Certification
- Beneficial Occupancy Memorandum
- Quality Assurance Plan
- Request for Final Inspection
- Meeting Minutes



SECTION 6-10 EVALUATION AND ENFORCEMENT OF CONTRACTOR QUALITY CONTROL

6-10-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements (Reserve)
X6-10-A	QC Plan Review Checklist
B	Preparatory Phase Checklist
C	Initial Phase Checklist
D	Sample QC Manager Appointment Letter
E	Contractor Quality Control Report
F	NIH Quality Assurance Report
G	Contractor Performance Report
H	Construction Contract Clauses

6-10-00 POLICY

This Section defines the steps required by the PO for determining the validity and appropriateness of the contractor's Quality Control Plan.

A. APPLICABILITY

This procedure applies to all POs who provide project management of design and construction services in NIH-owned facilities.

B. RESPONSIBILITY

The contractor is responsible for producing a Quality Control Plan and the PO is responsible for evaluating the contractor's Quality Control Plan.

6-10-10 PROCEDURES

The PO evaluates the contractor's QC plan according to the criteria contained in the contract specifications as well as applicable U.S. Department of Labor Regulations for construction such as: OSHA, Davis Bacon, etc. Including but not limited to Federal Environmental Laws as well as other Federal Laws and Regulations (Note: for IDIQ type Task Order contracts, the QC plan requirement is usually included in the master contract.)

A. VERIFICATION

The Project Officer should verify that the contract specifications require the contractor's Quality Control Plan.

1. The checklist at attachment A can be used as a guide when evaluating the contractor's QC plan however specific contract requirements must also be considered.



2. Checklists for the Preparatory and Initial Phases of Quality Control are included at Attachment B and C for use by the contractor during construction and should be included as samples in the contractor's QC Plan.
3. A sample QC Appointment Letter is included at attachment D for reference.
4. The QC report format is included at Attachment E. The project Officer should verify that the contract specifications require the specific formats to be used.
5. The Quality Assurance Report format to be used by the Project Officer is included as Attachment F.

B. GOVERNMENT QUALITY ASSURANCE

The PO shall determine how the Government quality assurance will be performed for each project. This could be a combination of effort by the PO, contracted CQM services, or DTR oversight. All site visits should be documented through the Quality Assurance Report (Daily Report), or other meeting notes. The Government quality assurance team shall do one of the following if it notes a deficiency:

1. Provide oral notification to the contractor for any deficiency that can be corrected and verified in the same workday.
2. Provide written notification to the contractor if the deficiency cannot be corrected in the same workday. Notification can be accomplished by including the deficiency on the Rework/Deficiency Log, or by issuing a noncompliance notice. The QA team should use noncompliance notices when the deficiency is important or urgent. Informal notification can be used for minor deficiencies. The FAR "Inspection of Construction" clause applies.
3. If the contractor fails to correct deficient work, the PO can request the CO to direct the removal and replacement of any defective work. The government has a duty to mitigate the cost to the contractor of the corrective work. Therefore, the contractor should be prohibited from building on defective work. The FAR "Inspection of Construction" and "Materials and Workmanship" clauses apply.
4. Payment is not made for nonconforming work or work that may require removal or modification to correct deficiencies. Invoices are adjusted if the contractor bills for nonconforming work. This adjustment is separate from the FAR allowance to retain up to 10 percent from invoices if the contractor is behind schedule. The FAR "Payments under Fixed Price Construction" clause applies.
5. If the contractor fails to correct nonconforming work in a timely fashion, the nonconformity can be corrected by using another contract or by government forces. The PO should work in conjunction with the CO to determine the most appropriate method of correction.

C. DEFAULT

If a contractor continues to fail to conform to contract requirements after all other remedies have been attempted, the CO can use the FAR "Default" clause to prohibit the contractor from continuing with the work. The default process has three steps:

1. The PO helps the CO draft a "Cure Notice" to the contractor requesting that the contractor cure the nonconforming conditions. A cure notice should be issued only if it is possible for the contractor to cure the nonconforming conditions. A copy of the notice is forwarded to the contractor's bonding company.



2. The PO helps the CO draft a "Show Cause" letter to the contractor. This letter asks the contractor to provide cause as to why the contractor should not be defaulted. A copy of the letter is forwarded to the contractor's bonding company.
3. If the contractor does not provide adequate cause to prevent default, the CO defaults the contractor and issues notice of the default to the contractor and the contractor's bonding company.

6-10-20 GUIDANCE AND INFORMATION

A. RELEVANT DOCUMENTS

- Attachment A - QC Plan Review Checklist
- Attachment B - Preparatory Phase Checklist
- Attachment C - Initial Phase Checklist
- Attachment D - Sample QC Manager Appointment Letter
- Attachment E - Contractor Quality Control Report
- Attachment F - NIH Quality Assurance Report

B. RECORDS

- Contractor's Quality Control Plan (when applicable)
- Government's Construction Quality Assurance Plan (when applicable)
- Cure Notice (when applicable)
- Non-compliance Notices (when applicable)
- Rework Deficiency Log (when applicable)
- Show-Cause Notice (when applicable)
- QC Plan Review Checklist
- Daily QC Reports





Attachment A - QC PLAN REVIEW CHECKLIST

Item Description	Items to be Checked	√
General Items	<ul style="list-style-type: none"> • As built drawings statement. The required full-size set of marked up contract drawings to be maintained on-site, updated monthly and submitted to the Project Officer after completion of construction 	
Table of Contents	<ul style="list-style-type: none"> • TOC is included • Page numbers are indicated • Revisions sheet is included to indicate any changes made to the plan during the course of construction 	
QC Organization Chart	<ul style="list-style-type: none"> • Relationship of QC Manager to officer of firm to whom he reports • Relationship of QC Manager to other members of QC staff • Relationship of QC Manager to subcontractor QC Managers or foreman • Relationship of QC Manager to consultants, testing firms, etc. • Relationship of QC Manager to Prime Contractor's superintendent 	
Names & Qualifications	<ul style="list-style-type: none"> • Names and qualifications in resume format of all personnel in the QC organization. Qualifications of an individual should be limited to one or two pages and should relate to person's function in the QC organization. Pertinent information includes education and training, construction experience, quality control experience, and management experience. 	
Duties and Responsibilities	<ul style="list-style-type: none"> • The area of responsibility and authority of each individual in the QC organization is clearly stated 	
Outside Organizations	<ul style="list-style-type: none"> • A list of outside organizations such as testing laboratories, architects, and consulting engineers that will be employed and a description of the services they will provide 	
Appointment Letters	<ul style="list-style-type: none"> • Letter appointing the QC Manager signed by officer of the firm • Letter(s) appointing staff (if required) signed by QC Manager 	
Submittal procedures	<ul style="list-style-type: none"> • Submittal Review Procedure including names of persons authorized to certify submittals for the contractor • Submittal Status Log • Specification matrix indicating who the authorized submittal reviewer, inspector, and testing lab personnel (both on-site and factory) will be for each technical specification section 	
Testing Lab Information	<ul style="list-style-type: none"> • The contractor must provide the following information for each independent testing laboratory for NIH approval: <ul style="list-style-type: none"> ○ Review and certification of submittals ○ Functional Description of lab's organizational structure ○ List and resume of testing lab personnel ○ Affidavit of compliance with applicable ASTM publications and certification that all lab work will be performed in accordance with contract technical specifications ○ List of inspection equipment corresponding to each test noted in the testing log and equipment calibration certificate ○ Certification from a nationally recognized agency ○ Affidavits for special inspections must be submitted to the Contracting Officer before progress payments for the work are approved. 	



Attachment A - QC PLAN REVIEW CHECKLIST (cont'd)

Testing Plan and Log	<ul style="list-style-type: none"> • Testing plan includes all formal tests and the specification reference • Responsible parties identified for each test 	
Rework Procedures	<ul style="list-style-type: none"> • Non-Compliance check off list (Log of Deficiencies Form) 	
Documentation Procedures	<ul style="list-style-type: none"> • Copy of QC Daily Report Form 	
List of Definable features of work	<ul style="list-style-type: none"> • As a minimum, this will include each section of the specification cross referenced to the production schedule. For projects requiring a progress chart (Bar or Gant chart), the list of DFW shall include but not be limited to all items of work on the schedule. For projects requiring a network analysis, the list of DFW shall include but not be limited to all critical path activities. 	
Procedures for performing Three Phases of Quality Control	<ul style="list-style-type: none"> • Copies of the checklists for Preparatory and Initial inspections with the heading partially filled in (Spec section, contract number, DFW title, and schedule activity number) for each DFW 	
Personnel matrix	<ul style="list-style-type: none"> • Personnel assigned for each specification section or who is responsible for: <ul style="list-style-type: none"> ○ Review and certification of submittals ○ Perform and document the three phases of quality Control ○ Perform and document the testing ○ Performing punch-out, pre-final, and final inspections 	
Completion Inspection Procedures	<ul style="list-style-type: none"> • Identify process and the responsible party(s) for documenting completion inspections for: <ul style="list-style-type: none"> ○ Punch-out inspections ○ Pre-final inspections ○ Final acceptance inspection 	



PREPARATORY PHASE CHECKLIST (Continued on Second Page)		SPEC SECTION	DATE
CONTRACT NUMBER	DEFINABLE FEATURE OF WORK	SCHEDULE ACT NO	.INDEX #
PERSONNEL PRESENT	NIH REP NOTIFIED ____ HOURS IN ADVANCE: YES ____ NO ____		
	NAME	POSITION	COMPANY/NIH CODE
SUBMITTALS	REVIEW SUBMITTALS AND/OR SUBMITTAL REGISTER. HAVE ALL SUBMITTALS BEEN APPROVED? YES ____ NO ____ IF NO, WHAT ITEMS HAVE NOT BEEN SUBMITTED?		
	ARE ALL MATERIALS ON HAND? YES ____ NO ____ IF NO, WHAT ITEMS ARE MISSING?		
	CHECK APPROVED SUBMITTALS AGAINST DELIVERED MATERIAL. (THIS SHOULD BE DONE AS MATERIAL ARRIVES) COMMENTS:		
MATERIAL STORAGE	ARE MATERIALS STORED PROPERLY? YES ____ NO ____ IF NO, WHAT ACTION IS TAKEN?		
SPECIFICATIONS	REVIEW EACH PARAGRAPH OF THE SPECIFICATIONS.		
	DISCUSS PROCEDURE FOR ACCOMPLISHING THE WORK		
	CLARIFY ANY DIFFERENCES		
PRELIMINARY WORK & PERMITS	ENSURE PRELIMINARY WORK IS CORRECT AND PERMITS ARE ON FILE IF NOT, WHAT ACTION IS TAKEN?:		



PREPARATORY PHASE CHECKLIST (Continued from First Page)		SPEC SECTION	DATE
CONTRACT NUMBER	DEFINABLE FEATURE OF WORK	SCHEDULE ACT NO	.INDEX #
TESTING	IDENTIFY TEST TO BE PERFORMED.		
	WHEN REQUIRED?		
	WHERE REQUIRED?		
	REVIEW TESTING PLAN		
	HAS TESTING FACILITY BEEN APPROVED?		
SAFETY	REVIEW ACTIVITY HAZARDS. APPLICABLE PORTION OF CFR 1926:		
	SAFETY MEASURES TO BE TAKEN:		
MEETING COMMENTS	MEETING COMMENTS		
OTHER ITEMS OR REMARKS	OTHER ITEMS OR REMARKS		
		QC Manager	Date



INITIAL PHASE CHECKLIST		SPEC SECTION	DATE
CONTRACT NUMBER	DEFINABLE FEATURE OF WORK	SCHEDULE ACT NO	.INDEX #
PERSONNEL PRESENT	NIH REP NOTIFIED ___ HOURS IN ADVANCE: YES ___ NO ___		
	NAME	POSITION	COMPANY/NIH CODE
PROCEDURE COMPLIANCE	IDENTIFY FULL COMPLIANCE WITH PROCEDURES IDENTIFIED AT PREPARATORY, COORDINATE PLANS, SPECIFICATIONS AND SUBMITTALS		
	COMMENTS		
PRELIMINARY WORK	ENSURE PRELIMINARY WORK IS COMPLETE AND CORRECT. IF NOT, WHAT ACTION IS TAKEN?		
WORKMANSHIP	ESTABLISH LEVEL OF WORKMANSHIP. WHERE IS WORK LOCATED		
	IS SAMPLE PANEL REQUIRED	Yes ___ No ___	
	WILL THE INITIAL WORK BE CONSIDERED AS A SAMPLE	Yes ___ No ___	
	(IF YES, MAINTAIN IN ITS PRESENT CONDITION AS LONG AS POSSIBLE AND DESCRIBE LOCATION OF SAMPLE.		
RESOLUTION	RESOLVE ANY DIFFERENCES		
	COMMENTS:		
CHECK SAFETY	REVIEW PROJECT CONDITIONS		
	COMMENTS:		
OTHER	OTHER ITEMS OR REMARKS		
		QC Manager	Date



Attachment D - SAMPLE QC MANAGER APPOINTMENT LETTER

Date

QC Manager's Name

QC Manager's Address

City, State Zip

SUBJECT: Appointment as QC Manager

RE: Contract Number XXXX-YYYY-ZZ

Dear Sir:

You are hereby appointed as the Quality Control Manager (QC Manager) for SAMPLE Construction Company, Inc. for the term of the subject contract.

You are directed to follow the inspection procedures, instructions, and reports in strict compliance with the contract drawings and specifications and any authorized changes thereto. As a direct representative of the company, you are authorized and directed to perform the following duties and any other duties assigned to the QC Manager in the contract specifications:

1. Certify all shop drawings and submittals for conformance to the contract requirements. You are to keep a Submittal Status Log and Testing Plan up to date and copies of your certified submittals are to be forwarded to NIH. Submittals that require NIH approval are to be forwarded to the designated party for appropriate action after your certification.
2. Inspect the work performed on a continual basis for compliance with the current drawings and specifications. You have the authority to issue a stop work order on any item or work feature pending satisfactory correction of any deficiency in that work, particularly if the defective work is to be enclosed, is to support further construction, or will be inaccessible if further work proceeds. You have the authority to direct removal and replacement of any defective work.
3. Perform, supervise, or coordinate as required the reviews, inspections and tests to be made by other members of the Quality Control Organization.
4. Inspect and certify that all material and equipment delivered to the jobsite complies with the approved submittals.
5. Ensure that all required test and/or inspections are performed, and report the results in the daily QC Reports.
6. Submit certified QC Reports daily to the NIH Project Officer. These reports are to cover prime and subcontractor personnel and equipment on the site, idle equipment and personnel, material deliveries, weather conditions, work accomplished, inspections, results of inspections and tests, deficiencies found, and corrective action taken.
7. Maintain as-builts. At the job site, two sets of full-size contract drawings shall be marked to show any deviations that have been made from the contract drawings.
8. Recommend to (Appropriate Company Individual who manages personnel) removal of any individual from the project who consistently fails to perform work properly.
9. Report to me any subcontractor who consistently does not conform to the contract drawings and specifications.
10. Keep a copy of the approved QC Plan, with up -to-date approved revisions, on file at the job site.

Very truly yours,

SAMPLE Construction Company, Inc.
President



CONTRACTOR QUALITY CONTROL REPORT (ATTACH ADDITIONAL SHEETS IF NECESSARY)			Date: _____	
			Report No: _____	
Phase	Contract No:	Contract Title		
PREPARATORY	WAS PREPARATORY PHASE WORK PERFORMED TODAY? YES ___ NO ___ IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST			
	SCHEDULE ACTIVITY NO:	DEFINABLE FEATURE OF WORK	INDEX NUMBER	
INITIAL	WAS INITIAL PHASE WORK PERFORMED TODAY? YES ___ NO ___ IF YES, FILL OUT AND ATTACH SUPPLEMENTAL INITIAL PHASE CHECKLIST			
	SCHEDULE ACTIVITY NO:	DEFINABLE FEATURE OF WORK	INDEX NUMBER	
FOLLOW-UP	WORK COMPLIES WITH CONTRACT AS APPROVED DURING INITIAL PHASE? YES ___ NO ___ WORK COMPLIES SAFETY REQUIREMENTS? YES ___ NO ___			
	SCHEDULE ACTIVITY NO:	Description of Work, Testing Performed & By Whom, Definable Feature of Work, Specification Section, Location and List of Personnel Present		
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)		REWORK ITEMS CORRECTED TODAY (FROM PREVIOUS REWORK ITEMS LIST)		
SCHEDULE ACTIVITY NO:	DESCRIPTION	SCHEDULE ACTIVITY NO	DESCRIPTION	
REMARKS (ALSO EXPLAIN ANY FOLLOW-UP PHASE CHECKLIST ITEM FROM ABOVE THAT WAS ANSWERED "NO"), MANUF REP ON SITE, ETC.				
SCHEDULE ACTIVITY NO:	DESCRIPTION			

On behalf of the contractor, I certify that this report is complete and correct equipment and material used and work performed during the reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.

_____	_____
QC MANAGER	DATE

QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT

NIH QUALITY ASSURANCE REPRESENTATIVE DATE



CONTRACTOR QUALITY CONTROL REPORT (CONTINUATION SHEET) (ATTACH ADDITIONAL SHEETS IF NECESSARY)		DATE
		REPORT NO.
PHASE	CONTRACT NO.	CONTRACT TITLE
FOLLOW UP	WORK COMPLIES WITH CONTRACT AS APPROVED DURING INITIAL PHASE? YES ___ NO ___	
	WORK COMPLIES WITH SAFETY REQUIREMENTS? YES ___ NO ___	
	SCHEDULE ACTIVITY NO	Description of Work, Testing, Performed & By Whom, Definable Feature of Work, Specification Section, Location and List of Personnel Present.
	REMARKS (Also Explain Any Checklist Item From Above That Was Answered "NO"), Manuf Rep. On-site, etc.	
SCHEDULE ACTIVITY NO	DESCRIPTION	





National Institutes of Health
Contractor Performance Report
Standard Evaluation

Contract Data

Evaluation Type: Interim Final _ (check one)		
Evaluating Organization:	Reporting Period: From	to
Contracting Office:	Contract Number:	Order Number:

Contractor Name:	Contractor Address:	
DUNS:	City:	State:
Additional or Alternate Contractor Name:	Zip/Postal Code:	Country:

TIN:	Industrial Code (NAICS):	Commodity Code:	Contract Type:
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Contract Award Date:	Contract Expiration Date:	Contract Value:
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Requirement Description:

Ratings

Summarize contractor performance and check the number which corresponds to the rating for each rating category (*See attached Rating Guidelines*).

Quality of Product or Service

_0=Unsatisfactory	_1=Poor	_2=Fair	_3=Good	_4=Excellent	_5=Outstanding
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Government Comments for Quality of Product or Service (2000 characters maximum):

Cost Control (Rating and Comments for Cost Control are not required if contract type is Fixed-Price)

_0=Unsatisfactory	_1=Poor	_2=Fair	_3=Good	_4=Excellent	_5=Outstanding
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Government Comments for Cost Control (2000 characters maximum):

Timeliness of Performance

_0=Unsatisfactory	_1=Poor	_2=Fair	_3=Good	_4=Excellent	_5=Outstanding
--------------------------	----------------	----------------	----------------	---------------------	-----------------------

Government Comments for Timeliness of Performance (2000 characters maximum):



Business Relations

0=Unsatisfactory 1=Poor 2=Fair 3=Good 4=Excellent 5=Outstanding

Government Comments for Business Relations (2000 characters maximum):

Additional Info

Subcontracts

Are subcontracts involved? Yes No (*Check one*)

Government Comment on subcontracts (2000 characters maximum):

Contractor Key Personnel

Contractor Manager/Principal Investigator (*name*):

Government Comment on Contractor Manager/Principal Investigator (2000 characters maximum):

Contractor Key Person (*name*):

Government Comment on Contractor Key Person (2000 characters maximum):

Contractor Key Person (*name*):

Government Comment on Contractor Key Person (2000 characters maximum):

Small Business Subcontracting Plan

Did the contractor make a good faith effort to comply with its subcontracting plan consistent with the goals and objectives, reporting and other aspects of the plan? Yes No N/A (*Check one*)



If this is a bundled contract, did the contractor meet the goals and objectives for small business participation?

_Yes _No _N/A (*Check one*)

Government Comments on Small Business Subcontracting Plan (2000 characters maximum):

Small Disadvantaged Business Goals

Did the contractor make a good faith effort to comply with its subcontracting plan consistent with the goals and objectives, for small disadvantaged business (SDB) participation, monetary targets for SDB participation, and required notifications? _Yes _No _N/A (*Check one*)

Government Comments on Small Disadvantaged Business Goals (2000 characters maximum):

Customer Satisfaction

Is/was the contractor committed to customer satisfaction? _Yes _No (*Check one*)

**Would you recommend the selection of this firm again? _Yes _No (*Check one*) – FINAL
*REPORT ONLY***

Government Comments on Customer Satisfaction (2000 characters maximum):



Admin Info

Project Officer/COTR

Name:

Phone:

Fax:

E-mail Address:

Contractor Representative

Name:

Phone:

Fax:

E-mail Address:

Alternate Contractor Representative *(Required to insure that at least one person is notified of evaluation)*

Name:

Phone:

Fax:

E-mail Address:

Contracting Officer:

Name:

Phone:

Fax:

E-mail Address:



Contractor Comments

Quality of Product of Service

Contractor has elected not to comment

Contractor Comments for Quality of Product of Service (2000 characters maximum):

Cost Control

Contractor has elected not to comment

Contractor Comments for Quality of Product of Service (2000 characters maximum):

Timeliness of Performance

Contractor has elected not to comment

Contractor Comments for Timeliness of Performance (2000 characters maximum):

Business Relations

Contractor has elected not to comment

Contractor Comments for Business Relations (2000 characters maximum):

Overall Comment

Contractor has elected not to comment

Contractor Comments for Quality of Product of Service (2000 characters maximum):



Rating Guidelines

Quality of Product or Service

0 = Unsatisfactory 1 = Poor 2 = Fair 3 = Good 4 = Excellent 5 = Outstanding

Unsatisfactory	Non-conformances are jeopardizing the achievement of contract requirements, despite use of Agency resources. Recovery is not likely. If performance cannot be substantially corrected, it constitutes a significant impediment in consideration for future awards containing similar requirements.
Poor	Overall compliance requires significant Agency resources to ensure achievement of contract requirements.
Fair	Overall compliance requires minor Agency resources to ensure achievement of contract requirements.
Good	There are no, or very minimal, quality problems, and the Contractor has met the contract requirements.
Excellent	There are no quality issues, and the Contractor has substantially exceeded the contract performance requirements without commensurate additional costs to the Government.
Outstanding	The contractor has demonstrated an outstanding performance level that was significantly in excess of anticipated achievements and is commendable as an example for others, so that it justifies adding a point to the score. It is expected that this rating will be used in those rare circumstances where contractor performance clearly exceeds the performance levels described as "Excellent".

Cost Control

0 = Unsatisfactory 1 = Poor 2 = Fair 3 = Good 4 = Excellent 5 = Outstanding

Unsatisfactory	Ability to manage cost issues is jeopardizing performance of contract requirements, despite use of Agency resources. Recovery is not likely. If performance cannot be substantially corrected, this level of ability to manage cost issues constitutes a significant impediment in consideration for future awards.
Poor	Ability to manage cost issues requires significant Agency resources to ensure achievement of contract requirements.
Fair	Ability to control cost issues requires minor Agency resources to ensure achievement of contract requirements.
Good	There are no, or very minimal, cost management issues and the Contractor has met the contract requirements.
Excellent	There are no cost management issues and the Contractor has exceeded the contract requirements, achieving cost savings to the Government.
Outstanding	The contractor has demonstrated an outstanding performance level that justifies adding a point to the score. It is expected that this rating will be used in those rare circumstances where the contractor achieved cost savings and performance clearly exceeds the performance levels described as "Excellent".



Timeliness of Performance

0 = Unsatisfactory 1 = Poor 2 = Fair 3 = Good 4 = Excellent 5 = Outstanding

Unsatisfactory	Delays are jeopardizing the achievement of contract requirements, despite use of Agency resources. Recovery is not likely. If performance cannot be substantially corrected, it constitutes a significant impediment in consideration for future awards.
Poor	Delays require significant Agency resources to ensure achievement of contract requirements.
Fair	Delays require minor Agency resources to ensure achievement of contract requirements.
Good	There are no, or minimal, delays that impact achievement of contract requirements.
Excellent	There are no delays and the contractor has exceeded the agreed upon time schedule.
Outstanding	The contractor has demonstrated an outstanding performance level that justifies adding a point to the score. It is expected that this rating will be used in those rare circumstances where contractor performance clearly exceeds the performance levels described as "Excellent".

Business Relations

0 = Unsatisfactory 1 = Poor 2 = Fair 3 = Good 4 = Excellent 5 = Outstanding

Unsatisfactory	Response to inquiries and/or technical, service, administrative issues is not effective. If not substantially mitigated or corrected it should constitute a significant impediment in considerations for future awards.
Poor	Response to inquiries and/or technical, service, administrative issues is marginally effective.
Fair	Response to inquiries and/or technical, service, administrative issues is somewhat effective.
Good	Response to inquiries and/or technical, service, administrative issues is consistently effective.
Excellent	Response to inquiries and/or technical, service, administrative issues exceeds Government expectation.
Outstanding	The contractor has demonstrated an outstanding performance level that justifies adding a point to the score. It is expected that this rating will be used in those rare circumstances where contractor performance clearly exceeds the performance levels described as "Excellent".





STIPULATION 1 GENERAL PROVISIONS

1.1 Basic Definitions

“Architect-engineer services” as defined in 40 U.S.C. 541, means:

- A. Professional services of an architectural or engineering nature, as defined by State law, if applicable, which are required to be performed or approved by a person licensed, registered, or certified to provide such services;
- B. Professional services of an architectural or engineering nature performed by contract that are associated with research, planning, development, design, construction, alteration, or repair of real property; and
- C. Such other professional services of an architectural or engineering nature, or incidental services, which members of the architectural and engineering professions (and individuals in their employ) may logically or justifiably perform, including studies, investigations, surveying and mapping, tests, evaluations, consultations, comprehensive planning, program management, conceptual designs, plans and specifications, value engineering, construction phase services, soils engineering, drawing reviews, preparation of operating and maintenance manuals, and other related services.

“Construction” means construction, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other real property. For purposes of this definition, the terms “buildings, structures, or other real property” include but are not limited to improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, cemeteries, pumping stations, railways, airport facilities, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, canals, and channels. Construction does not include the manufacture, production, furnishing, construction, alteration, repair, processing, or assembling of vessels, aircraft, or other kinds of personal property.

“Contract” is intended to refer to a contract for design-build services.

“Contracting Officer” is authorized to enter into a contact on behalf of the Government.

“Contractor” (Sometimes referred to as the “Contractor” or “DB”)

“Contract Documents” are the Program of Requirements, Performance Specifications, Design Proposal, approved construction documents and the requirements within the awarded proposal.

“Deliverables” is the sum of the drawings, specifications, models, etc., prepared by the offeror in response to a Request for Proposal.

“Design” means defining the construction requirement (including the functional relationships and technical systems to be used, such as architectural, environmental, structural, electrical, mechanical, and fire protection), producing the technical specifications and drawings, and preparing the construction cost estimate.

“Design-build” as used means combining design and construction in a single contract with one contractor.

“Contractor” means the Contractor.

“Design Proposal” is that portion of a design-build proposal which contains design factors, usually including function, layout, materials, aesthetics and specifications. Design proposal falls under the general category of qualitative evaluation factors.

“FAR” means Federal Acquisition Regulations

“Firm” means any individual, partnership, corporation, association, or other legal entity permitted by law to practice the professions of architecture, engineering or related field. It also means any individual, partnership, corporation, association, or other legal entity permitted by law to construct facilities.

“Government” The entity for which the project is being built and with whom the Contractor will be in privity of contract

“Management Proposal” is that portion of a design-build proposal, which contains the management plan including project approach, personnel, organization, scheduled, affirmative action plan, etc. The management plan falls under the category of qualitative evaluation factors.

“Offeror” is one of the selected respondents to participate in the RFP Phase (2) of the design-build competition. The offerors are the only ones eligible to submit a proposal.

“Performance Specifications” is a specification expressed in terms of an expected outcome or acceptable performance standard. Often used in design-build criteria to articulate the Government’s requirements.

“Plans and specifications” means drawings, specifications, and other data for construction.

“Record drawings,” means drawings submitted by a contractor or subcontractor at any tier to show the construction of a particular structure or work as actually completed under the contract.

“Shop drawings,” means drawings submitted by the construction contractor or a subcontractor at any tier or required under a Design-build contract, showing in detail--



- A. The proposed fabrication and assembly of structural elements,
- B. The installation (i.e., form, fit, and attachment details) of materials or equipment, or
- C. Both.

1.2 Specifications and Drawings for Construction. As prescribed in *FAR 36.521*, [FAR Clause 52.236-21](#) is inserted:

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by," or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefore. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings will be retained by the Contracting Officer and one set will be returned to the Contractor.

1.3 Laws and Regulations for Federal Construction

1.3.1 Labor Laws: FAR 22.4 Labor Standards for Contract Involving Construction applies to design-build services. 22.400 Scope of subpart. This subpart implements the statutes which prescribe labor standards requirements for contracts in excess of \$2,000 for construction, alteration, or repair, including painting and decorating, of public buildings and public works. Labor relations requirements prescribed in other subparts of Part 22 may also apply. FAR 22.4 includes the Davis-Bacon Act and the Copeland Act. FAR 22.6 Walsh-Healey Public Contracts Act also applies to design-build services. Equal Employment Opportunity as specified in FAR 22.8 applies to design-build.

1.3.2 Environmental Laws: The following environmental laws apply to design-build services: Clean Air Act (42 U.S.C. 7401 et seq.); Clean Water Act (33 U.S.C. 1251 et seq.); Executive Order 11738, September 10, 1973 (38 FR 25161, September 12, 1973); and Environmental Protection Agency (EPA) regulations (40 CFR Part 32).(National Environmental Protection Act)

1.3.3 Energy Conservation Laws: The following energy conservation laws apply to design-build services: Energy Policy and Conservation Act (42 U.S.C. 6361(a)(1)) and Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.); National Energy Con-



servation Policy Act (42 U.S.C. 8253 and 8262g); Executive Order 11912, April 13, 1976; Executive Order 12759, Sections 3, 9, and 10, April 17, 1991; and Executive Order 12902, March 8, 1994.

1.3.4 Hazardous Material Identification and Material Safety Data: Contractor shall be in compliance with FAR 23.3. This FAR subpart prescribes policies and procedures for acquiring deliverable items, other than ammunition and explosives that require the furnishing of data involving hazardous materials. "Hazardous material" is defined in the latest version of Federal Standard No. 313.

1.3.5 Use of Recovered Materials: Contractor shall be in compliance with the following regulations: Resource Conservation and Recovery Act of 1976 (RCRA), as amended (Solid Waste Disposal Act, 42 U.S.C. 6901, et seq.) and Executive Order 12873, dated October 20, 1993.

1.4.6 Buy American Act – Construction Materials: The Buy American Act (41 U.S.C. 10) and Executive Order 10582, December 17, 1954 (as amended). These apply to contracts for the construction, alteration, or repair of any public building or public work in the United States.

1.4.7 Equal Opportunity: Equal Employment Opportunity is required under Executive Order 11246 (EO 11246), as amended. It is an Act to ensure compliance with the regulations of the U.S. Department of Labor to promote the full realization of equal employment opportunity for all persons, regardless of race, color, religion, sex, or national origin. This EO is also known as Contract Compliance. With respect to construction the EO has prescribe guidelines. See FAR 22.804-2 "Construction." Non construction contracts that in any 12-month period, total, or can reasonably be expected to total, \$50,000 or more, is required to develop a written affirmative action program for each of its establishments within 120 days from the commencement of its first such Government contract, subcontract. See FAR 22.804-1.

1.4.9 Other Applicable Federal Regulations: Services delivered by design-build contractor shall be in accordance with all applicable Federal Regulations including but not necessarily limited to the following: Uniformed Federal Accessibility Standards, OSHA (29CFR 1910); The National Historic Preservation Act of 1966 (36 CFR 800); The Archeological and Historic Preservation Act; etc.

STIPULATION 2 THE GOVERNMENT

2.1 Responsibilities

2.1.1 Contracting Officer's Technical Representative: The Government's Contracting Officer shall designate a representative to act on the Government's behalf with respect to technical matters of the project. The Contracting Officer's Technical Representative (COTR) The COTR manages the project on behalf of the contracting officer to ensure compliance with the terms of the contract. The COTR does not have the authority to modify or change a contract. The Government or such authorized representative will examine documents submitted by the Contractor and will render decisions in a timely manner and in accordance with the schedule accepted by the Government. The Government may obtain independent review of construction documents or other design documents submitted by the Contractor by a separate architect, engineer, contractor or cost estimator under contract to or employed by the Government. Such independent reviews will be undertaken at the Government's expense in a timely manner and will not delay the orderly progress of the work.

2.1.2 Government Information: The Government shall provide full information in a timely manner regarding requirements for the Project, including a written facility Program of Requirements and Performance Specifications which will set forth the Government's objectives, schedule, constraints and criteria.

2.1.3 On-Site Representative: The Government may appoint an on-site representative to observe the work and to have such other responsibilities as the Government and the Contractor agree in writing.

2.1.4 Physical Data: As prescribed in FAR 36.504, FAR Clause 52.236-4 is inserted:

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by the Government: *The Government will provide the Contractor with the following: topographic map showing existing contours, natural features and man-made improvements; soil report including soil boring logs and location; and underground utility plans with profiles and inverts.*

(b) Weather conditions: The project is expected to take more than a year to construct. The project is located in the North Temperate Zone. According to the U.S. Weather Service, temperatures are expected to be slightly above normal and precipitation is expected to be normal.

(c) Transportation facilities The Government will not provide parking for the Contractor or their Subcontractors. The



Contractor shall secure a site for employee parking and provide a bus to bring employees to the site and return and pick up employees and take them away from the site. The Government will not provide parking for the Contractor's bus.

(d) The Government will provide the Contractor and their Subcontractors' employees with temporary identification badges for access to the site.

2.1.5 Disclosures The Government will disclose, to the extent known to the Government, the results and reports of prior tests, inspections, or investigations conducted for projects involving structural or mechanical systems; chemical, air and water pollution; hazardous materials; or other environmental and subsurface conditions. The Government will disclose all information known to the Government regarding the presence of pollutants at the project site.

2.1.6 Notice of Nonconformity: If the Government observes or otherwise become aware of a fault or defect in the work or nonconformity with the Contractor's contract, the Government will give prompt written notice thereof to the Contractor.

2.1.7 Communications: The Government will communicate with persons or entities employed or retained by the Contractor through the Contractor; unless otherwise directed by the Contractor.

STIPULATION 3 CONTRACTOR

3.1 Services and Responsibilities

3.1.1 Acts and Omissions The Contractor shall be responsible to the Government for acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons performing any portion of the Contractor's obligations under the agreement.

3.1.3 Site Investigation and Conditions Affecting the Work As prescribed in *FAR 36.503*, [FAR Clause 52.236-3](#) is inserted:

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, includ-

ing all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

3.2 Basic Services

3.2.1 Contractor Representative: The Contractor shall designate a representative subject to the approval of the Government authorized to act on the Contractor's behalf with respect to the project.

3.2.1.1 Superintendence by the Contractor As prescribed in *FAR 36.506*, [FAR Clause 52.236-6](#) is inserted:

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work site a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

3.2.2 General Submittals: The Contractor shall submit construction documents for the review and approval by the Government. Construction Documents may include drawings, specifications, and other documents and electronic data setting forth in detail the requirements for construction of the work, and shall:

1. be consistent with the Program of Requirements and Performance Specifications;
2. provide information for the use of those in the building trades; and
3. include documents customarily required regulatory agency approvals.

3.2.3 Performance of Work by the Contractor As prescribed in *FAR 36.501(b)*, [FAR Clause 52.236-1](#) is inserted

The Contractor shall perform on the site, and with its own organization, work equivalent to at least twenty (20) percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.



3.2.3.1 The Contractor shall provide and pay for design services, labor, materials, equipment, tools, and machinery, utilities, transportation and other facilities and services necessary for the proper execution and completion of the work, whether temporary or permanent and whether or not incorporated or to be incorporated in the work.

3.2.4 Material and Workmanship As prescribed in *FAR 36.505*, [FAR clause 52.236-5](#) is inserted:

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

Construction not conforming to these requirements, including substitutions not properly approved by the Government, shall be corrected in accordance with Clause 4.3(c)

3.2.4.1 The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under this agreement.

3.2.5 Permits and Responsibilities As prescribed in *FAR 36.507*, [FAR Clause 52.236-7](#) is inserted:

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal,

State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

3.2.6 Cleaning Up As prescribed in *FAR 36.512*, [FAR Clause 52.236-12](#) is inserted:

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

3.3 Optional Services

3.3.1 Assistance: Providing assistance in the utilization of equipment or systems such as preparation of operation and maintenance manuals, training personnel for operation and maintenance, and consultation during operation.

STIPULATION 4 TIME

4.1 General: Unless otherwise indicated the Government and the Contractor shall perform their respective obligations as expeditiously as is consistent with reasonable skill and care and the orderly progress of the Project.

4.2 Period of Performance: The period of performance for basic award is 720 calendar days from the date of Award.

4.3 Schedules for Construction Contracts As prescribed in *FAR 36.515*, [FAR Clause 52.236-15](#) is inserted:

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon do-



ing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

4.4 Use and Possession Prior to Completion As prescribed in *FAR 36.511*, FAR Clause 52.236-11 is inserted:

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

4.5 Suspension of Work As prescribed in *FAR 42.1305(a)*, FAR Clause 52.242-14 (modified) is inserted for solicitations and contracts when a fixed-price construction contract is contemplated:

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(c) A claim under this clause shall not be allowed--

(1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and

(2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

4.6 Stop-Work Order As prescribed in *FAR 42.1305(b)*, the following FAR Clause 52.242-15 is inserted. The "90-day" period stated in the clause may be reduced to less than 90 days.

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule



or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

4.7 Government Delay of Work As prescribed in *FAR 42.1305(d)*, *FAR Clause 52.242-17* is inserted in solicitations and contracts when a fixed-price contract is contemplated for supplies other than commercial or modified-commercial items. The clause use is optional when a fixed-price contract is contemplated for services, or for supplies that are commercial or modified-commercial items.

(a) If the performance of all or any part of the work of this contract is delayed or interrupted (1) by an act of the Contracting Officer in the administration of this contract that is not expressly or implied authorized by this contract, or (2) by a failure of the Contracting Officer to act within the time specified in this contract, or within a reasonable time if not specified, an adjustment (excluding profit) shall be made for any increase in the cost of performance of this contract caused by the delay or interruption and the contract shall be modified in writing accordingly. Adjustment shall also be made in the delivery or performance dates and any other contractual term or condition affected by the delay or interruption. However, no adjustment shall be made under this clause for any delay or interruption to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(b) A claim under this clause shall not be allowed--

(1) For any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved; and

(2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the delay or interruption, but not later than the day of final payment under the contract.

4.8 Delays Beyond the Contractor's Control. Delays caused by labor disputes, fire, unusual delay in deliveries, adverse weather conditions not reasonably anticipatable, unavoidable casualties beyond the Contractor's control, or by other causes which the Government and Contractor agree may justify delay, and then the contract time shall be reasonably extended by change order.

STIPULATION 5 PAYMENT

5.1 Payments under Fixed-Price Construction Contracts. As prescribed in *FAR 32.111(a)(5)*, *FAR Clause 52.232-5* is inserted:

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the prescribed certification, or payment shall not be made: (How-



ever, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the

Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.

(h) Final payment. The Government shall pay the amount due the Contractor under this contract after--

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation because of un-definitive work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on un-definitive contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

5.2 Prompt Payment for Construction Contracts As prescribed in *FAR 32.908(b)*, FAR Clause 52.232-27 is inserted:

Notwithstanding any other payment terms in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in section 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)



(a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project:

(A) The due date for making such payments shall be 14 days after receipt of the payment request by the designated billing office. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date shall be the 14th day after the date of the Contractor's payment request, provided a proper payment request is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, shall be as specified in the contract or, if not specified, 30 days after approval for release to the Contractor by the Contracting Officer.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract):

(A) The due date for making such payments shall be either the 30th day after receipt by the designated billing office of a proper invoice from the Contractor, or the 30th day after Government acceptance of the work or services completed by the Contractor, whichever is later. If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date shall be the 30th day after the date of the Contractor's invoice, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) On a final invoice where the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance shall be deemed to have occurred on the effective date of the contract settlement.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(2)(i) through (a)(2)(ix) of this clause. If the invoice does not comply with these requirements, it shall be returned within 7 days after the date the designated billing office received the invoice, with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a)(4) of this clause.

(i) Name and address of the Contractor.

(ii) Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., prompt payment discount terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.

(viii) For payments described in subdivision (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Any other information or documentation required by the contract.

(x) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.

(3) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.



(4) Computing penalty amount. The interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority (e.g., tariffs). This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice principal payment amount approved by the Government until the payment date of such approved principal amount; and will be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice principal payment amount and will be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(2) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in subdivision (a)(1)(ii) of this clause, Government acceptance or approval shall be deemed to have occurred constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. In the event that actual acceptance or approval occurs within the constructive acceptance or approval period, the determination of an interest penalty shall be based on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days.

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(5) Prompt payment discounts. An interest penalty also shall be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(6) Additional interest penalty. (i) A penalty amount, calculated in accordance with subdivision (a)(6)(iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor--

(A) Is owed an interest penalty of \$1 or more;

(B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with subdivision (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be required. Contractors shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) Demands must be postmarked on or before the 40th day after payment was made, except that--

(1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or

(2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.



(iii)(A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty except--

- (1) The additional penalty shall not exceed \$5,000;
- (2) The additional penalty shall never be less than \$25; and
- (3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a)(4)(iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a)(6)(iii)(A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payments--(1) Due dates for recurring financing payments. If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the [insert day as prescribed by Agency head; if not prescribed, insert 30th day] day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(2) Due dates for other contract financing. For advance payments, loans, or other arrangements that do not involve recurring submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(3) Interest penalty not applicable. Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to include a payment clause and an interest penalty clause conforming to the standards set forth in subparagraphs (c)(1) and (c)(2) of this clause in each of its subcontracts, and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) A copy of any notice issued by a Contractor pursuant to subdivision (d)(3)(i) of this clause has been furnished to the Contracting Officer.



(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to subparagraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under subparagraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under subdivision (e)(5)(i) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under subparagraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under subdivision (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under subparagraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under subdivision (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under subdivision (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. A written notice of any withholding shall be issued to a subcontractor (with a copy to the Contracting Officer of any such notice issued by the Contractor), specifying--

(1) The amount to be withheld;



(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the United States is a party. The United States may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime Contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the United States for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

5.3 Discounts for Prompt Payment. As prescribed in *FAR 32.111(c)(1)*, FAR Clause 52.232-8 is inserted:

(a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a prompt payment discount in conjunction with the offer, offerors awarded contracts may include prompt payment discounts on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the agency annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are

closed and Government business is not expected to be conducted, payment may be made on the following business day.

STIPULATION 6 PROTECTION OF PERSONS AND PROPERTY

6.1 Accident Prevention. As prescribed in *FAR 36.513*, FAR Clause 52.236-13 is inserted:

(a) The Contractor shall provide and maintain work environments and procedures which will--

(1) Safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) Avoid interruptions of Government operations and delays in project completion dates; and

(3) Control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall--

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of



the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(f) *Before commencing the work, the Contractor shall--*

(1) *Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and*

(2) *Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.*

6.2 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements. As prescribed in FAR 36.509, FAR Clause 52.236-9 is inserted:

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site, and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

STIPULATION 7 INSURANCE AND BONDS

7.1 Performance and Payment Bonds-- Construction. As prescribed in FAR 28.102-3(a), FAR Clause 52.228-15 is inserted:

(a) Definitions. As used in this clause--

"Contract price" means the award price of the contract or, for requirements contracts, the price payable for the esti-

mated quantity; or for indefinite-delivery type contracts, the price payable for the specified minimum quantity.

(b) Unless the resulting contract price is \$100,000 or less, the successful offeror shall be required to furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance Bonds (Standard Form 25): (i) The penal amount of performance bonds shall be 100 percent of the original contract price.

(ii) The Government may require additional performance bond protection when the contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract price.

(iii) The Government may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(2) Payment Bonds (Standard Form 25-A): (i) The penal amount of payment bonds shall equal--

(A) 50 percent of the contract price if the contract price is not more than \$1 million;

(B) 40 percent of the contract price if the contract price is more than \$1 million but not more than \$5 million; or

(C) \$2.5 million if the contract price is more than \$5 million.

(ii) If the original contract price is \$5 million or less, the Government may require additional protection if the contract price is increased. The penal amount of the total protection shall meet the requirement of subparagraph (b)(2)(i) of this clause.

(iii) The Government may secure additional protection by directing the Contractor to increase the penal sum of the existing bond or to obtain an additional bond.

(c) The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register, or may be obtained from the:

U.S. Department of Treasury



Financial Management Service

Surety Bond Branch

401 14th Street, NW, 2nd Floor, West Wing

Washington, DC 20227

7.2 Insurance--Work on a Government Installation. As prescribed in *FAR 28.310*, *FAR Clause 52.228-5* is inserted:

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective--

(1) For such period as the laws of the State in which this contract is to be performed prescribe; or

(2) Until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Requirements or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

7.3 Workers' Compensation and Employer's Liability: The Contractor and subcontractors shall comply with applicable Federal and State workers' compensation and occupational disease statutes. Employer's liability coverage of at least \$153,000.00 (in addition to workers' compensation insurance shall be required except in states with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.

7.4 General Liability The Contractor and subcontractors shall have bodily injury liability insurance coverage written on the comprehensive form of policy of at least \$100,000.00 per occurrence, bodily injury and property damage combined and \$356,000.00 general (annual) aggregate.

7.5 Automobile Liability The Contractor and subcontractors shall be required to have automobile liability insurance written on the comprehensive form of policy. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in con-

nection with performing the contract. Policies covering automobiles operated in the United States shall provide coverage of at least \$ 50,000.00 for each accident (bodily injury and property damage combined).

STIPULATION 8 CHANGES IN THE WORK

8.1 Changes--Fixed-Price. As prescribed in *FAR 43.205(a)(1)*, *FAR Clause 52.243-1* is inserted. The 30-day period may be varied according to agency procedures.

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

(1) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the Government in accordance with the drawings, designs, or specifications.

(2) Method of shipment or packing.

(3) Place of delivery.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.

(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

(f) No services for which an additional cost or fee will be charged by the Contractor shall be furnished without the prior written authorization of the Contracting Officer.

8.2 Minor Changes in the Work The Contractor shall have the authority to make minor changes in the construction documents and construction consistent with the intent of the contract documents when such minor changes do not involve adjustment in the contract sum or extension or the contract time. The Contractor shall promptly inform the



Contracting Officer, in writing, of minor changes in construction documents and construction.

8.3 Differing Site Conditions. As prescribed in FAR 36.502, FAR Clause 52.236-2 is inserted:

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of--

(1) Subsurface or latent physical conditions at the site which differ materially from those indicated in this contract; or

(2) Unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in paragraph (a) of this clause for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

STIPULATION 9 INSPECTION & ACCEPTANCE

9.1 Inspection of Construction. As prescribed in FAR 46.312, FAR Clause 52.246-12 is inserted

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes re-inspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may--

(1) By contract or otherwise, replace or correct the work and charge the cost to the Contractor; or

(2) Terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and



reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

9.2 Warranty of Construction (Mar 1994) As prescribed in *FAR 46.710(e)(1)*, FAR Clause 52.246-21 is inserted

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

9.3 Release of Liens

(a) At the completion of work the Contractor shall secure a release of lien from all subcontractors and suppliers who performed on the contract to indemnify the Government from all future mechanics liens.

STIPULATION 10 DISPUTE RESOLUTION

10.1 Disputes As prescribed in *FAR 33.215*, FAR Clause 52.233-1 is inserted.

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph (d)(2) of this clause. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.



(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) Contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim--

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using--

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use ADR. If the Contractor refuses an offer for alternative dispute resolution, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request. When using arbitration conducted pursuant to 5 U.S.C. 575-580, or when using any other ADR technique that the agency elects to handle in accordance with the ADRA, any claim, regardless of amount, shall be accompanied by the certification described in subparagraph (d)(2)(iii) of this clause, and executed in accordance with subparagraph (d)(3) of this clause.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date that the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in FAR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

STIPULATION 11 MISCELLANEOUS PROVISIONS

11.1 Subcontracts for Construction The Contractor as soon as practicable, shall furnish to the Contracting Officer in writing names of the persons or entities the Contractor will engage as construction subcontractors for the work.

11.2 Other Contracts. As prescribed in *FAR 36.508*, FAR Clause 52.236-8 is inserted:

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other Contractor or by Government employees.

11.3 Authorization and Consent. As prescribed in *FAR 27.201-2(a)*, FAR Clause 52.227-1 is inserted:

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes li-



ability for all other infringement to the extent of the authorization and consent herein above granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold); however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

11.4 Notice and Assistance Regarding Patent and Copyright Infringement. As prescribed in *FAR 27.202-2*, [FAR Clause 52.227-2](#) is inserted:

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at *FAR 2.101*.

11.5 Patent Indemnity--Construction Contracts. As prescribed in *FAR 27.203-5*, [FAR Clause 52.227-4](#) is inserted:

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

11.8 Value Engineering As prescribed in *FAR 48.201(f)*, [FAR Clause 52.248-2](#) is inserted:

(a) General. The Contractor shall (1) perform value engineering (VE) services and submit progress reports as speci-

fied in the Requirements; and (2) submit to the Contracting Officer any resulting value engineering proposals (VEP's). Value engineering activities shall be performed concurrently with, and without delay to, the schedule set forth in the contract. The services shall include VE evaluation and review and study of design documents immediately following completion of the 35 percent design state or at such stages as the Contracting Officer may direct. Each separately priced line item for VE services shall define specifically the scope of work to be accomplished and may include VE studies of items other than design documents. The Contractor shall be paid as the contract specifies for this effort, but shall not share in savings which may result from acceptance and use of VEP's by the Government.

(b) Definitions. "Life cycle cost," as used in this clause, is the sum of all costs over the useful life of a building, system or product. It includes the cost of design, construction, acquisition, operation, maintenance, and salvage (resale) value, if any.

"Value engineering," as used in this clause, means an organized effort to analyze the functions of systems, equipment, facilities, services, and supplies for the purpose of achieving the essential functions at the lowest life cycle cost consistent with required performance, reliability, quality, and safety.

"Value engineering proposal," as used in this clause, means, in connection with the contract, a change proposal developed by employees of the Federal Government or Contractor value engineering personnel under contract to an agency to provide value engineering services for the contract or program.

(c) Submissions. After award of a design-build contract the Contractor shall--

(1) Provide the Government with a fee breakdown schedule for the VE services (such as criteria review, task team review, and bid package review) included in the contract schedule;

(2) Submit, for approval by the Contracting Officer, a list of team members and their respective resumes representing the engineering disciplines required to complete the study effort, and evidence of the team leader's qualifications and engineering discipline. Subsequent changes or substitutions to the approved VE team shall be submitted in writing to the Contracting Officer for approval; and

(3) The team leader shall be responsible for pre-study work assembly and shall edit, reproduce, and sign the final report and each VEP. All VEP's, even if submitted earlier as an individual submission, shall be contained in the final report.

(d) VEP preparation. As a minimum, the Contractor shall include the following information in each VEP:

(1) A description of the difference between the existing and proposed design, the comparative advantages and disadvantages of each, a justification when an item's function is



being altered, the effect of the change on system or facility performance, and any pertinent objective test data.

(2) A list and analysis of design criteria or specifications that must be changed if the VEP is accepted.

(3) A separate detailed estimate of the impact on project cost of each VEP, if accepted and implemented by the Government.

(4) A description and estimate of costs the Government may incur in implementing the VEP, such as design change cost and test and evaluation cost.

(5) A prediction of any effects the proposed change may have on life cycle cost.

(6) The effect the VEP will have on design or construction schedules.

(e) VEP acceptance. Approved VEP's shall be implemented by bilateral modification to this contract.

STIPULATION 12 TERMINATION OF THE AGREEMENT

12.1 Termination for Convenience of the Government

As prescribed in *FAR 49.502(a)(1)*, FAR Clause 52.249-1 is inserted:

The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the rights, duties, and obligations of the parties, including compensation to the Contractor, shall be in accordance with Part 49 of the Federal Acquisition Regulation in effect on the date of this contract.

12. 2 Default As prescribed in *FAR 49.504(c)(1)*, FAR Clause 52.249-10 is inserted:

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include--

(i) Acts of God or of the public enemy,

(ii) Acts of the Government in either its sovereign or contractual capacity,

(iii) Acts of another Contractor in the performance of a contract with the Government,

(iv) Fires,

(v) Floods,

(vi) Epidemics,

(vii) Quarantine restrictions,

(viii) Strikes,

(ix) Freight embargoes,

(x) Unusually severe weather, or

(xi) Delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors-Builders or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

(d) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.



**STIPULATION 13
FAR CLAUSES INCORPORATED BY
REFERENCE**

As prescribed in FAR 52.107(b), the following clauses are inserted:

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

- 52.203-3 Gratuities.
- 52.203-7 Anti-Kickback Procedures.
- 52.204-3 Taxpayer Identification.
- 52.204-4 Printing/Copying Double-Sided on Recycled Paper.
- 52.204-5 Women-Owned Business.
- 52.204-6 Data Universal Numbering System (DUNS) Number.
- 52.209-5 Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters.
- 52.209-6 Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment.
- 52.211-12 Liquidated Damages--Construction.
- 52.211-13 Time Extensions.
- 52.215-2 Audit and Records--Negotiation.
- 52.222-1 Notice to the Government of Labor Disputes.
- 52.222-2 Payment for Overtime Premiums.
- 52.222-4 Contract Work Hours and Safety Standards Act--Overtime Compensation.
- 52.222-6 Davis-Bacon Act.
- 52.222-7 Withholding of Funds.
- 52.222-8 Payrolls and Basic Records.
- 52.222-9 Apprentices and Trainees.
- 52.222-10 Compliance with Copeland Act Requirements.
- 52.222-11 Subcontracts (Labor Standards).
- 52.222-12 Contract Termination--Debarment.
- 52.222-13 Compliance with Davis-Bacon and Related Act Regulations.
- 52.222-14 Disputes Concerning Labor Standards.
- 52.222-15 Certification of Eligibility.
- 52.222-16 Approval of Wage Rates.
- 52.222-17 Labor Standards for Construction Work Facilities Contracts.
- 52.222-20 Walsh-Healey Public Contracts Act.
- 52.222-21 Certification of Nonsegregated Facilities.
- 52.222-22 Previous Contracts and Compliance Reports.
- 52.222-23 Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity.
- 52.222-24 Pre-award On-Site Equal Opportunity Compliance Review.
- 52.222-25 Affirmative Action Compliance.

- 52.222-26 Equal Opportunity.
- 52.222-27 Affirmative Action Compliance Requirements for Construction.
- 52.222-28 Equal Opportunity Pre-award Clearance of Subcontracts.
- 52.222-35 Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era.
- 52.222-36 Affirmative Action for Workers with Disabilities.
- 52.222-37 Employment Reports on Disabled Veterans and Veterans of the Vietnam Era.
- 52.223-1 Clean Air and Water Certification.
- 52.223-2 Clean Air and Water.
- 52.223-3 Hazardous Material Identification and Material Safety Data.
- 52.223-4 Recovered Material Certification.
- 52.223-5 Pollution Prevention and Right-to-Know Information.
- 52.223-6 Drug-Free Workplace.
- 52.223-7 Notice of Radioactive Materials.
- 52.223-9 Certification and Estimate of Percentage of Recovered Material Content for EPA Designated Items.
- 52.223-10 Waste Reduction Program.
- 52.223-11 Ozone-Depleting Substances.
- 52.223-12 Refrigeration Equipment and Air Conditioners.
- 52.223-13 Certification of Toxic Chemical Release Reporting.
- 52.223-14 Toxic Chemical Release Reporting.
- 52.224-1 Privacy Act Notification.
- 52.224-2 Privacy Act.
- 52.225-1 Buy American Certificate.
- 52.225-3 Buy American Act--Supplies.
- 52.225-5 Buy American Act--Construction Materials.
- 52.225-11 Restrictions on Certain Foreign Purchases.
- 52.225-12 Notice of Buy American Act Requirement--Construction Materials.
- 52.225-13 Notice of Buy American Act Requirement--Construction Materials under Trade Agreements Act and North American Free Trade Agreement.
- 52.225-15 Buy American Act--Construction Materials under Trade Agreements Act and North American Free Trade Agreement
- 52.225-18 European Union Sanction for End Products.
- 52.225-19 European Union Sanction for Services.
- 52.225-20 Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program Certificate.
- 52.225-21 Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program.
- 52.225-22 Balance of Payments Program--Construction Materials--NAFTA.
- 52.227-1 Authorization and Consent.
- 52.227-2 Notice and Assistance Regarding Patent and Copyright Infringement.



- 52.227-3 Patent Indemnity.
- 52.227-5 Waiver of Indemnity.
- 52.227-6 Royalty Information.
- 52.227-7 Patents--Notice of Government Licensee.
- 52.227-9 Refund of Royalties.
- 52.227-10 Filing of Patent Applications--Classified Subject Matter.
- 52.227-12 Patent Rights--Retention by the Contractor (Long Form).
- 52.227-13 Patent Rights--Acquisition by the Government.
- 52.227-14 Rights in Data--General.
- 52.227-15 Representation of Limited Rights Data and Restricted Computer Software.
- 52.227-16 Additional Data Requirements.
- 52.227-17 Rights in Data--Special Works.
- 52.227-18 Rights in Data--Existing Works.
- 52.227-19 Commercial Computer Software--Restricted Rights.
- 52.227-20 Rights in Data--SBIR Program.
- 52.227-23 Rights to Proposal Data (Technical).

- 52.228-2 Additional Bond Security.
- 52.228-11 Pledges of Assets.
- 52.228-14 Irrevocable Letter of Credit.

- 52.230-1 Cost Accounting Standards Notices and Certification.
- 52.230-2 Cost Accounting Standards.
- 52.230-3 Disclosure and Consistency of Cost Accounting Practices.
- 52.230-4 Consistency in Cost Accounting Practices.
- 52.230-6 Administration of Cost Accounting Standards

- 52.232-11 Extras.
- 52.232-18 Availability of Funds.
- 52.232-19 Availability of Funds for the Next Fiscal Year. (*If Applicable*)
- 52.232-23 Assignment of Claims.
- 52.232-24 Prohibition of Assignment of Claims.
- 52.232-33 Mandatory Information for Electronic Funds Transfer Payment.

- 52.233-1 Disputes.
- 52.233-2 Service of Protest.
- 52.233-3 Protest after Award.

- 52.236-3 Site Investigation and Conditions Affecting the Work.
- 52.236-10 Operations and Storage Areas.
- 52.236-11 Use and Possession Prior to Completion.
- 52.236-14 Availability and Use of Utility Services.
- 52.236-15 Schedules for Construction Contracts.
- 52.236-16 Quantity Surveys.
- 52.236-17 Layout of Work.
- 52.236-19 Organization and Direction of the Work.
- 52.236-26 Pre-construction Conference.
- 52.236-27 Site Visit (Construction).

- 52.242-13 Bankruptcy.
- 52.242-17 Government Delay of Work.
- 52.243-1 Changes--Fixed-Price.
- 52.243-2 Changes--Cost-Reimbursement.

- 52.245-6 Liability for Government Property (Demolition Services Contracts) [*If applicable*].
- 52.245-10 Government Property (Facilities Acquisition).
- 52.246-1 Contractor Inspection Requirements.
- 52.246-12 Inspection of Construction.
- 52.246-13 Inspection--Dismantling, Demolition, or Removal of Improvements[*If applicable*].
- 52.246-15 Certificate of Conformance.



SECTION 6-11 CONSTRUCTION COORDINATION & APPROVAL

6-11-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements
X6-11-A	Radiography Approval Form

6-11-00 POLICY

This Section defines the steps for initiating coordination with NIH community and facility authorities and obtaining approvals for construction coordination.

A. APPLICABILITY

- This procedure applies to all NIH construction Projects.

B. RESPONSIBILITIES

- The Project Officer is responsible for determining the need for any of the following procedures and initiating action to acquire necessary approvals.

6-11-10 PROCEDURES

A. LAN/TELECOMMUNICATIONS AND SECURITY:

If Data, LAN or Telecommunications will be affected by the planned construction activity, CIT will need access to the site just prior to final phase of construction in order to connect cabling. The PO shall notify the AO to issue a request and coordinates the LAN, telecommunications and security access requirements with CIT, and the contractor.

B. HARDWARE & CARD KEY SYSTEMS:

The PO notifies the AO to issue a “DELPRO” request for hardware (locks, keys, and card key systems) and CCTV to the Division of Physical Security Management prior to completion of construction.

C. INDUSTRIAL RADIOGRAPHY:

This paragraph addresses the use of a radiation source to perform a test or examination, such as inspecting welds or locating reinforcing in a concrete slab.

1. The PO advises the contractor that the following conditions shall be met:
 - Schedule radiography at times of lowest occupancy of adjacent areas, buildings or other public spaces.
 - Maintain a complete record of exact time-on and time-off for source for each radiograph.
 - Contractor shall use maximum shielding, including maximum use of lead shot bags.



2. The PO requests that the contractor provide the following information about the proposed radiography:
 - Plans showing exact locations of planned uses and adjacent occupied public spaces.
 - Proposed schedule (date and time) of use.
 - Calculation of doses at potentially occupied public points.
 - Specifications of radiation source(s), including nuclide and source activity, collimator(s), and shielding to be used.
3. The PO completes the Radiography Approval Request Form and attaches the information provided by the contractor and forwards the completed form with attachment to the Division Radiation Safety (DRS). The DRS reviews the information and works with the PO and the contractor to assure that necessary precautions and coordination take place.
4. The Division of Radiation Safety approves the Radiography Approval Request Form and returns it to the PO when it determines that the radiography has been properly planned and coordinated. The DRS typically has a two-day response time on Radiography Approval Requests.
5. When the approved form is received from the DRS, the PO advises the contractor that he may proceed with the radiography, subject to any conditions noted on the approval form. The PO files the Radiography Approval Request Form in the project file.

D. REQUESTS FOR FIRE PROTECTION AND UTILITY SHUTDOWNS:

PO initiates and submits shutdown requests electronically to the Technical Support Team allowing 15 calendar days advanced notice. Only NIH maintenance staff is authorized to shut down utilities; contractors are not permitted to do so.

E. WORK TO BE PERFORMED OUTSIDE NORMAL WORKING HOURS:

PO initiates and submits Outside Normal Working Hours Form via hard copy to NIH Police and provides a copy to the contractor for his records.

F. TEMPORARY USE OF NIH ROADS, SIDEWALKS, OR PARKING LOTS:

1. If road closure is required as part of construction, the PO includes a Request for Temporary Use of NIH Roadway/Sidewalks/Parking Lots to DFP and Police with actual duration of closure.
2. PO initiates and submits the Temporary Use of NIH Roads, Sidewalks, or Parking Lots Form and submits it to DFP for review and approval allowing advance of 5 working days notice. PO receives approval and any conditions and ensures implementation by the contractor.

G. STAGING/MOBILIZATION PLAN:

If after construction contract award, it is determined that modifications are needed to the already approved staging/mobilization plan and the Site Selection Request Form, the PO shall submit to the DFP a revised plan and form describing the modifications requested. PO may not proceed with the modification until the DFP sends approval.

H. EXCAVATION NEAR CONTROLLED UTILITIES:

PO coordinates contacts Utilities Operations Branch.



6-11-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Section 5-9 Environmental Permitting/Approvals
- ORF Safety Manual Section __ Asbestos Material
- Section 4-19 Coordination

B. RELEVANT DOCUMENTS

- LAN / Telecommunication and Security Related Documents:
- CIT LAN Master Plan
- NIH Telecommunications Request
- Radiography Approval Request Form
- Fire Protection and Utility Shutdowns
- Work to be Performed Outside Normal Working Hours Form
- Temporary Use of NIH Roads, Sidewalks, or Parking lots Form
- Hazardous Open Flame Permit
- NIH Emergency Response Plan

6-11-30 REPORTING REQUIREMENTS

A. RECORDS

- Radiography Approval Request Form (if required)
- Work to be Performed Outside Normal Working Hours Form (if required)
- Temporary Use of NIH Roads, Sidewalks, or Parking lots Form (if required)



Radiography Approval Request Form

FAX to: NIH Radiation Safety Officer (301-496-3544)

To be filled out by the Project Officer:

Date of Request: _____
Project Title: _____
Project Location (Building/Room): _____
Project Officer Name and Phone Number: _____
Radiography Contractor Company Name: _____
Radiography Contractor Point of Contact and Phone Number: _____
Proposed date and time of use _____
Brief Description of Proposed Radiography Work:

NOTE: ATTACH TO THIS FORM (to be provided by radiography contractor):

- Plans showing exact locations of all planned uses;
- Proposed schedule, including duration and number of radiographs to be taken;
- Calculation of doses at all potentially occupied public points;
- Specifications of radiation source(s), collimator(s), and shielding to be used;
- Description of precautions taken to ensure security of the radiography source.

To be completed by the Division of Radiation Safety, ORS:

Approved Date
Comments:

Disapproved



SECTION 6-12 PAYMENT AND CONSTRUCTION SCHEDULES

6-12-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

6-12-00 POLICY

This Section defines the process for reviewing and accepting the contractor's construction schedule, schedule of values and for reviewing to provide recommendation of payment on contractors' invoices.

A. APPLICABILITY

- This procedure applies to all design and construction projects in ORF.

B. RESPONSIBILITY

- The Project Officer is responsible for reviewing and recommending approval and disapproval of payments.
- The Contracting Officer is responsible for:
- Thorough and timely reviews, of submission for payment, and processing invoices.

6-12-10 PROCEDURES

A. SCHEDULE AND SCHEDULE OF VALUES:

1. The General Contractor (GC) submits the hard and soft copy of the construction schedule using a Critical Path Method (CPM) based project plan and schedule if the project is over \$1M, or if project complexity requires it. If the project is a capital project, the schedule should incorporate reports to support Earned Value Management (EVM) systems.
2. The payments should comply with Earned Value
 - The scope of the project is divided (broken down) using DWBS (Deliverable Work Breakdown Structure).
 - Project Plan and Schedule are developed using the DWBS
 - Budget cost accounts are established.
 - The project baseline schedule is established and agreed upon to be used for performance measurement.
 - The EVA and EVM are used to monitor the progress and performance.
 - Schedule shall include the definable features of work, long lead and critical path items and submittal review and approval durations.
 - The project schedule as a minimum should incorporate a hard and soft copy of the following reports:
 - Project Master Schedule (tabular and Gantt Chart formats)
 - Project milestone report
 - Project Baseline Schedule
 - Project Earn Value Reports
 - Project Network Diagram
 - Any other report requested by Project Manager



3. The GC submits the schedule of values broken down monthly for the period of performance
4. The Project Officer (PO) (and CQM if required) reviews the schedule and schedule of values submittals.
5. The PO accepts, accepts as noted or rejects the submittals. If the submittals are rejected, they are returned to the GC for rework and resubmission.
6. The PO provides the Contracting Officer (CO) with a copy of the approved schedule of values.
7. The contractor updates the schedule as the project progresses and submits an updated version with monthly payment requests.

B. INVOICES (EXCEPT FOR SIMPLIFIED ACQUISITIONS):

1. The contractor submits the invoice to the CO.
2. The CO date/time stamps the invoice, reviews it for completeness and forwards it to the PO for review. This review typically consists of determining whether the indicated values are consistent with the elements of work to be performed (against the schedule of values).
3. If the invoice is found to be incomplete or invalid, the PO returns it to the CO stating the reason for rejection. The CO will return the invoice to the contractor for corrections. The contractor submits the revised invoice and any requested backup information.
4. The PO processes the invoice within 3 days from date of receipt.
5. The CO reviews the PO's recommendation and processes payment. The PO maintains copies of the invoices and a construction payment log for invoices received.
6. At the completion of the project, the contractor submits his Final Invoice with the Release of Claims. The PO reviews and recommends approval for payment and sends the Contracting Officer a memo notifying them of the completion of the project and that all deliverables were received and accepted.

C. SIMPLIFIED ACQUISITION INVOICES:

1. The contractor submits the original invoice to accounts payable and one copy to the PO.
2. The PO reviews it for completeness and determines whether the requested invoice amount reflects the percent work complete (against the schedule of values). If the invoice is found to be incomplete or invalid, the PO sends the invoice back to the contractor for corrections. (The PO processes the invoice within 3 days from date of receipt.)
3. The contractor resubmits the revised invoice and any requested backup documentation.
4. The PO provides a copy of the invoice to the Purchasing Agent (PA) in the Office of Acquisitions, ORF. The PA will stamp invoice and request PO signature of approval. The PA will provide "Receiving Date" in the DELPRO.
5. Accounts Payable views the "Received Date" and then processes the payment.



6-12-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Section 6-13 Contract Close Out

B. RELEVANT DOCUMENTS

- CPM/Schedule
- Schedule of Values
- Invoices
- Release of Claims
- Construction Payment Log
- Earned Value Analysis and Reporting

6-12-30 REPORTING REQUIREMENTS

A. RECORDS

- Preliminary Schedule and Final Schedule
- Earned Value Reports (if applicable)
- Schedule of Values (if applicable)
- Copy of approved Invoices





SECTION 6-13 CONTRACT CLOSE-OUT

6-13-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

6-13-00 POLICY

This Section outlines the steps required to close out construction, Architect/Engineering (A/E) and Construction Quality Management (CQM) contracts to include project files, associated databases and accounting systems.

A. APPLICABILITY

This procedure applies to all Construction, A/E, and CQM contracts.

B. RESPONSIBILITIES

- Project Officer (PO) is responsible for ensuring that the contractor satisfies all requirements of the contract and that final payment and release of claims are approved when requested by the Contracting Officer.
- The PO is responsible for ensuring timely project closeout to meet customer requirements.
- The PO also ensures that:
- All the deliverables are complete and in compliance with NIH's Design Requirements Manual (DRM)
- All project issues are resolved.

6-13-10 PROCEDURE

A. GENERAL PROCEDURES

1. The PO confirms that all compliance and performance testing, commissioning and training are satisfactorily completed.
2. The PO confirms that the NIH Division of Fire Marshal (DFM) has conducted a final inspection of the project and has approved use of the space or facility.
3. The PO confirms that all material and spare parts to be stored are properly packaged and stored in a suitable environment and that maintenance requirements are conveyed to the Division of Property Management (DPM).



B. CONSTRUCTION CONTRACTS CLOSE-OUT:

1. Once construction is completed, the contractor provides the PO updated and signed as-built drawings that are certified to be accurate. Documents shall be provided in the format identified in the contract (electronically, etc.)
2. The PO confirms that 3 copies of Operation and Maintenance Manuals, warranties, and red line/as-built drawings (as applicable) have been submitted and approved.

C. CONTRACTOR'S FINAL PAYMENT

1. The PO notifies the Contracting Officer (CO) that all work has been completed in accordance with the contract requirements and recommends final payment and release of claims.
2. The PO reviews the contractor's final payment request and release of claims and ensures that all work is accepted and all submittals are provided and approved before approving the final payment.
3. If a Contractor submits a claim to the Contracting Officer, the CO forwards to the PO for review. The PO evaluates the contractor's request for equitable adjustment and submits recommendations to the CO. The CO working with the PO and, as applicable legal counsel, resolve contractors' claims, if any, (see "Contractor's Dispute Resolution" procedure).

D. A/E AND CQM CONTRACTS CLOSE-OUT:

1. The PO confirms that all services required under the A/E and/or CQM contract is provided. Specifically for A/E services where as-built drawings are required, assure that 3 copies of the documents are submitted and approved.
2. The PO reviews the A/E or CQM final payment request and release of claims to ensure that all work is accepted and all submittals or files are provided before recommending that the the final payment is approved by the CO.
3. The PO notifies the CO that all work has been completed in accordance with the contract requirements and recommends CO approve final payment.
4. If A/E or CQM submits request for equitable adjustment to the CO, the PO evaluates the request for equitable adjustment, (if required). The PCO working with the PO and, as applicable, with the legal counsel, resolve A/E or CQM claims, if any, (see contractor dispute resolution procedure).

6-13-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURES

- Section 6-9 Construction Activities
- Section 6-5 Contractor's Dispute Resolution

B. RELEVANT DOCUMENTS

- Contract specifications and drawings



6-13-30 REPORTING REQUIREMENTS

A. RECORDS

- Copy of final payment invoice
- As-built red-line drawings and specifications
- As-built electronic drawing files (as applicable)





SECTION 6-14 ADMINISTRATIVE CLOSE - OUT

6-14-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

6-14-00 POLICY

This Section describes the process required to at completing and closing out a file and the associated database and accounting system.

A. APPLICABILITY

This procedure applies to all construction projects in NIH owned and leased facilities.

B. RESPONSIBILITIES

- The PO is responsible for assuring that as-built drawings are submitted electronically by the contractor and for turning over the completed electronic record documents to the ORF Division of Property Management.
- The PO is responsible for completing all close out letters and that project files are turned over to the Business Center.
- Evaluation forms and acceptance letters are signed and delivered.

6-14-10 PROCEDURE

A. ADMINISTRATIVE CLOSE-OUT:

1. The Project Officer distributes documents / submittals in accordance with:
 - Closeout Transmittal Memo
 - Final File Checklist
2. For each construction contract of \$100,000 or more, once the request from the CO is received, the PO completes the Contractor Performance Evaluation electronically in the Contractor Performance System. The Project Officer completes the electronic performance evaluation form for construction contractors when initiated by CCB.
3. For all A/E and CQM contracts over \$25,000, once the request from the CO is received, the PO completes the A/E and CQM evaluation form for Architect - Engineers (SF 1421) and submits to CCB.
4. The PO submits to the Document Manager Specialist in the ORF Division of Property Management (DPM) project record documents (as-built drawings and electronic files, one approved set of contract submittals and record specifications).
5. The PO submits to the Technical Support Team (TST/ DPM) three (3) copies of the O&M (operations and maintenance manuals) and warranties.



6. The PO submits to the Division of Facilities Planning one set of electronic as-built drawings (including room numbers), the project gross square footage, the final construction cost, the IC, and the IC point-of-contact. This is required to allow the areas to be surveyed and to begin rent charges. In addition, a Real Property Inventory form will be submitted (if new space is created or major changes are made to existing space).
7. The Project Officer verifies that the project file is complete and forwards the file to the Business Support Branch. The Business Center determines whether FFS charges are pending and, if necessary, obtains funds from the work request fiscal manager or customer AO. The Project Officer resolves any funding issues with the customer AO.

B. THE BUSINESS SUPPORT BRANCH CLOSES OUT THE PROJECT IN SSFAS.

1. The Business Support Branch archives the project file per FAR Section 4.805.

6-14-20 GUIDANCE AND INFORMATION

A. RELATED PROCEDURE

- Section 5-7 Design Management and Review
- Section 6-13 Contract Closeout

B. RELEVANT DOCUMENTS

- Contract Documents

6-14-30 REPORTING REQUIREMENTS

A. RECORDS

- Performance Evaluation for Construction Contracts maintained electronically in the Contractor Performance by Office of Acquisitions, ORF.
- Copies of PO letters of Acceptance Memo/transmittal
- Real Property Inventory Form
- Transmittal of Memo of Distribution of Deliverable Documents
- Project File

NIH Facilities Development Manual



Chapter 7 Real Estate Acquisitions & Occupancy



SECTION 7-1 REAL ESTATE ACQUISITION

7-1-00	Policy
10	Procedures
20	(Reserved)
30	(Reserved)

7-1-00 POLICY

The purpose of this section is to establish HHS policy for the acquisition of real property through purchase, donation or transfer. The acquisition of real property through leasing is addressed in Section 7-2.

When seeking to acquire space, Federal agencies should first seek space in Government-owned and Government-leased buildings. If suitable Government-controlled space is unavailable, Federal agencies must acquire real estate and related services in an efficient and cost effective manner in accordance with the Federal Management Regulation (FMR) §102-73. It is HHS policy that (a) only such real property as is needed for effective program operation be acquired, and then only after requisite authorization and clearances; (b) private property may be acquired or improvements constructed only if suitable Government-owned facilities are not available; and (c) wherever practicable, HHS activities in the same city or town should be located in the same building.

No agency or element of HHS will undertake any discussion of prospective geographical areas or locations for sites or facilities with persons outside the Department without the approval of the Assistant Secretary for Administration and Management (ASAM), OS if the area under consideration extends into more than one region.

A. BASIC ACQUISITION AUTHORITIES

The principal statutes authorizing the acquisition of land and the provision of space are the following:

1. Section 304(b)(4) of the PHS Act (42 U.S.C. 242b) authorizes the Secretary of HHS to acquire, construct, improve, repair, operate, and maintain laboratory, research and other necessary facilities and equipment, and such other real or personal property as the Secretary deems necessary for health statistical activities and health services research, evaluation, and demonstrations.
2. Section 321 of the PHS Act (42 U.S.C. 248) authorizes the Secretary, with the approval of the President, to select sites for and to establish such institutions, hospitals, and stations as are necessary to enable HHS to discharge its functions and duties. The President's authority to approve facilities has been delegated by him to the Director of the Office of Management and Budget (OMB).
3. Section 413(b)(6)(A) of the PHS Act (42 U.S.C. 285a-2) authorizes the Director of the National Cancer Institute (NCI), NIH/HHS (in consultation with the advisory council for the Institute) to acquire, construct, improve, repair, operate, and maintain laboratories, other research facilities, equipment, and such other real or personal property as the Director determines necessary.
4. Section 413(a) of the PHS Act (42 U.S.C. 285b-3) authorizes the Director of the National Heart, Lung, And Blood Institute (NHLBI), NIH/HHS (after consultation with the National Heart and Lung Advisory Counsel) to acquire such real property as may be necessary.
5. Section 386 of the PHS Act (42 U.S.C. 286a-1) authorizes the Administrator of General Services to acquire suitable sites, selected by the Secretary of HHS in accordance with the directions of the



Board of Regents of the National Library of Medicine (NLM), NIH/HHS and to erect thereon, furnish, and equip suitable and adequate buildings and facilities for NLM. It also authorizes appropriations for the erection and equipment of buildings and facilities for the use of the Library.

6. Section 13 of Public Law 67-85 (known as the Snyder Act) (25 U.S.C. 13) authorized the Bureau of Indian Affairs to expand, improve, repair, operate and maintain buildings and grounds of existing plants and projects and irrigation systems and develop water supplies serving Indians.
7. Section 7 of Public Law 83-568 (known as the Indian Health Transfer Act) as amended (42 U.S.C. 2004), transferred authority for the construction, improvement, and extension of buildings and grounds and sanitation systems to serve Indians including the acquisition of lands, or rights or interests therein, to the Public Health Service of the Department of Health and Human Services.
8. Section 402(b)(4)(A) of the PHS Act (42 U.S.C. 282(b)(4)(A)) provides land acquisition authority to the Director of the National Institutes of Health (NIH).
9. Section 464P(b)(3) of the PHS Act (42 U.S.C. 285o-4(b)(3)) provided land acquisition authority to the Director of the National Institute of Drug Abuse (NIDA) in certain circumstances.

B. TITLE TO FEDERAL REAL PROPERTY

With certain minor exceptions, title to all Federal real property is held in the name of the United States of America. The HHS does not hold title to any real property in its own name. That is so because neither the HHS nor any official thereof has the statutory authority to hold title to real property, such as do certain Government corporations and officials of certain agencies in connection with their lending authorities.

Title to real property acquired by the HHS is taken in the name of the United States of America, and the deed transferring such title is recorded in the appropriate local land records. Transfers of control and accountability to or from other Government agencies are not so recorded because title thereto continues to be vested in the United States of America. Such transfers are usually made administratively through the General Services Administration (GSA).

There is no general repository of Federal land records for lands owned by the United States, although GSA maintains an inventory based on data submitted by the agencies having control and accountability (see Section 2-6, Real Property Inventory Reporting Requirements). Verify this reference, 2-6 is Site Selection in Volume 1. This emphasizes the importance of HHS keeping accurate and complete records of its real property holdings. They play an important role in determining whether the real property is effectively utilized and whether statutes and regulations are fully executed.

There are a few statutes, such as section 321 of the PHS Act (42 U.S.C. 248), authorizing HHS to acquire sites and to construct facilities so that it may carry out its functions. Such space, wholly or predominantly used for the special purposes of HHS and not generally suitable for the use of other agencies, is referred to as “special purpose” space. Other space, primarily space used for office or storage purposes, is called “general purpose” space. Generally, such space is acquired by GSA and administratively assigned to HHS.

7-1-10 PROCEDURES

A. ACQUISITION BY PURCHASE

All acquisitions of land require specific statutory authority, 41 U.S.C. 14, and specifically designated funding in a NIH’s budget and/or appropriation. All land acquisitions must be submitted to and approved



by the HHS Capital Investment Review Board. See also Section 2-1 Funding Sources for Facilities Projects.

After the Secretary concurs that the Department will acquire the property under its own authority, and after adequate funds are apportioned for such a purpose, the NIH will proceed with the purchase. Generally all acquisitions of land or buildings and the underlying land, should be accomplished by the NIH consistent with the “Department of Justice Title Standards 2001,” which is also available online at the Department of Justice (DOJ) web site. The land acquisition process is conducted and staffed by the NIH.

The NIH will obtain, from the owner(s) of the property, for a period of at least 90 days, an option to purchase the preferred site, subject to the establishment of just compensation by appraisal in accordance with the provisions of the Uniform Relocation Assistance and Land Acquisition Policies Act of 1970 (P.L. 91-646).

An appraiser, approved by the U.S. Attorney having jurisdiction over the area in which the property is located, will be used to establish the amount which he/she believes to be just compensation. The cost of the appraisal will be determined by negotiation.

After a price has been agreed to, the NIH will coordinate the acquisition with the Office of the General Counsel (OGC) and/or the Office of Chief Counsel who will play a vital advisory role in all real property acquisitions. As advisors, OGC and the Office of Chief Counsels provide legal advice as requested by the NIH throughout the process, prepare and execute requests to DOJ for required Preliminary and Final DOJ Title Opinions, and if requested, would assist in drafting such documents as the “contract of sale” and the draft deed.

The NIH will prepare the necessary purchase commitment documents consisting of (1) contract of sale, (2) draft of deed, (3) authority to execute the deed, (4) title policy commitment, and (5) a survey prepared by a registered surveyor.

After receiving advice from the Attorney General that the site acquisition documents are complete, including a satisfactory title opinion, payment, by U.S. Treasury check, may be made. The original site purchase documents will be retained by the NIH, with a CD-ROM copy provided to OFMP, after they are recorded with the registry of deed in the area where the property is located.

B. PURCHASE OF BUILDINGS

The purchase of buildings shall be in accordance with the FMR §102-73.240 through 73.250 including compliance with the location policies in FMR §102-73 and §102-83. See Exhibit X4-7-A for guidance on Suggested Award Factors & Evaluation of Buildings and Sites.

C. PURCHASE OF LAND

The purchase of land shall be in accordance with FMR §102-73.255 through 73.260 and shall follow the land acquisition policy in the Uniform Relocation Assistance and Real Property Acquisition Polices Act, 42 U.S.C. 4651-4655. See Section 2-6 Site Selection for guidance on evaluating sites for purchase.

D. ACQUISITION BY DONATION

1. Donations of Real Property: The procedures for acquiring real property by gift or donation are set forth in this section. The sequential steps relating to acquisition by purchase will generally be



followed. Although statutory authority to accept gifts obviates the need for returning to the Treasury an amount equal to the value of the gift, an appraisal is required. The cost of the appraisal must be borne by the NIH. OGC will review the formal offer of donation prior to requesting a title opinion from the Attorney General. The opinion must be received before the land is accepted on behalf of the United States.

On October 11, 2005, the Secretary delegated authority to the Assistant Secretary for Administration and Management (ASAM) to accept gifts of real property under Section 231 of the Public Health Service Act (42 U.S.C. 238) and 25 U.S.C. 451, as amended. ASAM redelegated this authority to the Deputy Assistant Secretary for Facilities Management and Policy on October 21, 2005.

HHS Procedures for Processing Offers of Gifts of Real Property:

- The applicable HHS OPDIV presents the offering organization's formal written proposal of gift of real property and the OPDIV's program analysis to OFMP for review. The program analysis must contain supporting documentation that the gift is mission related, mission dependent, and does not constitute a conflict of interest. Any conditions regarding Departmental acceptance or use must also be clearly identified.
 - If OPDIV program analysis supports and recommends acceptance, and OFMP is in agreement, OFMP will transmit the written offer and program analysis document to OGC for a legal opinion of the offer. OGC will review the offer and analysis to determine whether the proposed donation of land is within the Department's statutory gift acceptance authority and to assess if any legal requirements, conditions or encumbrances are imposed on the Department by acceptance of the gift.
 - If HQ offices concur, and the gift has a value of \$10 million or involves land acquisition, the proposal is presented to the Capital Investment Review Board for approval. If the Board approves, the delegation procedure noted below will be implemented by OFMP.
 - If HQ offices concur and the gift is valued at less than \$10 million and land acquisition is not part of the gift, OFMP will issue a specific delegation of authority to the applicable PHS agency to accept the gift of real property in accordance with all Departmental policies, procedures, and requirements outlined in the HHS Facilities Program Manual Volume 2 and Federal regulations and statutes.
2. Section 231 of the Public Health Service Act (42 U.S.C. 238) and 25 U.S.C. 451, as amended are the overriding statutes authorizing the acceptance of gifts of real property (usually unconditional but sometimes conditional) by or on behalf of HHS. Additional relevant statutes include:
- a. 42 USC 289f authorizes the Secretary of HHS to accept conditional gifts, including real property, for the benefit of the National Institutes of Health.
 - b. Section 22 of the Occupational Safety and Health Act (29 U.S.C. 671) authorizes the Director of the National Institute of Occupational Safety and Health, CDC/HHS to accept conditional or unconditional gifts for the benefit of the Institute.

E. ACQUISITION BY TRANSFER

Property which is excess to the needs of another department of agency of the Government may be requested for use by HHS when the requirements of acquisition set forth herein are met, and it has been established that the transfer will prove more economical over a sustained period of time than the acquisition of a new facility specifically designed to satisfy the program requirement. Transfer of property must be



made under the Federal Property and Administrative Services Act of 1949 and FMR §102-75 including the requirement for 100% reimbursement, except as noted otherwise.

The OPDIV will be responsible for initiating the transfer request, obtaining program approvals and funding commitments, and preparing the Request for Transfer (GSA Form 1334). A copy of the Request for Transfer, together with supporting documents, will be forwarded to OFMP concurrently with the OPDIV's submittal to GSA.





SECTION 7-2 LEASE ACQUISITION

7-2-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)
X7-2-A	Suggested Award Factors
X7-2-B	List of Leasing Forms and Clauses

7-2-00 POLICY

The Administrator of General Services delegated leasing of below prospectus level general-purpose space to The Secretary of the Department of Health and Human Services, effective October 14, 1996. The Secretary, HHS has re-delegated this authority to National Institutes of Health, Indian Health Service, Centers for Disease Control and Prevention, Food and Drug Administration, and the Program Support Center.

The Office of the Secretary has overall responsibility for management and provision of technical and administrative services to all facility development and operations in support of HHS' mission, including real estate, acquisition services, property management, design, construction, facilities planning and environmental protection. The Office of the Secretary, Office for Facilities Management and Policy (OFMP) promulgates and enforces overall space policy, including build-out standards, leasing, and safety policy. The OFMP must approve all leases to ensure adherence to space utilization standards. Additionally the Office of Public Health Emergency Preparedness (OPHEP) reviews all leases for the physical security. OFMP will issue written approval of the space acquisition.

Federal agencies must acquire and utilize the space in accordance with all applicable laws and regulations, including, but not limited to, the Competition in Contracting Act (CICA), Federal Management Regulations (FMR), Executive Order 12072, Executive Order 13006, Davis Bacon Act, and the Federal Acquisition Regulations (FAR) in order to:

1. Protect the public interest by conservation of property and prudent management of resources;
2. Effectively support the HHS and HHS missions by assuring facilities operation and performance of maintenance at a level of adequacy that will continually provide attractive and functional facilities and a high quality work environment, comparable to industry, for HHS employees and the public they serve.

In addition to Federal Regulations and Executive Orders, HHS OPDIVs are required to adhere to the HHS Space Utilization Policy issued on July 14, 2003.

Apart from the 1996 GSA-delegated leasing authority, HHS OPDIVs have legislative and/or regulatory authority to perform leasing activities. These authorities are cited below:

1. 41 CFR 102-73.195 – authorized HHS agencies to lease laboratories for periods of up to five years (including options);
2. Public Law 94-437, 810, as amended, Indian Health Care Improvement Act, authorizes the IHS to enter into leases with Indian Tribes for periods of up to 20 years;



3. Public Law 93-638, 105(1), Indian Self-Determination and Education Assistance Act, requires IHS to enter into leases (upon request) with Indian Tribes and tribal organizations for tribally-operated programs;
4. Public Law 100-690, 1987 OMNIBUS Drug Supplemental Appropriations Act, authorizes IHS to lease space for Youth Regional Treatment Centers for American Indians and Alaska Natives (in-patient services);
5. Section 413(b)(6)(C) of the PHS Act (42 USC 285(d)(2)) authorized the Director, National Cancer Institute to acquire space in the District of Columbia (DC) or communities adjacent thereto for the use of the Institute for a period not to exceed ten years.
6. Section 421(2)(C) of the PHS Act (42 USC 285-3(b)(2)(c)) authorizes the Director, National Heart Blood and Lung Institute to lease space in DC or communities adjacent thereto for the use of the Institute for a period not to exceed 10 years.

DEFINITIONS

For the purposes of Section 4-9 of this manual, the following definitions shall apply.

Acceptance of Space – A certification and commitment from an Agency to occupy space. Based on Agency acceptance, GSA may commit to the use of Government funds to award a lease, make a commitment for initial alterations, and/or establish a date of occupancy. Agencies are financially responsible for losses incurred by the Government caused by any failure by the Agency to fulfill a commitment to accept space.

Agency-Controlled Space – Federally owned, leased, or controlled space acquired or used by Federal Agencies under any authority other than the Federal Property and Administrative Services Act of 1949, as amended. It also includes space for which GSA has delegated authorities for acquisition, use, or disposal to other agencies.

Available Space – The total amount of space that is currently being marketed as available for lease in a given period. It includes any space that is available, regardless of whether the space is vacant, occupied, available for sublease, or available at a future date.

Build-Out – Refers to the preparation of space for occupancy including lighting, outlets, partitions, doors, carpet, paint, etc. This could mean either demolition of existing partitions, doors, outlets, etc., and then new interior construction or construction from a shell to meet contract terms.

Build-to-Suit – A term describing a particular property, developed specifically for a certain occupant to occupy, with structural features, systems, or improvement work designed specifically for the needs of the tenant. A build-to-suit can be leased or owned by the tenant. In a leased build-to-suit, a tenant will usually have a long-term lease on the space.

Central Business District – the designation of a Central Business District (CBD) and Suburban refer to a particular geographic area within a metropolitan area, describing the level of real estate development found there. A high density, well-organized core within the largest city of a given metropolitan area, characterizes the CBS.

Construction Documents – Scaled, hard-line drawings communicating a client's exact requirements for build-out, typically based on approved design intent drawings, a construction document package



contains full and complete [architectural drawings](#), furniture plans, finish plans, [telecommunication/LAN](#) and electrical plans, construction/demolition plans, and plumbing, mechanical, structural, and electrical engineering plans

Delineated Area – The specific boundaries within which space will be obtained to satisfy an Agency space requirement.

Delivery Date – The date a building completes construction and receives a certificate of occupancy.

Design Intent Drawings (DIDs) – Hard-line drawings of sufficient detail to communicate the client’s requirements for build-out. Generally includes full furniture and architectural plans with [telecommunications/LAN](#) and electrical locations. Does not include structural, mechanical or engineering drawings.

Existing Inventory – the square footage of buildings that have received a certificate of occupancy and are able to be occupied by the tenants. It does not include space in buildings that are either planned, under construction or under renovation.

FedBizOpps – Formerly titled synopsis of United States Government Proposed Procurement, Sales and Contract Awards. Publishes not only these facts, but also subcontracting opportunities and advance notices of proposed contracts.

Federally Leased Space – Space for which the United States Government has a right of occupancy by virtue of having acquired a leasehold interest.

Leased Space – All of the space that has a financial lease obligation. It includes all leased space, regardless of whether the space is currently occupied by a tenant. Leased space also includes space being offered for sublease.

Lessor – One who lets property under a lease [sometimes referred to as landlord](#).

Market – Geographic boundaries that serve to delineate core areas that are competitive with each other and constitute a generally accepted primary competitive set of areas. Markets are building type specific, and are non-overlapping contiguous geographic designations having a cumulative area that matches the boundaries of the entire Region. Markets can be further subdivided into sub markets.

Owner – The company, entity, or individual that holds title on a given building or property.

Quoted Rental Rate – The asking rate per square foot for a particular building or unit of space by a broker or property owner. Quoted rental rates may differ from the actual rates pay by tenants following the negotiation of all terms and conditions in a specific lease.

Rent – The amounts GSA charges for space and related services to its agencies with tenancy in GSA-controlled space. Rent is capitalized to differentiate it from the “rent” that GSA pays lessors [unless it is an agency delegated/direct lease](#).

Rental Rates – The annual cost of occupancy for a particular space quoted on a per square foot basis.



Request for Space – A written document upon which an Agency provides GSA with the information necessary to assign space. A request for space shall be submitted on Standard Form 81 and Standard Form 81-A, and the Space Requirements Questionnaire. The request shall, at a minimum, contain descriptions of the amount of space, personnel to be housed, geographic area, time period required and funding availability.

Sealed Bid – A prospective offeror's reply to the solicitation (SFO) form used for formally advertised procurements.

Solicitation for Offers (SFO) – Request submitted to prospective offerors. Means invitation for bids in sealed bidding and request for proposals in negotiations per GSAM 570.102.

Space - The area within the confines of buildings and land incidental to their use that is under Federal agency's custody and control.

7-2-10 PROCEDURES

General procedures of lease acquisition should follow the GSA Pricing Desk Guide.

A. MARKET SURVEY PROCEDURES

A market survey is used to identify potential sources that meet HHS requirements for real property. Market surveys may use information available within GSA's existing inventory or other sources that will meet the Government's minimum requirements (GSAM 570.301). All potential facilities must be surveyed and judged in the same manner and use the same criteria. Full documentation is necessary to avoid any potential claims of unfairness. The market survey is utilized as a means of obtaining the best space and at the best value to the Government. OPDIVs using delegated leasing authority for leases exceeding the simplified lease acquisition threshold must obtain offers from the maximum number of qualified sources capable of meeting the government's minimum requirements. All documentation is to be maintained in the procurement file.

The GSA local office can provide basic information about what is available and market rates. The Local Office can aid the Contracting Officer in preparing public advertisements; determining competitive responses and offers, based on market conditions; and making an award that represents the best value to the Government. In addition to the GSA local office, there are other sources of market information available to the Contracting Officer. For example market data can be gathered from local newspapers, real estate brokers, local business people, local board of realtors, recent government market surveys and resultant offers, recent appraisals, the local chamber of commerce, real estate publications by the Building Owners and Managers Association (BOMA), Black's Guide, and the Crane Business Report. Touring desirable locations is another method for gathering marketing data.

The acquisition of federal space requires public advertisement in all non-exempt leasing actions for blocks of space of more than 10,000 square feet. Such advertisements must be publicized in local newspapers and FedBizOpps. In cases where the Government proposes to lease a building to be constructed on a predetermined site, the proposed acquisition must be publicized in FedBizOpps.

Advertisements should broadly define the requirements of space and give all interested parties information to respond to the announcement, including delineated area. The delineated area is the specific boundaries (by streets located to the north, south, east, and west) within which space will be obtained to



satisfy the HHS space requirement. The advertisement usually runs once. In order to ensure competition, the Contracting Officer may run other ads in real estate trade journals.

1. Market Survey Form: The HHS will use GSA Form 3627 for market surveys. All items or blocks in the form must be completed. The form should be used to record information on each property surveyed. Supporting documents such as floor plans, photos, or tenant directories that are provided should be attached to the form. Completed forms should be kept with the lease solicitation file. The listing file should contain forms for all facilities surveyed for the solicitation. The successful Offeror's form must be placed in the official lease file.
2. Discussions with Offerors: A market survey is for information only and the Government should not enter into negotiations with a potential offeror. The government shall inform the offeror that a market survey is not a solicitation for offer or commitment on the Government's part whatsoever. The offeror should be informed that an official solicitation for a written offer (SFO) would be sent if the property meets the minimum standards. Informal discussions are permitted that allow the offeror to state the asking price.

The Government will avoid stating any opinion regarding the acceptability of the property. It is permissible during the market survey to tell the offeror that the property will probably not be considered when major defects are noted. However, the offeror should not be prohibited from competing, but note that the offer will not be considered unless the defects are corrected before occupancy. **All Government officials and representatives who participate in the market survey team must sign a procurement sensitive form that prohibits discussion about the potential sites outside of the market survey team**

B. LEASE ACQUISITION PLANNING PROCEDURES

Lease acquisition strategy is to leverage the market place by providing the best value for the HHS in acquiring and administering leased space. Lease acquisition strategy will also further define the Solicitation for Offers (SFO). Each OPDIV is required to ensure written availability of funds through the OPDIV Chief Financial Officer (CFO).

Executive Order 12072 requires that first consideration to meet space needs in urban areas be given to the centralized community business area, or central business district (CBD). The local government defines central business districts.

1. Space Available within HHS Current Lease Inventory: The OPDIV Real Estate Specialist should first review HHS' lease inventory in the delineated area by contacting the HHS Office of Facilities Management and Policy to determine if space is available to meet the requirement. Any existing lease should have **at least** two years remaining on the lease term.
2. Space Available within GSA Current Lease Inventory: GSA must be notified of pending lease acquisitions and GSA must certify that no space is available. The Real Estate Specialist should review GSA lease inventory in the delineated area to determine if space is available to meet the requirement. The current GSA inventory can be found at <http://www.iolp.gsa.gov>.
 - a. **No Space Available**: If there is no space available in GSA's inventories the Real Estate Specialist must be notified in writing or e-mail by GSA and the lease acquisition process may begin.
 - b. **Special Purpose Space**: These types of space are generally not available through GSA; therefore HHS OPDIVS may enter into Direct Leases. Refer to 41 CFR 102-73.
3. Full and Open Competition: FAR 2.101 defines full and open competition as permitting all responsible sources to compete. The procedures for full and open competition are as follows:



- a. Negotiated Acquisitions
 - b. Sealed Bids
4. Other than Full and Open Competition: The Competition in Contracting Act of 1984 permits under certain specified conditions, contracting without providing for full and open competition. FAR 6 covers the requirements, and approvals for other than full and open competition. The requirements are:
- a. Only one responsible source and no other supplies or services will satisfy agency requirement;
 - b. Unusual and compelling urgency;
 - c. Industrial mobilization; engineering, developmental, or research capability, or expert services;
 - d. International agreement;
 - e. Authorized or required by statute;
 - f. National security; and
 - g. Public interest (FAR 6.302)
5. Competition for Leases not exceeding the Simplified Lease Acquisition Threshold: Simplified lease acquisition procedures will be used for procurements that do not exceed the simplified lease acquisition threshold of \$100,000 average net annual rent for the term of the lease, including option periods excluding operating cost.
- a. Solicit at least three sources to promote competition to maximum extent possible
 - b. When repeated requirements for space occur in the same market and if practicable, invite two sources not included in the most recent solicitation to submit offers.
 - c. If one source is solicited, document the file with explanation for the lack of competition.
 - d. If sources that are not solicited learn of the requirement and express an interest, their space must be considered if they meet, or can be made to meet the requirements.

C. METHODS OF LEASE PROCUREMENT

1. Sealed Bidding: Sealed bidding requires that all bidders be given a definitive set of requirements and they offer precisely the product or service specified. Evaluation is made as to responsiveness, responsibility and price. Negotiation or discussion is not allowed. "Federal Property Administration Services Act" (FPASA) § 303(a) (2) (a), and FAR 6.401 require that an agency solicit sealed bids if:
 - a. Time permits solicitations, submissions, and evaluation of sealed bids.
 - b. The award will be made solely on the basis of price and price related factors.
 - c. It will not be necessary to hold discussions with offerors.
 - d. There is reasonable expectation of receiving more than one sealed bid.



The use of sealed bidding is usually not practical; unless the building site is pre-selected on the site in accordance with Government-furnished construction documents for lease to the government.

2. Negotiated Acquisition: Negotiated acquisition is any method of purchase or leasing that is not sealed bidding. FPASA § 303(a) (2) (b) directs agencies when sealed bidding is not appropriate. Negotiated acquisition is the preferred method of acquiring lease space because it is necessary to conduct discussions with offerors about their proposals and factors other than price must be considered in making an award.

D. LIMITS TO HHS/OPDIV DELEGATED LEASING AUTHORITY

The HHS' delegated leasing authority is limited to projects with a net annual rent (annual rent less operating cost) that is not expected to exceed the prospectus threshold. Projects expected to exceed the threshold require Congressional approval and must be performed by GSA. The prospectus threshold is indexed and changed annually. Refer to Internet Reference Information for link to annual Prospectus Threshold. See Section 4-7-20A for link to current prospectus reporting thresholds

E. SHORT-TERM LEASE PROCEDURES

Leases for emergency space, short-term space, and swing space must be pre-approved by GSA and HHS.

F. SOLICITATION FOR OFFERORS AND AWARD PROCEDURES

The Solicitation for Offers (SFO) is required for all Government lease acquisitions and must include all necessary information to permit an offeror to submit a proposal. The SFO is the foundation for the entire lease negotiation process and will become part of the lease. FMR 102-73.100 requires executive agencies to use the Competition in Contracting Act of 1984 for full and open competition among suitable locations meeting minimum government space requirements. The SFO must set performance criteria by which the lessor must perform and it must also set the evaluation criteria by which proposals will be evaluated. The evaluation criteria must be set forth in the SFO with clear specificity so that offerors making proposals will know in advance by what criteria their proposals will be evaluated. The evaluation criteria in the SFO cannot be overly restrictive. The SFO must disclose the relative order of importance of the evaluation factors in the evaluation criteria. When no order is stated in the SFO then it will be presumed that all of the criteria carry the same weight. The SFO must state whether price is more important or equal to the technical factors. See Exhibit X4-7-A for suggested evaluation factors for award and Exhibit X4-7-B for relevant forms.

The government Contracting Officer or the Realty Specialist, has the responsibility for selecting and incorporating the general provisions, required clauses from the General Services Administrative Manual (GSAM) that sets forth all the clauses that can be included in a government lease. The solicitation is a written document and the provisions selected are based on particular requirements for each lease and the date of delivery or date of performance, and the solicitation must clearly establish the OPDIV's needs.

A sample SFO for leasing can be found on the GSA website. This sample contains appropriate terms, conditions, and clauses required for the lease contract.

Award Procedures: Develop an abstract for offers to determine responsiveness to the SFO and communicate with offerors to discuss responsiveness and provide an opportunity to correct deficiencies.



(Suggested award factors are provided as Exhibit X4-7-A.) The award letter will formally transmit the executed lease and transmits SFO amendments.

G. PREOCCUPANCY LEASE ADMINISTRATION

1. **Requirements for Build-Out:** The lease provides consideration for Lessor to provide space to meet the Government's needs before the Government can occupy it. Rent will not commence until space is provided in accordance with the terms and conditions in the lease.
2. **Program Documents (Section 9):** The Program Documents section of the lease is a contract document that is binding on both the Government and the Lessor. It is the primary basis for tenant build-out. All parties involved in the development and negotiation of the Program Documents must realize and clearly understand that Program Documents cannot be changed without consideration of cost, time and scope. It is very important to prepare a set of Program Documents that is clear, concise, correct, and complete.
3. **Performance Requirements (Sections 4 through 8 of the Lease):** The lease provides the performance requirements for the build-out for the lease. These sections also contain provisions that prescribe contractual obligations with respect to r tenant build-out. All parties involved in the development and negotiation of the lease must realize and clearly understand that these sections cannot be changed without consideration of cost, time and scope.
4. **Government Design Review:** The Government shall review the Lessor's build out plans and specifications for compliance with the Program Documents and the lease for the build-out. The review intervals shall be established in the lease or through agreement between the Contracting Officer and the Lessor.
5. **Government Acceptance and Measurement of Space:** The Government shall conduct a final walk-through with the Lessor of the build out space to determine if the space is substantially complete. The Government and the Lessor will identify visible deficiencies in the built out space and establish a punch list for the Lessor to complete at a mutually agreed upon time between the Government and Lessor.
6. **Measurement of Space:** Space shall be measured in accordance with (GSA Space Measurement Guidelines) ANSI/BOMA Standard (ANSI/BOMA Z65.1 – 1996)
7. **Existing Conditions Survey:** Before taking beneficial occupancy the Government shall prepare an existing conditions survey report to document the conditions of the premises. The Existing Condition Survey will be the basis for determining the Government's responsibility at the termination of the lease.
8. **Beneficial Occupancy:** Once the Government and the Lessor determine and agree that the build-out is substantially complete the Government may take beneficial occupancy.
9. **Lease Performance Period:** Rent begins when the Government occupies the space or at substantial completion. The Government and the Lessor must execute a Supplemental Lease Agreement (SLA) to establish the performance period of the lease and to ratify the actual rentable space.
10. **Default in Delivery – Time Extensions:** If the Lessor fails to do the work with diligence that will ensure its substantial completion by the delivery date or fails to substantially complete the work by such



date, the Government may by notice to the Lessor terminate the lease. The Lessor and the Lessor's surety, if any shall be jointly and severally liable for any damages to the Government resulting from the termination of the lease.

H. DESIGN AND BUILD-OUT PROCEDURES

The design and build-out phase of the project further develops the preliminary programming information of the solicitation into the documents necessary for a contractor to construct, or build-out the space interior. The Government is not privy to the Lessor's design or construction contract and therefore has little oversight, [sometimes the Government participates in the selection of the Lessor's design A/E and construction contractor and reviews/approves the scope of services of the A/E](#); however, the Lessor must deliver the space in according to the conditions specified in the lease.

During the design period, the architect/engineering firm (A/E) meets with the agency and creates scaled drawings indicating the agency's desired space layout and finishes. The drawings are developed in iterations starting with a simple partition layout. Adding electrical/voice/data locations, and other general space attributes constitute the Design Intent Drawings (DIDs). The drawings review intervals are established in the lease or through agreement between the Contracting Officer and the Lessor. This process repeats several times, refining the scope of the build-out, and culminates in complete space drawings and specifications, which are called the contract documents.

At or near the completion of the contract documents, the Lessor must obtain pricing for the work shown on the contract documents. The preferred pricing method is for the lessor to compete the build-out scope of work. This may be a competition among general contractors, or with a lessor-assigned general contractor, and a competition of the varying trades, e.g. carpenters, electricians, etc. There are other variations on the theme of integrating an atmosphere of competition into the build-out pricing. However, due to programmatic or scheduling requirements, the cost of the build-out may be negotiated with a single contractor. Regardless of build-out procurement method, a base cost of work is set, and the lessor provides the build-out schedule. This schedule must set forth significant milestones to ensure that the lease occupancy date will be met. The schedule is critical to coordination of the Government's contractors, i.e. [telecommunications/LAN](#), voice/data cabling, furniture/fixtures/equipment (FFE), and physical relocation. The SFO contains a paragraph addressing liquidated damages which are penalties paid by the lessor should there be a lessor-caused delay in delivery of the space. Numerous aspects of the build-out phase are administrative. These include holding regular progress meetings, procedures for changes in the work, channels of communication, government representatives and their limits of authority, and the coordination of Government direct contracts, and the contractor's access to the site and work hours. The build-out is complete when the contractor has completed all work and the local building officials have issued a certificate of occupancy (CO).

When notified by the contractor that all work is complete, a final walk-through for space acceptance occurs. This walk-through is usually coincident with the creation of a contractor deficiency list, or punch list, of omitted or substandard work items. With a certificate of occupancy, and agreement that the space is substantially complete, the Government may occupy the space. The contractor is typically allowed to work minor punch list items as the Government occupies the space.



7-2-20 GUIDANCE AND INFORMATION

A. INTERNET REFERENCE INFORMATION

The following web sites, internet links, and references provide guidance and information relevant to federal leasing.

Federal Management Regulations, are found within Title 41, Subtitle C of the Code of Federal Regulations –

<http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200141>

Executive Orders including 12072 and 13006 -

<http://www.gsa.gov/Portal/gsa/ep/indexView.do?pageTypeId=8199&channelId=-13339>

Public Law 93-638 – <http://www.ihs.gov/NonMedicalPrograms/chr/pl93-638.cfm>

Public Law 100.690 – www.hawaii.edu/ohr/emp-d&b/drug/pl100690.pdf

42 USC 285(d) (2) – a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/cfr_2002/julqtr/pdf/41cfr101-17.0.pdf

Davis Bacon Act – <http://www.dol.gov/esa/whd/contracts/dbra.htm>

FAR clauses including 6.202, 6.203, 6.204, 6.205, 6.302, 6.303, 6.304, 6.401. 9.104-1, 15.208, 15.303, 15.305, 15-306, 15.505, and 15.506 at <http://www.arnet.gov/far/>

General Services Administrative Manual (GSAM) including clauses GSAM 501.603, 570.301, 570.303-3, 570.306, 570.307, 570.307, 570.308, 570-309, and 570.7 at

http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=13604&noc=T

GSA forms and standard forms such as SF 2, GSA 1166, GSA 1364, GSA 3626, GSA 3627, and GSA 3628 are available at <http://www.gsa.gov/Portal/gsa/ep/formslibrary.do?formType=ALL>

FPASA 303 - http://www.dtic.mil/envirodod/Policies/Archives/appndx_f.htm

Prospectus reporting thresholds -

http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=16247&noc=T

ANSI/BOMA Z65.1-1996 – Standard Method for Measuring Floor Area in Office Buildings is available for purchase at

<http://www.boma.org/ProductsAndResearch/Standards/StandardMethodForMeasuringFloorAreainOfficeBuildings.htm>

Energy Policy Act of 1992 - <http://www.epa.gov/radiation/yucca/enpa92.htm>

Security Standards for Leased Space ISC Subcommittee Final Report, dated May 16, 2003.

Americans With Disabilities Act (ADA) - <http://www.usdoj.gov/crt/ada/adahom1.htm>



Competition in Contracting Act of 1984 –
http://www.gsa.gov/Portal/gsa/ep/contentView.do?pageTypeId=8199&channelId=-13340&P=PRCOE&contentId=11625&contentType=GSA_BASIC





SUGGESTED AWARD FACTORS & EVALUATION OF BUILDINGS AND SITES

- A. Ability to meet the Requirements in the Solicitation for Offers
1. Adequate Space to Meet the Requirements
The Offeror must provide adequate space to meet HHS needs. If the Offeror's proposal does not provide adequate space, the proposal may be considered as non-responsive.
 2. Configuration of Space to Meet the Requirements
The Offeror must provide space that meet HHS' functional and adjacency requirements. If there is a need for the space to be contiguous, it should be required in Program of Requirements attached to the SFO. The efficiency of circulation between and with space should be considered.
 3. Adequate Structural Capacity.
The structural system of the property must be able to accommodate HHS needs. Unusual structural requirements should be noted in the Program of Requirements attached to the SFO.
 4. Adequate Building Systems
The Offeror's building systems (i.e. HVAC, plumbing, fire protection, electrical and communications systems) must be adequate to meet HHS' needs. Unusual building systems should be noted in the Program of Requirements attached to the SFO.
- B. The Ability to Deliver a Turnkey Facility in Accordance with the Government's Requirements.
1. Minimum construction needed to meet the Government's Requirements.
Offers that can meet the requirements as is or with the least amount of construction is desirable because it will allow the HHS to occupy the space soon after award of lease at a lower rent.
 2. Offers with earliest delivery date.
Consideration should be given to the ability of the offeror to deliver the space at the earliest possible date in a cost efficient manner.
- C. Transportation
1. Highway Access
The property should be located on or very close to an arterial street as defined by the local planning jurisdiction.
 2. Parking
The property should be located in an area where there is adequate parking for HHS staff
 3. Public Transportation
The property should be located within 2,500 feet walking distance to mass transit
 4. Pedestrian Traffic
The property should be accessible to pedestrians without major conflicts with vehicular and service traffic.
 5. Emergency Access
All occupied structures on the property should be accessible on all sides to emergency response vehicles and personnel.
 6. Service Access
The property should be accessible to service vehicles and have adequate loading docks to accommodate the needs of HHS mission
 7. Architectural and Transportation Barriers
The property shall be accessible to persons with disabilities free of architectural and transportation barriers in accordance with the Americans with Disabilities Act and/or state or local regulations and laws.



- D. Neighborhood Amenities
 - 1. Eating Establishments
The property should in close proximity to eating establishments within a ___ minute walking distance.
 - 2. Shopping
The property should in close proximity to shopping facilities
 - 3. Postal Services
The property should in close proximity to postal services.
 - 4. Healthcare
The property should in close proximity to healthcare facilities
 - 5. Quality
The property should be located in a neighborhood that is well maintained and free of blight
 - 6. Other
- E. Ground Floor Space
 - 1. Offers providing ground space
- F. Energy
 - 1. Energy efficient construction, equipment and fixtures
The buildings on the property should be constructed to meet federal energy requirements in accordance with the Energy Policy Act of 1992
- G. Environmental Features
 - 1. Noise: *The site should not be in close proximity to sources of noise such as highways, power plants, and service areas.*
 - 2. Air and Water Quality: *The site should not be in close proximity to sources of air or water pollution.*
 - 3. Solid Waste Disposal: *Solid waste disposal services should be economically available to the site.*
 - 4. Hazardous Waste Contamination: *The site should be free of hazardous materials.*
 - 5. Historic Characteristics: *The historic and archeological features of the site should be considered.*
- H. Maintenance and Operations
 - 1. Building and Janitorial Services
The Offeror should provide adequate maintenance and janitorial services to maintain the property.
- I. Security
 - 1. Site Security
Lessor should provide an electronic key card perimeter security system during non-duty hours which should be monitored 24 hours per day and provide a level of security which reasonably deters unauthorized entry to the leased space. At the Government's expense, the Government retains the right to implement security requirements in accordance with latest DHS policies as adopted by Office of Public Health Emergency Preparedness (OPHEP) or other applicable Federal policy.
 - a. Grouping of Structures



- The grouping of structures should reinforce associations of mutual benefit. There should be delineated paths of movement; there should be defined areas of activity for particular users through their juxtaposition with internal work areas, and provides for natural opportunities for visual surveillance. The grouping of buildings should promote a clear understanding of the function of the space*
- b. **Visibility of Streets and Open Space**
Streets and open spaces should be visible from the workspace within the property. Building entrances and lobbies should be visible from the street.
 - c. **Subdivision of the Site**
The site should be subdivided so that all of its areas relate to a particular building or group of buildings. The area surrounding a building should be perceived by occupants as an outdoor extension of their workspace. As such, it comes under their continued use and surveillance. Persons using those areas should feel they are under the natural observation of their co-workers.
 - d. **No Unassigned Areas**
No area should be unassigned or simply left “public”. Outdoor space should be allocated to specific buildings or building clusters.
 - e. **Boundaries**
Physical barriers or symbolic barriers should define the property’s boundaries. The barriers should separate public from semi-public areas of the property, provide transition from outdoors to indoors, divide the semi-public space of building lobby from the corridors.
 - f. **Physical Barriers**
The property should feature physical barriers such as fences, walls and berms that limit access to facilities by unauthorized persons. Certain areas such as maintenance yards, hazardous material storage, etc. will require fencing.
 - g. **Symbolic Barriers**
The property should feature symbolic barriers such as plants, low walls, doors, berms, change in level, and security desks that will discourages unauthorized entry by making distinctions between the occupants and the visitor. The use of symbolic barriers should not limit or block emergency access or access to emergency systems such as fire hydrants, electric disconnects switches, and gas shut-off valves.
 - h. **Surveillance**
The buildings and structures on the property should promote the ease of surveillance by staff and security personnel. The surveillance system should be obvious to make a potential intruder aware that any overt act or suspicious behavior will come under the scrutiny of the facility’s occupants.
2. **Current Tenants**
- a. *The current tenants of the property should be engaged in lawful activities and not engaged in activities that are a threat to the security of the United States of America.*
 - b. *When leasing new space or renewing existing leases, consideration should be given to locating in a building with existing federal tenants with similar facility and security requirements.*



LIST OF LEASING FORMS AND CLAUSES

1. Forms Section may consist of:
 - A. SF 2, U.S. Government Lease for Real Property or GSA Form 3626, U.S. Government Lease for Real Property (Short Form) or equivalent documents.¹
 - B. GSA Form 3516 or GSA Form 3516A, Solicitation Provisions.
 - C. GSA Form 3517A or GSA Form 3517B Required Clauses (Full Text).²
 - D. GSA Form 3518, Required Certifications and Representations, signed by Lessor.
 - E. GSA Form 1364, Proposal to Lease Space.
 - F. GSA Form 1217, Lessor's Annual Cost Statement.
 - G. GSA Form 3627, Market Survey

¹ The Contracting Officer must approve equivalent documents.

² The Contracting Officer must approve GSA Form 3517 Required Clauses by reference.



SECTION 7-3: ACCEPTANCE AND OCCUPANCY

7-3-00	Policy
10	Procedures
20	Guidance and Information
30	(Reserved)

7-3-00 POLICY

A. PURPOSE

The purpose of this section is to provide guidance that will facilitate transitioning from the construction phase of a project to beneficial use and operations by the user. Topic areas of particular significance to effective facility activation include inspection and acceptance, warranties, training, documentation in operations and maintenance manuals, and occupancy.

1. HHS activities shall normally take beneficial occupancy or use after substantial completion of a facilities project is achieved. Potential risks, impacts and effects shall be carefully considered when deciding whether to occupy or utilize a portion of a construction project prior to substantial completion of the whole project.
2. HHS activities shall ensure that an effective warranty management program is in place to enforce active material, equipment, and workmanship warranties for the benefit of the government.

B. OCCUPANCY POLICY FOR NEW OR RENOVATED LABORATORY OR SUPPORT SPACE

It is NIH policy to provide facilities which are complete and services which are complete and fully operational as determined through functional testing before any occupancy phase can begin. This policy applies to all new construction and renovations projects. Any deviations or waivers from this policy must be submitted to the Division of Technical Resources.

1. One hundred percent(100%) of central support elements and regional distribution for mechanical, electrical, plumbing, fire protection and life safety systems, telecommunications and special laboratory systems(e.g., containment devices, air vacuum, gas, etc.) must be installed, tested and certified for use prior to the proposed occupancy of areas of the building. All major/critical systems serving the proposed occupied areas of the building that affect occupant safety, comfort and the ability to accomplish the NIH mission must be fully operational at the time of occupancy. This certification process will assure that the systems are complete so that the scientist can conduct research. When subsequent regional branches are added to a system, it must be done without disrupting the service to the occupied area. Pre-final and final certification of these systems must be finalized prior to occupancy. Certification must be accomplished under a variety of operational scenarios, including normal emergency, opposite seasons, test and failure mode. All major punch list items must be completed prior to occupancy.
2. Minor balancing

B. PHASED AND PARTIAL OCCUPANCY

No partial occupancy will be allowed if the facility is not accessible to persons with disabilities, or not in compliance with other Federal laws and regulations.



Where phased occupancy is proposed before the entire facility is complete, fire protection and life safety systems must be in place prior to partial or complete occupancy of an area, floor or building and should be determined on a case by case basis. All critical elements and services necessary to conduct research within that area must be 100% complete before transition begins. Critical elements and services are program driven and should be determined on an occupant specific basis. Specific critical elements must be identified in writing and approved by the IC. When construction of those elements has been completed, the user will accept the phased occupancy area. Essential modifications to the space and systems within phased occupancy area which affect the ability of the occupants to conduct research must also be 100% complete prior to initiating into that space, provided the modifications fall outside the moratorium guidelines defined in the paragraph below. The Project Officer must insure that all facility systems are supported 24 hours a day, 7 days a week, once any occupancy begins and until the entire facility is turned over to ORF.

C. DEFINITIONS

For the purpose of Section 5-1 of this manual, the following definitions shall apply.

Latent Defect - Latent defect is defined in the FAR Subpart 2.1, as “a defect that exists at the time of acceptance but cannot be discovered by a reasonable inspection”.

Beneficial Occupancy - Beneficial occupancy takes place on the date when part or all of the work involved in a construction project is substantially complete and the Government takes possession of the designated space or spaces to use for the purpose intended. Beneficial occupancy also initiates the warranty period and the environmental mitigation identified in the environmental documents. (The use of a project or portion thereof for the purpose intended.)

Substantial Completion - The time when the contract work is complete to the point that the Government may take over the facility and receive beneficial occupancy for the purpose intended.

D. MATERIAL SAFETY DATA SHEETS (MSDS)

MSDS shall be required from the contractor in a separate binder. A MSDS is designed to provide both workers and emergency personnel with procedures for handling or working with a particular substance. MSDS's include information such as physical data (melting point, boiling point, flash point etc.) toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill/leak procedures. These are of particular use if a spill or other accident occurs.

7-3-10 PROCEDURES

A. INSPECTION AND ACCEPTANCE

Contractors and Lessors are required to maintain adequate quality control systems and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor and/or Lessor should maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract. Government inspections and tests are for the sole benefit of the Government and do not relieve the Contractor and/or Lessor of responsibility for providing adequate quality control measures; relieve the Contractor and/or Lessor of responsibility for damage to or



loss of the material before acceptance; constitute or imply acceptance; or affect the continuing rights of the Government after acceptance of the completed work under the contract.

OPDIVS are encouraged to have one or more full-time Government inspectors on large and complex construction or design-build projects; however, the presence or absence of a Government inspector does not relieve the Contractor and/or Lessor from any contract requirement, nor is the inspector authorized to change any term or condition of the contract without the Contracting Officer's written authorization.

The Contractor and/or Lessor will, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the non-conforming work with an appropriate adjustment in contract price. The Contractor and/or Lessor will promptly remove rejected material from the premises.

If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor and/or Lessor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor and/or Lessor or its subcontractors, the Contractor and/or Lessor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

The Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract that the Government determines meets contract requirements or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance by the Contracting Officer shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

B. WARRANTIES

1. Basic Warranties - It is in the best interest of the Government to have the entire construction project warranted. OPDIV Contracting Officers shall insert in full text FAR Clause 52.246-21, Warranty of Construction, into construction contracts as well as design-build contracts. This clause provides for the following: The contractor, whether a construction contractor or a design-build contractor, essentially warrants that work performed under their contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. The contractor shall maintain all equipment during the construction period in accordance with manufacturer's suggestion operations and maintenance manuals. Require documentation that this has been performed by the contractor on all equipment requiring scheduled maintenance prior to Government acceptance of work. The standard warranty period extends usually for one year from the date of substantial completion of the work.

Contractors shall provide warranties in a separate binder with points of contact names, addresses, and all applicable phone and fax numbers.

2. Adjustments of Basic Warranty/ Guarantee Period - The contractor may request an adjustment in a warranty period based on completion of the work and use of the equipment and/or system by the Government. Systems that are utilized on a seasonal basis must be tested and used through a complete annual load cycle. For example, if the final inspection were held in the fall, the air conditioning system would not be properly tested under full load until the following air conditioning



season. The contractually specified warranty period does not apply to latent defects. The timeframes in which remedies for latent defects are possible is usually much longer than the standard one-year warranty.

3. Manufacturers', Subcontractors', and Suppliers' Warranties - The A/E generally specifies product performance characteristics that result in warranties. In many cases these warranties are industry standards. All warranties express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished are enforceable under the contract. The Contractor is required to obtain all warranties that would be given in normal commercial practice; all warranties are to be executed, in writing, for the benefit of the Government, and all warranties are to be enforced for the benefit of the Government.

The management of the warranty process should be passed to the maintenance staff operating the facility along with COTR responsibilities. This group of individuals identifies the actual problem through troubleshooting processes and determines if it is in fact a warranty issue. Then appropriate action and follow-up can occur as well as a documented history. This staff also works with the Contracting Officer to resolve any items in dispute and provide any necessary technical information to the Contracting Officer for enforcement of the warranty requirement.

C. OCCUPANCY

1. Normal Occupancy - Generally, the facility is occupied after final inspection and acceptance.
2. Beneficial Occupancy - The Government has the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer should furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

Government Responsibility - When beneficial occupancy is effected prior to full acceptance, a careful inspection of the area to be occupied should precede such occupancy. Since the Government would be responsible for restoration and repair of damage resulting from the beneficial occupancy, records of conditions in both photographic and narrative form at the time of occupancy are essential.

While the Government has such possession or use, the Contractor is relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use. If possession or use by the Government prior to substantial completion of the entire project delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment should be made in the contract price, the time of completion, or both, and the contract should be modified in writing accordingly.

3. Occupancy Agreements - The Contracting Officer shall prepare an appropriate letter to the contractor setting forth the extent of the occupancy and its effective date and time. Lists of deficiencies and omissions in the occupied area should be included. In addition, when partial occupancy is required, an agreement with the contractor must be executed which delineates facility service responsibilities (maintenance, utilities, security, etc.).



7-3-20 GUIDANCE AND INFORMATION

OPERATIONS AND MAINTENANCE MANUALS

Operations and Maintenance (O&M) Manuals are essential to the activation and long term care of new HHS facilities. Provisions in the construction or design-build contract should require the development of a consolidated operations and maintenance manual for the entire facility in both hard copy and electronic soft copy. A copy of the manual should be kept and maintained by the OPDIV's facilities management office and the OPDIV's operation and maintenance field office. The manual shall include:

- A copy of all warranties [with point of contact information and telephone number of local representative to obtain warranty service.](#)
- As-built/Record drawings of project
- A list of all training requirements and a roster of trainees.
- All information necessary to optimize operations and maintenance of facility equipment and systems.
- Specific operational protocols for special and highly sophisticated equipment.
- Standard operating procedures and parameters.
- Commissioning results as a baseline for validation and facility performance expectations.





SECTION 7-4 POST-OCCUPANCY EVALUATION SURVEY

7-4-00	Policy
10	Procedures
20	Guidance and Information
30	Reporting Requirements

7-4-00 POLICY

A. PURPOSE AND SCOPE

Responsibility for a variety of Facility Surveys is vested in the OPDIVs under policy guidance of this manual. Post Occupancy Evaluation (POE) requires a detailed and systematic assessment of an operational facility. The POE is conducted after occupants have had sufficient time to establish operations and evaluate suitability of the facility to support the program mission. This section explains the rationale for performing POE's, desired outcomes, and the general approach to their accomplishment.

1. HHS OPDIVs shall conduct POEs on all leases and GSA assignments over prospectus level and on all federally owned facilities with a total project cost \$10 million or more (Capital Investment Review Board level projects), except staff quarters and utilities projects.
2. All Leases and GSA Assignments Over Prospectus Level – Each POE on these types of facilities will include *only* a customer satisfaction survey to be completed by HHS.
3. All Projects at Federally Owned Facilities \geq \$10M – Each POE will include a project management assessment, a customer satisfaction survey and an on-site evaluation. Standard tools are used to capture the project management assessment and the customer satisfaction survey. The on-site evaluation shall be developed by the OPDIV and reflect the requirements unique to its facilities.
4. “Lessons learned” in the process of performing POEs shall be posted electronically in a location accessible to OPDIVs, so that the information may be shared and used for the future improvement of the real property asset program.

B. DEFINITIONS

For the purposes of Section 7-4 of this manual, the following definitions shall apply.

Post-Occupancy Evaluation (POE) – Process of inspecting and analyzing recently completed and occupied facilities.

Project Management Assessment – A tool to measure the usage of certain project management techniques.

Customer Satisfaction Survey – A tool to measure key stakeholder satisfaction based on the quality and performance of a completed and occupied facility. This tool allows for a consistent comparison of facilities within each OPDIV and across OPDIVs.

On-Site Evaluation – Report which delineates the process of inspecting and analyzing recently completed and occupied facilities, and includes the data gathered and the conclusions and recommendations developed as a result of the process. This does not apply to leased facilities as defined in Section 7-4, paragraph A.1 above



7-4-10 PROCEDURES

A. PROJECT MANAGEMENT ASSESSMENT

The objective of the project management assessment is:

1. To evaluate the effectiveness of project management practices used in the execution of a project.
As a minimum, the assessment should include the following practices:

1. Planning and programming documentation
2. Business case analysis or economic and life cycle cost analysis (i.e. ECONPACK) as it applies to the alternatives to meeting an identified need.
3. Pre-project planning and the Project Delivery Rating Index (PDRI) Analysis
4. Acquisition planning – as it applies to contracting for goods and services to complete a project
5. Risk management planning
6. Budget planning
7. Schedule planning.

B. CUSTOMER SATISFACTION SURVEY

The objectives of the customer satisfaction survey are:

1. To provide an unbiased assessment of customer (Facility occupants, users and maintenance staff), likes and dislikes and better understanding of the quality and performance issues once the facility is occupied (at least 10 months after Beneficial Occupancy).
2. To improve the quality of future construction by discerning areas exceeding or falling below customer expectations.
3. To provide a metric that will measure facility quality and performance and provide insight on the effectiveness of the design and construction outcome.

Customer satisfaction surveys are to include the standard questions as provided by the Department [Exhibit]

C. ON-SITE EVALUATION

The objectives of the on-site evaluation are:

1. To document noteworthy construction features or practices for inclusion in future projects.
2. To identify poor or inefficient design features or construction deficiencies and take action to avoid those mistakes on future projects, as well as identify potential warranty items or latent defects (if still within the warranty period).
3. To identify cost overruns incurred during design and construction stages that might have been avoided with better planning.
4. To evaluate staffing patterns and adequacy of space.
5. To determine whether functional requirements of the program are met at reasonable costs.
6. To evaluate the needs of the facility occupants (medical and administrative staffs, patients, and visitors) and the facility performance in response to those needs.
7. To stay current with changes in technology, medical equipment, model codes, and federal/state/local requirements.



8. To provide evaluation and feedback (lessons learned) to all HHS offices responsible for planning, designing, constructing and operating facilities in order to save future construction and operating costs by contributing to an efficient facilities design and construction program.

On site surveys shall incorporate the following elements:

1. The OPDIV will plan and schedule the Survey for their facilities.
2. The facility should be in operation for at least ten (10) months before an On-Site Evaluation is conducted. The survey should not be conducted until the operation has reached a relatively normal/ steady state. In some cases, this will not occur for two or three years. Initially there may be abnormal spikes in patronage. Conversely, there may be areas that are not fully staffed for operation. It is noted that if the On-Site Evaluation can be successfully conducted prior to expiration of the construction warranty, it could potentially allow enough time to enforce the standard one-year construction warranty clause if warranted defects are discovered. However, the primary consideration in scheduling is whether the functionality of the facility can be assessed relative to normal operations.
3. The survey team consists of occupants or users, professional staff from each design discipline including architectural, civil/structural, mechanical, and electrical. There should also be program-planning professionals to assist in determining suitability of program department space. The design Architect/Engineer (A/E), Medical Program staff, and Agency customer representative for the project should be invited to participate in the site visit to provide background information on the facility design. If survey responses indicate safety, health or environmental concerns, Safety and/or Environmental Staff should also participate.
4. Prior to a site visit, the survey team should review the results of the Customer Satisfaction Survey (see part B above), review the project Program of Requirements (POR) and related project construction documents. This will enable the survey team to better determine whether program requirements have been met. It will also save time at the site since the survey team will be familiar with the facility before arriving.
5. The survey team shall visit the facility and inspect all exterior and interior elements of the facility and site. The survey team shall note conformance of the facility to the construction documents.
6. During the visit, survey team members shall interview the facility managers and the facility occupants to determine their observations about and reactions to the building. Persons interviewed should include the occupants, users, facility director, administrative officer, department heads, safety and/or environmental staff, facility engineering and maintenance staff.
7. In conducting the on-site survey, the information to be gathered is not limited to design or construction deficiencies. The survey team shall note successful integration of positive facility features including (but not limited to):
 - a. Efficient use of space including optimizing square footage and floor plan.
 - b. Sustainability in terms of
 - i. Efficiency of operations and maintenance,
 - ii. Durability of finishes,
 - iii. System flexibility, space adaptability,
 - iv. Technologically current and adaptable,



- v. Energy performance, and
 - vi. Sustainable buildings rating system and level of certification.
 - c. Design elements pleasing to occupants and visitors.
 - d. Acoustics, lighting, ventilation, thermal control.
 - e. Effective exterior design strategies.
 - f. Control of Storm water.
 - g. Safety measures, devices and factors.
8. Photographs should be taken during the site visit. These will document the general appearance of the facility and site as well as specific design and construction features. Necessary security approval of photography should be obtained, as necessary.

7-4-20 GUIDANCE AND INFORMATION

A. PROJECT MANAGEMENT ASSESSMENT

The Project Team shall address each standard project management element and explain how they were or were not effective.

B. CUSTOMER SATISFACTION SURVEY

1. General:

Each OPDIV shall utilize the standard set of survey questions in [Document Name, date of issuance]. An OPDIV may add any additional questions deemed appropriate for the particular facility to be evaluated.

2. Set-Up

- a. The Project Team shall set up an account with a survey hosting provider and initiate the survey. Respondents shall receive an e-mail invitation to complete the survey via the web link provided in the e-mail message.
 - i. The standard survey requires responses from two categories, Users and Maintainers. The PO shall review these standard survey question listings and add any additional questions deemed appropriate.
 - ii. The responses to the surveys shall be consolidated into the survey hosting provider's standard reports. Additional reports can be created at the PO's option by downloading the data into an Excel spreadsheet.
 - iii. Any major successes or concerns identified by the surveys shall be investigated further during the On-Site Evaluation. This information shall also be included in the On-Site Evaluation.

C. ON-SITE EVALUATION

Before visiting the site, each survey team should formulate a plan and a project specific checklist for each technical discipline to use as a guideline during the survey. This guideline/template will permit the efficient use of time at the facility and ensure that major areas are not overlooked. The following guidelines are recommended:



1. Design Review – Note design excesses or deficiencies, omissions or poor design features.
2. Supervision – Determine whether the A/E, the contractor, and the involved agency enforced/complied with the requirements of the plans and specifications.
3. Design Features
 - a. Each technical discipline involved in the review process should evaluate the major systems (for example, Electrical Engineer for emergency power) and its effective performance for the facility.
 - b. Discuss the use of alternate materials and/or systems.
 - c. Comment on the cost effectiveness of the installed systems.
 - d. Address design features contributing to the facility condition.
4. Systems Reliability
 - a. Health care and research facilities require a reliable power source and the maintenance of interior environmental conditions. Therefore, essential systems and equipment must be provided with alternate and/or standby power and components. The electrical and the mechanical disciplines should evaluate the reliability of the electric power, heating, air conditioning and other major systems.
 - b. Review other systems, their reliability and whether there is necessary redundancy/backup for critical systems.
5. Staff and Maintenance Personnel – Interview the facility management staff and maintenance staff regarding design and construction features, access to equipment, operations, adequacy of as-built drawings, training and maintenance manuals, and "contractor-furnished" training manuals on major equipment items.
6. Equipment and Utility Space – Determine the adequacy of equipment space for easy access and housekeeping purposes. Equipment that is not readily accessible is difficult to maintain properly. Verify that corridor space, door openings, and knockout panels are adequate for large equipment service or replacement.
7. Codes/Standards – Summarize National Fire Protection Association, Life Safety Code, Americans with Disabilities Act, and other national code used as design basis.

7-4-30 REPORTING REQUIREMENTS – DOCUMENTATION AND APPLICATION

Reporting requirements are considered met once all 3 parts for the owned facility projects \geq \$10M or when the Customer Satisfaction Survey are received by the Department. Minimum reporting requirements are as follows:

A. PROJECT MANAGEMENT ASSESSMENT

1. The OPDIV shall provide to OFMP the Project Management Assessment as part of the project Final FPAA Report (See *HHS Facilities Program Manual Volume II* – Section 2-2 Performance Measures). Assessment is to be provided under *Item 12. Continued from Page 1* on the 2nd page of the document.

B. CUSTOMER SATISFACTION SURVEY



1. Furnish survey report copies to OFMP

C. ON-SITE EVALUATIONS

1. Place the data gathered during the on-site survey in an On-Site Evaluation Report, with a separate section for each technical discipline. Describe the facility briefly and document deficiencies or notably good design and construction features, using photographs for descriptive purposes. Lists of suggestions for improved solutions should also be included to correct noted deficiencies. (The development of a matrix space analysis is encouraged to show differences between the POR, design documents, actual construction, and current agency design requirements.)
2. Promptly identify potential warranty items or latent defects to the Project Officer and Facility Manager so that timely action can be taken to enforce and benefit from the warranty.
3. This survey report is for information and use in planning and constructing future health care and research facilities. Make copies of the report available to all HHS OPDIVs, and any office or committee engaged in updating design criteria for use in HHS health care and research facilities construction programs.
4. Each OPDIV should develop and make available a method of posting and electronically retrieving the "Lessons Learned" during the POE process. For all OPDIVs this can be invaluable for future planning of facilities because it will make information available on items and procedures to avoid and those features that are desirable.
5. OPDIVs shall submit to the OFMP, an executive summary detailing major elements of the on-site evaluation and its results. Submittal of the full, completed On-Site Evaluation Report is not routinely required; however, OFMP, Division of Planning and Construction may request a completed survey report be submitted for information purposes.

NIH Facilities Development Manual



Appendices

Appendix A
Sample Statements of Work
&
A/E Submission Checklists



ARCHITECT ENGINEER SCOPES OF WORK

A-1-00	Policy
10	Procedures
20	Guidance and Information (Reserved)
30	Reporting Requirements (Reserved)

A-1-00 POLICY

ORF Project Officers and Contracting Officers shall use the Sample NIH Statements of Work and A/E Checklists found in Appendix A, XA-5-A through XA-5-C; furthermore, ORF Project Officers and Contracting Officers shall attach the appropriate A/E checklist found in XA-5-D or XA-5-E to the Scope of Work. A statement of work and its attached A/E checklist is a contract document.

4-1-10 PROCEDURES

The Project Officer shall edit the Sample Statement of Work and A/E Checklist to reflect the scope of the project.

A. A/E Checklists

The A/E Checklist reflects the minimum requirements for each design submittal. The Project Officer should check each A/E design submittal for completeness. Should the submittal be found insufficient based on the requirements of the checklist, then the Project Officer with the concurrence of their supervisor reject the submittal before it is forwarded to the Division of Technical Resources.



SAMPLE FOR NEW CONSTRUCTION
STATEMENT OF WORK
FOR
ARCHITECT-ENGINEER (A/E) SERVICES

A. BACKGROUND:

The Integrated Research Facility (IRF) will house scientists and support staff from five institutes and centers (IC's) from National Institutes of Health (NIH) working toward a single mission. The mission of the scientists is to formulate methods to treat people who have been exposed to biological agents. The National Institute of Allergy and Infectious Diseases (NIAID) will serve as the lead Institute. The other institutes that plan to occupy this facility are National Heart, Lung, and Blood Institute (NHLBI), National Institute of Biomedical Imaging and Bioengineering (NIBIB), National Institute of General Medical Sciences (NIGMS) and Clinical Center (CC). The Scientific Director is responsible for the research conducted in the facility and Executive Officer is responsible for finances.

B. PROJECT DESCRIPTION:

The IRF will accommodate general purpose laboratories, Bio-safety level laboratories, Vivarium, shared analytical laboratories and support spaces. The facility shall be designed to facilitate interaction between scientists and support staff. The facility shall employ sustainable design features to achieve flexibility, energy efficiency and quality work environment. The facility will house scientific equipment with special requirements. The construction cost of the facility is estimated to be \$ 35,000,000.

Project Title:	xxxxxxxxxx
Work Request Number:	xxxxxxxxxx
Location:	xxxxxxxxxx

C. PROJECT MANAGEMENT

The A/E shall have responsibilities concerning Project Management as defined herein.

The A/E shall appoint a Project Manager, who shall be the Government's single point of contact, and provide all necessary project representation for the successful accomplishment of the work. The A/E project manager shall be thoroughly familiar with all requirements and schedules. The A/E project manager shall be identified in the A/E proposal prior to contract award.

D. CODES & STANDARDS

The IRF shall be designed in compliance with applicable codes and industry standards for the location of the facility.

1) Model Building Codes

The IRF shall be designed with applicable model building code for the location of the facility. The design shall use other appropriate codes and industry standards such as: the Life Safety Code (NFPA 101), Fire Protection for Laboratories Using Chemicals (NFPA 45), Standard for the



Installation of Sprinkler Systems (NFPA 13) and Health care Facilities (NFPA 99). (Note: The Department of Health and Human Services (DHHS) as an agency of the Government of the United States of America, derives its authority from the Congress of the United States, and is not subject to laws, ordinances, regulations established by state and local governments or authorities of a lesser jurisdiction.)

2) Federal Regulations

The IRF shall be designed in compliance with all applicable Federal Regulations including but not necessarily limited to the following: Uniformed Federal Accessibility Standards, OSHA 29CFR 1910; The National Environmental Policy Act of 1969 (NEPA); The Endangered Species Act; The National Historic Preservation Act of 1966; The Archeological and Historic Preservation Act; The Wild and Scenic Rivers Act; 40CFR Environmental which includes: Safe Drinking Water Act, Clean Air Act, Clean Water Act, Toxic Substance Control Act, Solid Waste Disposal Act, and RCRA; Executive Order 11990 (Wetlands); Executive Order 11988 (Floodplains); Executive Order 12088 (Compliance with State environmental laws); National Capital Planning Commission (NCPC) "Master Planning Regulations"; Energy Policy Act of 1992; Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management) etc.

3) Departmental Regulations

The IRF shall be designed in compliance with "Guide for the Care and Use of Laboratory Animals" (NIH Publication 85-23), and "Biosafety in Microbiological and Biomedical Laboratories (BMBL), 5th Edition, January 2007 (DHHS Publication).

4) Agency Design Policies

The IRF shall be designed in compliance with the NIH Design Requirements Manual (DRM).

D. SCOPE OF SERVICES

The Architect/Engineer (A/E) shall provide professional services for all architectural and engineering disciplines; material and labor necessary to provide a set of construction documents to facilitate the construction of the IRF.

1) Submittals and Deliverables

The A/E shall make five (5) design submittals at the following stages: Schematic Design (15%), Design Development (30%), Construction documents (70%), Construction documents (95%), and Construction documents (100%).

a) Schematic Design

The schematic design constituting 15% design completion consists of but not necessarily limited to the following:

schematic site, floor plans, elevations and sections drawn to scale, exterior and interior perspective or axiometric drawings necessary to explain the concept, table of content



specifications, broad order of magnitude (square foot) cost estimate, storm drainage, structural, HVAC, plumbing and electrical calculations.

See attached A/E checklist and NIH DRM for detailed requirements.

b) Design Development

Design development constituting 35% of design completion consists of but not necessarily limited to the following in addition to all items required during schematic design phase:

Site grading and drainage plan, site utilities plan, site pavement plan, landscape plan, sediment control plan, site profiles, definitive floor plans for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, final perspective or axiometric drawings necessary to explain the design for presentation purposes, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules, plumbing riser diagram, one line electrical diagram, communication riser diagrams, out line specifications, systems cost estimate, final storm drainage and structural, HVAC, plumbing and electrical calculations.

See attached A/E checklist and NIH DRM for detailed requirements.

c) Construction Documents Phase – 70%

Construction documents constituting 70% of design completion consists of but not necessary limited to the following in addition to all items required during design development phase:

Site grading and drainage plan, site profiles, site utilities plan, site pavement plans and profiles, landscape plan and plant schedules, sediment control plan, floor plans for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules details for each discipline drawn to scale, plumbing raiser diagram, one line electrical diagram, electrical panel schedules, communication riser diagrams, specifications, quantity takeoff cost estimate and updated calculations.

See attached A/E checklist and NIH DRM for detailed requirements.

d) Construction Documents Phase – 95%

Construction documents constituting 95% of design completion consists of but not necessarily limited to the following in addition to all items required during construction document 70% phase.

site grading and drainage plan, site profiles, site utilities plan, site pavement plans and profiles, landscape plan and plant schedules, sediment control plan, floor plans for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules, with facility numbers, details for each discipline drawn to scale, plumbing raiser diagram, one line electrical diagram, electrical



panel schedules, communication and data layouts and one line diagrams, specifications, quantity takeoff cost estimate.

See attached A/E checklist and NIH DRM for detailed requirements.

e) **Construction Documents Phase – 100%**

Construction documents constituting 100% of design completion consists of to all items required during construction document 95% phase.

All drawings, specifications, calculations and reports shall incorporate previously accepted review comments. The A/E shall provide electronic copy of all CAD drawings in AutoCAD format; Electronic copy of specifications, calculations and reports.

See attached A/E checklist and NIH DRM for detailed requirements.

2) **Project Meetings**

The A/E shall prepare and provide meeting minutes to the PO within 7 working days for all meetings.

a) **Progress Meetings**

Progress meetings will be held at the National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland. The purpose of the progress meetings is to review the progress of the project in accordance with the schedule, status of submittals and resolve any outstanding issues.

b) **Review Meetings**

The review meetings may be scheduled by the PO to clarify review comments from various disciplines. The Government will provide appropriate representatives authorized to make technical and programmatic decisions necessary to maintain progress. The A/E shall send appropriate representatives consistent with the level of development and the nature of review. The representative(s) shall be qualified and authorized to make the technical decisions as required to maintain effective progress.

c) **User Meetings**

Meetings with users will be scheduled by the PO to discuss requirements of special laboratory equipment, any required operational protocol followed by the users and other functional requirements.

E. GOVERNMENT FURNISHED ITEMS

1) **Program of Requirements**

The A/E shall design the IRF in accordance with the Program of Requirements.

2) **Agency Master Plan**



- 3) Topographic Survey of the site
- 4) Geo-technical Report and recommendations

F. FACILITY NUMBERS

- 1) The A/E shall request facility numbers for each mechanical, plumbing and electrical equipment from the Division of Property Management via the PO.
- 2) The facility numbers and labeling requirements shall be incorporated into 95% construction documents.

G. SCHEDULE

- 1) The work shall proceed only after the issuance of the Notice to Proceed (NTP) by the Contracting Officer for the activities indicated.
- 2) The actual performance of the work and the delivery of the required documents shall be in accordance with the following submittal schedule which also indicates the performance time for each review stage.

SUBMITTALS AND QUANTITIES			PERFORMANCE TIME (CALENDAR DAYS)	
SUBMITTAL	Paper copies	CD	A/E	GOV
Submittal #1 (Schematic Design)	XX	XX	XX	XX
Submittal #2 (Design Development)	XX	XX	XX	XX
Submittal #3 (Construction Document 70%)	XX	XX	XX	XX
Submittal #4 (Construction Document 95%)	XX	XX	XX	XX
Submittal #5 (Construction Document 100%)	XX	XX	XX	XX

H. ESTIMATED CONSTRUCTION COSTS WITH RESPECT TO DESIGNING WITHIN FUNDING LIMITATIONS

- 1) The A/E shall accomplish the design services required under this contract so as to permit the award of a contract, using standard Federal Acquisition Regulation procedures for the construction of the facilities designed at a price that does not exceed the estimated construction contract price as set forth in paragraph 3) below. When bids or proposals for the construction contract are received that exceed the estimated price, the contractor shall perform such redesign effort as required to enable award within the funding limitation. If the unfavorable bids or proposals are the result of conditions beyond the A/Es reasonable control, the A/E shall not be required to perform such additional services without compensation.



- 2) The A/E shall promptly advise the Contracting Officer if they find that the project being designed will exceed or is likely to exceed funding limitations and they are unable to design a usable (fully functional) facility within the funding limitations. Upon receipt of such information, the Contracting Officer will review the contractor's revised estimate of construction cost. The Contracting Officer may authorize a change in the Estimated Construction Contract Price (ECCP). If it is determined that the original ECCP was not sufficient to allow a construction contract award within the amount specified, at the option of the CO, the ECCP may be increased or the scope of work reduced commensurate with available funds. When bids or proposals are not solicited or are unreasonably delayed, the Government shall prepare the ECCP based on the design submitted at the time the project is advertised for construction. This ECCP shall be used in lieu of bids or proposals to determine compliance with the funding limitation.
- 3) The ECCP (to the mid-point of construction) for the project described in this contract is xxxx.

I. REVIEWS

- 1) The PO will coordinate all required Government reviews and reviews of other Government-contracted services.
- 2) The A/E shall conform to the submission schedules and requirements as defined herein for the work of this contract. The A/E shall allocate technical manpower and other resources so as to steadily progress toward milestone dates and monitor the work of consultants to insure concurrent steady progress. The A/E shall request information, determinations, and similar direction in sufficient time to permit the Governments development and delivery of the required information without delay to the schedule.
- 3) The A/E shall endeavor, in the planning of the work, to anticipate information requirements and request information as soon as the need for it becomes apparent. Insofar as possible, the A/E shall work around areas requiring clarification so as to minimize any delay to the project as a whole. Should delay occur, the A/E shall work closely and cooperatively with the PO to develop and implement methods to regain or minimize lost time.
- 4) It is imperative that the A/E and its consultants recognize that the NIH reviews are general in nature; that the detailed checking for technical accuracy, sufficiency, and coordination is the sole responsibility of the A/E and his consultants. Notwithstanding Government approval, the A/E shall remain liable for all damages resulting from design errors and negligent performance by the A/E or its consultants.
- 5) Following each Submittal, the PO will return to the A/E written comments on the submitted work. Government may use web based system to provide comments in which case the A/E shall provide responses using the same system.
- 6) All review comments shall be incorporated into the work prior to the next Submittal, unless the reviewer directs the A/E to disregard the comment. In this event the A/E shall send a memo reporting the directive to the PO and CO.
- 7) The A/E shall provide a written reply to all comments with the next submission on the Review Comment forms. If the A/E intends to disregard a comment, the A/E shall provide a



written explanation of variance with the comment to the PO within seven calendar days after receipt of the Government review comments.

- 8) At the option of the Government, the PO may request on-board review of Submittal of progress prints to insure that progress is being sustained.
- 9) The A/E may request on-board reviews. These reviews shall be at the discretion of the PO.

J. PROJECT CONTACT PERSONS:

- 1) CONTRACTING OFFICER (overall authority in all matters for this project):
Mr. xxxxxxxxxxxx
National Institutes of Health
AE-CCB, Office of Acquisition
13 South Drive, MSC xxxx
Building 13, Room xxxx
Bethesda, Maryland 20892
Telephone: (301) xxx - xxxx
- 2) PROJECT OFFICER (PO) (project management and the Contracting Officer's Technical Representative (COTR) for this project):

Ms. xxxxxxxxxxxx
Division of xxxxxxxxxxxx
13 South Drive, MSC xxxx
Building 13, Room xxx
Bethesda, Maryland 20892
Telephone: (301) xxx - xxxx

In this scope of work, the Government point of contact will be the Project Officer (PO) and the A/E point of contact will be the Project Manager. All correspondence shall only be issued either through the PO or the Project Manager.

K. OPTIONS:

At the option of the Government the A/E shall provide the following post design activities. The A/E Post-Design Services shall be performed during the project construction phase for the period of construction by qualified personnel who shall have proven knowledge of this type of construction and competence in construction and observation. For the purpose of this contract, the construction phase is defined as the period of performance between the issuance of the Notice to Proceed with construction and the final acceptance by the PO of the completed construction contract. The services are to be performed in a timely and expeditious manner.

1) CONSTRUCTION INSPECTIONS:

- a) The A/E shall perform on-site construction observation in conjunction with each construction meeting throughout the duration of the construction to verify the conformance with the contract documents included in the construction contract. The frequency of the meeting will be discussed and decided by the PO depending upon the construction status but typically they should occur the same day of the progress meetings.



The A/E shall observe and report (to the prime contractor) work in place and visible at the time of observation. The A/E shall also verify that the Prime Contractor is maintaining up-to-date as-built mark-ups.

- b) On the basis of such on-site observations, the A/E shall keep the prime contractor informed of progress, quality of work, and deficiencies in the work of the Contractor. A complete log of each inspection trip shall be maintained throughout the construction period of performance, and made available to the PO on a bi-weekly basis. Site trips and expenditure of time on matters related to clarification due to inadequacies, errors and/or omissions in the contract plans and specifications, shall be performed at no cost to the Government.

2) PROGRESS MEETINGS:

- a) The PO shall hold construction progress review meetings at the project site with the construction Contractor, A/E representatives, and other NIH officials at least once every two weeks to discuss progress of the contract and related issues/problems identified during construction so as to provide timely resolutions on the requirements or the intent of the contract documents. The Prime contractor shall take minutes of all progress meetings and send copies to all attendees no later than one-week after each meeting. The A/E shall assign a primary staff member to attend each progress meeting. If there are standing technical issues, technical meetings will be held on the other two weeks.

3) RFIS:

- a) All requests for information (RFIs) and questions submitted by the Contractor shall be given to the A/E for resolution. The A/E's interpretation shall be documented in writing or in the form of drawings on a supplemental instruction form (similar to AIA G 710). A/E supplemental instructions shall be uniquely and sequentially numbered. A/E responses to RFIs shall be provided in a timely manner so as to avoid interruptions to the flow of work and minimize schedule delays.
- b) The A/E shall use an information tracking system to ensure that all RFIs and other construction issues are monitored for timely response, and brought to closure.

4) CONSTRUCTION SUBMITTAL REVIEW:

- a) The A/E shall review and shall recommend either "reviewed", "reviewed as noted" or disapproval of shop drawings, material samples, manufacturer's clarifications, etc., for which the contract specifications require approval by NIH. Submittals must be looked at from two perspectives: First, which pieces of submittal data are not meeting the scheduled date? This requires a detailed examination of the control log, and flagging of late submittals. Second, submittals must meet the intent of the contract documents. The A/E shall include notes specifically addressing any corrections to be made to each submittal. Each submittal with approval shall be kept in the A/E's office file until the project is completed. Marked-up copies and the A/E's recommendations shall be delivered to the contractor within ten working days of their receipt by the A/E unless otherwise directed. Simultaneously the A/E shall send to the PO the status of returned submittals to the contractor. The A/E shall use an information tracking system to ensure that all submittals are received and processed on time.



5) CHANGE ORDERS:

- a) The Prime Contractor shall prepare Change Orders and Construction Change Directives, with supporting documentation (similar to AIA Document G701 & G714) and data necessary for the PO and CO approval and execution in accordance with the Contract Documents.

The Prime contractor shall clearly indicate the source of change as being

- Due to design deficiency, and/or conflict
- Due to unforeseen conditions,
- Due to client's new request.

- b) The A/E shall keep track of the above changes, and constantly update the ratios of cost of these changes with respect to the cost of construction. If requested by the PO, the A/E shall participate, and assist in negotiating these changes.

6) PUNCH LIST:

- a) The Prime Contractor shall keep the PO informed of the progress and quality of the work, and shall endeavor to advise the PO of defects and deficiencies in the work in writing. The A/E and Prime Contractor shall observe the entire installation such as sprinkler system, light fixtures, etc. to ensure compliance with the contract documents. In order to do so, the A/E shall be familiar with the progress and quality of the work throughout the construction period and verify that the work is being performed in a manner that, when completed, will comply with the Contract Documents. Timely corrective measures shall be taken along the way to ensure that problems are not deferred until the final punch list is compiled at the end of the project.
- b) The A/E shall conduct a preliminary observation of the completed project with the Prime Contractor as part of a regular construction progress meeting. The prime contractor shall submit to the PO a punch list of any defects and omissions noted. At an appropriate time, the PO shall conduct a final observation to verify that the Prime Contractor has adequately corrected defects, deficiencies and omissions. A Certificate of Substantial Completion (similar to AIA Document G704) with the results shall be forwarded to the PO.
- c) The Prime Contractor shall receive and forward to the PO for the PO's review and records written warranties and related documents required by the Contract Documents and assembled by the Contractor.

7) REIMBURSEING GC FOR ITEMES PURCHASED, AND STORED

- a) When the prime contractor notifies the P.O. of items purchased and stored, the A/E and Prime Contractor shall accompany the PO for inspection and validity of stored material – upon which the PO shall approve reimbursement to the contractor.

8) AS-BUILT DRAWINGS:



- a) The A/E shall keep a current set of prints noting thereon any deviations or clarifications generated by A/E supplemental instructions. Any changes during construction shall be made on the contract drawings and changes made in CAD files. Changes shall be published from updated CAD files. Before completion of construction, the Construction Contractor shall provide the A/E with as-built maintained in the field. The A/E shall correct the contract drawings and update the CAD files to reflect changes indicated on both A/E and Contractor marked-up prints. Marked-up construction prints and corrected drawings plus two CDs or DVDs of the As Built formatted as AutoCAD files of Record As-Built shall be forwarded to the PO.

9) CONSTRUCTION SCHEDULE:

- a) Provide a baseline construction schedule with each submission. The baseline schedule shall include Work Breakdown Structure and milestones. This baseline construction schedule will be used as the government baseline to be utilized to compare with the Construction Contractor baseline schedule at the time of construction bidding.

10) CLOSE-OUT:

- a) At the close of the project, the Contractor shall package all documents related to the project (including submittals) in an orderly manner and send them to the PO for archiving.



SAMPLE FOR RENOVATION PROJECTS

STATEMENT OF WORK FOR ARCHITECT-ENGINEER SERVICES

A. BACKGROUND

The National Heart, Lung, and Blood Institute (NHLBI) is planning for an Echocardiography Reading Center (Echo RC), and is in need of space suitable to the program. The new program space will be provided through renovation in Building xx. The Echo RC will house staff scientists and support staff. The Program of Requirements (POR) has been developed based on input from the customers. The Scientific Director is responsible for the research conducted in the facility and Executive Officer is responsible for finances.

B. PROJECT DESCRIPTION

The Echo RC will accommodate general purpose laboratories, bio-safety level laboratories, shared analytical laboratories, and support spaces. The facility shall be designed to facilitate interaction between scientists and support staff. The facility shall employ sustainable design features to achieve flexibility, energy efficiency, and quality work environment. The facility will house scientific equipment with special requirements. The construction cost of the facility is estimated to be \$ xxxxxx.

Project Title:	xxxxxxxxxx
Work Request Number:	xxxxxxxxxx
Location:	xxxxxxxxxx

C. PROJECT MANAGEMENT

The Architect/Engineer (A/E) shall have responsibilities concerning Project Management as defined herein.

The A/E shall appoint a Project Manager (PM), who shall be the Government's single point of contact, and provide all necessary project representation for the successful accomplishment of the work. The A/E project manager shall be thoroughly familiar with all requirements and schedules. The A/E project manager shall be identified in the A/E proposal prior to contract award.

D. CODES & STANDARDS

The Echo RC shall be designed in compliance with applicable codes and industry standards for the location of the facility.

1) Model Building Codes

The Echo RC shall be designed with applicable model building code for the location of the facility. The design shall use other appropriate codes and industry standards such as: the Life Safety Code (NFPA 101), Fire Protection for Laboratories Using Chemicals (NFPA 45), Standard for the Installation of Sprinkler Systems (NFPA 13), and Health care Facilities (NFPA 99). (Note: The Department of Health and Human Services (DHHS) as an agency of the Government of the United States of America, derives its authority from the Congress of the United States, and



is not subject to laws, ordinances, regulations established by state and local governments or authorities of a lesser jurisdiction.)

2) Federal Regulations

The Echo RC shall be designed in compliance with all applicable Federal Regulations including but not necessarily limited to the following: Uniformed Federal Accessibility Standards, OSHA 29CFR 1910; The National Environmental Policy Act of 1969 (NEPA); The Endangered Species Act; The National Historic Preservation Act of 1966; The Archeological and Historic Preservation Act; The Wild and Scenic Rivers Act; 40CFR Environmental which includes: Safe Drinking Water Act, Clean Air Act, Clean Water Act, Toxic Substance Control Act, Solid Waste Disposal Act, and RCRA; Executive Order 11990 (Wetlands); Executive Order 11988 (Floodplains); Executive Order 12088 (Compliance with State environmental laws); National Capital Planning Commission (NCPC) "Master Planning Regulations"; Energy Policy Act of 1992; Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), etc.

3) Departmental Regulations

The Echo RC shall be designed in compliance with "Guide for the Care and Use of Laboratory Animals" (NIH Publication 85-23), and "Biosafety in Microbiological and Biomedical Laboratories (BMBL), 5th Edition, January 2007 (DHHS Publication).

4) Agency Design Policies

The Echo RC shall be designed in compliance with the NIH Design Requirements Manual (DRM).

E. SCOPE OF SERVICES

The A/E shall provide professional services for all architectural and engineering disciplines; material and labor necessary to provide a set of construction documents to facilitate the construction of the Echo RC.

3) Submittals and Deliverables

The A/E shall make five (5) design submittals at the following stages: Schematic Design (15%), Design Development (30%), Construction documents (70%), Construction documents (95%), and Construction documents (100%).

a) Schematic Design

The schematic design constituting 15% design completion consists of but not necessarily limited to the following:

schematic site, floor plans, elevations and sections drawn to scale, exterior and interior perspective or axiometric drawings necessary to explain the concept, table of content specifications, broad order of magnitude (square foot) cost estimate, storm drainage, structural, HVAC, plumbing, and electrical calculations.

See attached A/E checklist and NIH DRM for detailed requirements.



b) Design Development

Design development constituting 35% of design completion consists of but not necessarily limited to the following in addition to all items required during schematic design phase:

Site grading and drainage plan, site utilities plan, site pavement plan, landscape plan, sediment control plan, site profiles, definitive floor plans indicated with demolition and new work for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, final perspective or axiometric drawings necessary to explain the design for presentation purposes, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules, plumbing riser diagram, one line electrical diagram, communication riser diagrams, out line specifications, systems cost-estimate, final storm drainage and structural, HVAC, plumbing, and electrical calculations.

See attached A/E checklist and NIH DRM for detailed requirements.

c) Construction Documents Phase – 70%

Construction documents constituting 70% of design completion consists of but not necessary limited to the following in addition to all items required during design development phase:

Site grading and drainage plan, site profiles, site utilities plan, site pavement plans and profiles, landscape plan and plant schedules, sediment control plan, floor plans indicated with demolition and new work for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules details for each discipline drawn to scale, plumbing raiser diagram, one line electrical diagram, electrical panel schedules, communication riser diagrams, specifications, quantity takeoff cost-estimate, and updated calculations.

See attached A/E checklist and NIH DRM for detailed requirements.

d) Construction Documents Phase – 95%

Construction documents constituting 95% of design completion consists of but not necessarily limited to the following in addition to all items required during construction document 70% phase.

Site grading and drainage plan, site profiles, site utilities plan, site pavement plans and profiles, landscape plan and plant schedules, sediment control plan, floor plans indicated with demolition and new work for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules with facility numbers (See section F. Facility Numbers), details for each discipline drawn to scale, plumbing raiser diagram, one line electrical diagram, electrical panel schedules, communication and data layouts, and one line diagrams, specifications, and quantity takeoff cost-estimate.



See attached A/E checklist and NIH DRM for detailed requirements.

e) **Construction Documents Phase – 100%**

Construction documents constituting 100% of design completion consists of to all items required during construction document 95% phase.

All drawings, specifications, calculations and reports shall incorporate previously accepted review comments. The A/E shall provide electronic copy of all CAD drawings in AutoCAD format; electronic copy of specifications, calculations and reports.

See attached A/E checklist and NIH DRM for detailed requirements.

4) **Project Meetings**

The A/E shall prepare and provide meeting minutes to the PO within 7 working days for all meetings.

a) **Progress Meetings**

Progress meetings will be held at the National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland. The purpose of the progress meetings is to review the progress of the project in accordance with the schedule, status of submittals, and resolve any outstanding issues.

b) **Review Meetings**

The review meetings may be scheduled by the Project Officer (PO) to clarify review comments from various disciplines. The Government will provide appropriate representatives authorized to make technical and programmatic decisions necessary to maintain progress. The A/E shall send appropriate representatives consistent with the level of development and the nature of review. The representative(s) shall be qualified and authorized to make the technical decisions as required to maintain effective progress.

c) **User Meetings**

Meetings with users will be scheduled by the PO to discuss requirements of special laboratory equipment, any required operational protocol followed by the users and other functional requirements.

F. **GOVERNMENT FURNISHED ITEMS**

5) **POR**

The A/E shall design the Echo RC in accordance with the POR.

6) **Topographic Survey of the site, and**

7) **Geotechnical Report and recommendations**

G. **FIELD SURVEYS**

The A/E shall perform field surveys that identify existing conditions to ascertain items necessary to accomplish the project. This may include measurements of the existing utilities within the scope of work prior to demolition, to verify the design conditions will be obtainable.



H. PLANNING AND COORDINATION DRAWINGS

If requested, the A/E shall provide planning and coordination sketches and/or drawings showing the proposed connections, circuitry, etc. Sketches and/or drawings shall be submitted to the Contracting Officer (CO) for review and approval prior to the start of work. Utility and Structural capacities must be verified during the design phase for projects in existing facilities. Analysis/reports need to be provided to and analyzed by NIH to approve proposed changes to existing systems.

I. FACILITY NUMBERS

Inventory control of equipment maintained by the Office of Research Facilities is tracked via facility numbers. The Division of Property Management will issue the facility numbers for all new equipment.

- 3) On the demolition plan, the A/E shall indicate the designated facility number for all equipment being removed.
- 4) The A/E shall request facility numbers for all new mechanical, plumbing, and electrical equipment from the Division of Property Management via the PO.
- 5) The facility numbers and labeling requirements shall be incorporated into 95% construction documents.

J. SCHEDULE

- 3) The work shall proceed only after the issuance of the Notice to Proceed (NTP) by the CO for the activities indicated.
- 4) The actual performance of the work and the delivery of the required documents shall be in accordance with the following submittal schedule which also indicates the performance time for each review stage.

SUBMITTALS AND QUANTITIES			PERFORMANCE TIME (CALENDAR DAYS)	
SUBMITTAL	Paper copies	CD	A/E	GOV
Submittal #1 (Schematic Design)	xx	xx	xx	xx
Submittal #2 (Design Development)	xx	xx	xx	xx
Submittal #3 (Construction Document 70%)	xx	xx	xx	xx
Submittal #4 (Construction Document 95%)	xx	xx	xx	xx
Submittal #5 (Construction Document 100%)	xx	xx	xx	xx



K. ESTIMATED CONSTRUCTION COSTS WITH RESPECT TO DESIGNING WITHIN FUNDING LIMITATIONS

- 4) The A/E shall accomplish the design services required under this contract so as to permit the award of a contract, using standard Federal Acquisition Regulation procedures for the construction of the facilities designed at a price that does not exceed the estimated construction contract price as set forth in Paragraph 3 below. When bids or proposals for the construction contract are received that exceed the estimated price, the contractor shall perform such redesign effort as required to enable award within the funding limitation. If the unfavorable bids or proposals are the result of conditions beyond the A/E's reasonable control, the A/E shall not be required to perform such additional services without compensation.
- 5) The A/E shall promptly advise the CO if they find that the project being designed will exceed or is likely to exceed funding limitations and they are unable to design a usable (fully functional) facility within the funding limitations. Upon receipt of such information, the CO will review the contractor's revised estimate of construction cost. The CO may authorize a change in the Estimated Construction Contract Price (ECCP). If it is determined that the original ECCP was not sufficient to allow a construction contract award within the amount specified, at the option of the CO, the ECCP may be increased or the scope of work reduced commensurate with available funds. When bids or proposals are not solicited or are unreasonably delayed, the Government shall prepare the ECCP based on the design submitted at the time the project is advertised for construction. This ECCP shall be used in lieu of bids or proposals to determine compliance with the funding limitation.
- 6) The ECCP (to the mid-point of construction) for the project described in this contract is xxxx.

L. REVIEWS

- 1) The PO will coordinate all required Government reviews and reviews of other Government-contracted services.
- 2) The A/E shall conform to the submission schedules and requirements as defined herein for the work of this contract. The A/E shall allocate technical manpower and other resources so as to steadily progress toward milestone dates and monitor the work of consultants to insure concurrent steady progress. The A/E shall request information, determinations, and similar direction in sufficient time to permit the Government's development and delivery of the required information without delay to the schedule.
- 3) The A/E shall endeavor, in the planning of the work, to anticipate information requirements and request information as soon as the need for it becomes apparent. Insofar as possible, the A/E shall work around areas requiring clarification so as to minimize any delay to the project as a whole. Should delay occur, the A/E shall work closely and cooperatively with the PO to develop and implement methods to regain or minimize lost time.
- 4) It is imperative that the A/E and its consultants recognize that the NIH reviews are general in nature; that the detailed checking for technical accuracy, sufficiency, and coordination is the sole responsibility of the A/E and his consultants. Not-with-standing Government approval, the A/E



shall remain liable for all damages resulting from design errors and negligent performance by the A/E or its consultants.

- 5) Following each submittal, the PO will return to the A/E written comments on the submitted work. The Government may use web-based system to provide comments in which case the A/E shall provide responses using the same system.
- 6) All review comments shall be incorporated into the work prior to the next submittal, unless the reviewer directs the A/E to disregard the comment. In this event the A/E shall send a memo reporting the directive to the PO and CO.
- 7) The A/E shall provide a written reply to all comments with the next submission on the Review Comment forms. If the A/E intends to disregard a comment, the A/E shall provide a written explanation of variance with the comment to the PO within seven (7) calendar days after receipt of the Government review comments.
- 8) At the option of the Government, the PO may request on-board review of submittal of progress prints to insure that progress is being sustained.
- 9) The A/E may request on-board reviews. These reviews shall be at the discretion of the PO.

M. PROJECT CONTACT PERSONS:

- 3) CONTRACTING OFFICER (overall authority in all matters for this project):

Mr. xxxxxxxxxxxx
National Institutes of Health
AE-CCB, Office of Acquisition
13 South Drive, MSC xxxx
Building 13, Room xxxx
Bethesda, Maryland 20892
Telephone: (301) xxx - xxxx

- 4) PROJECT OFFICER (project management and the Contractor Officer's Technical Representative (COTR) for this project):

Ms. xxxxxxxxxxxx
Division of xxxxxxxxxxxx
13 South Drive, MSC xxxx
Building 13, Room xxx
Bethesda, Maryland 20892
Telephone: (301) xxx - xxxx

In this scope of work, the Government point of contact will be the PO and the A/E point of contact will be the PM. All correspondence shall only be issued either through the PO or the PM.

N. OPTIONS:

At the option of the Government the A/E shall provide the following post design activities. The A/E Post-Design Services shall be performed during the project construction phase for the period of construction by



qualified personnel who shall have proven knowledge of this type of construction and competence in construction and observation. For the purpose of this contract, the construction phase is defined as the period of performance between the issuance of the Notice to Proceed with construction and the final acceptance by the PO of the completed construction contract. The services are to be performed in a timely and expeditious manner.

1) Construction Inspections

- a) The A/E shall perform on-site construction observation in conjunction with each construction meeting throughout the duration of the construction to verify the conformance with the contract documents included in the construction contract. The frequency of the meeting will be discussed and decided by the PO depending upon the construction status but typically they should occur the same day of the progress meetings. The A/E shall observe and report (to the prime contractor) work in place and visible at the time of observation. The A/E shall also verify that the Prime Contractor is maintaining up-to-date as-built mark-ups.
- b) On the basis of such on-site observations, the A/E shall keep the prime contractor informed of progress, quality of work, and deficiencies in the work of the Contractor. A complete log of each inspection trip shall be maintained throughout the construction period of performance, and made available to the PO on a bi-weekly basis. Site trips and expenditure of time on matters related to clarification due to inadequacies, errors and/or omissions in the contract plans and specifications, shall be performed at no cost to the Government.

2) Progress Meetings

- a) The PO shall hold construction progress review meetings at the project site with the Construction Contractor, A/E representatives, and other NIH officials at least once every two weeks to discuss progress of the contract and related issues/problems identified during construction so as to provide timely resolutions on the requirements or the intent of the contract documents. The Prime Contractor shall take minutes of all progress meetings and send copies to all attendees no later than one-week after each meeting. The A/E shall assign a primary staff member to attend each progress meeting. If there are standing technical issues, technical meetings will be held on the other two weeks.

3) Request for Information

- a) All requests for information (RFIs) and questions submitted by the Contractor shall be given to the A/E for resolution. The A/E's interpretation shall be documented in writing or in the form of drawings on a supplemental instruction form (similar to AIA G 710). A/E supplemental instructions shall be uniquely and sequentially numbered. The A/E responses to RFIs shall be provided in a timely manner so as to avoid interruptions to the flow of work and minimize schedule delays.
- b) The A/E shall use an information tracking system to ensure that all RFIs and other construction issues are monitored for timely response, and brought to closure.

4) Construction Submittal Review

- a) The A/E shall review and shall recommend either "reviewed", "reviewed as noted" or disapproval of shop drawings, material samples, manufacturer's clarifications, etc., for which the contract



specifications require approval by NIH. Submittals must be looked at from two perspectives: First, which pieces of submittal data are not meeting the scheduled date? This requires a detailed examination of the control log, and flagging of late submittals. Second, submittals must meet the intent of the contract documents. The A/E shall include notes specifically addressing any corrections to be made to each submittal. Each submittal with approval shall be kept in the A/E's office file until the project is completed. Marked-up copies and the A/E's recommendations shall be delivered to the contractor within ten working days of their receipt by the A/E unless otherwise directed. Simultaneously, the A/E shall send the PO the status of returned submittals to the contractor. The A/E shall use an information tracking system to ensure that all submittals are received and processed on time.

5) Change Orders

- a) The Prime Contractor shall prepare Change Orders and Construction Change Directives, with supporting documentation (similar to AIA Document G701 & G714) and data necessary for the PO and CO approval and execution in accordance with the Contract Documents. The Prime contractor shall clearly indicate the source of change as being
 - Due to design deficiency, and/or conflict
 - Due to unforeseen conditions,
 - Due to client's new request.
- b) The A/E shall keep track of the above changes, and constantly update the ratios of cost of these changes with respect to the cost of construction. If requested by the PO, the A/E shall participate, and assist in negotiating these changes.

6) Punch List

- a) The Prime Contractor shall keep the PO informed of the progress and quality of the work, and shall endeavor to advise the PO of defects and deficiencies in the work in writing. The A/E and Prime Contractor shall observe the entire installation such as sprinkler system, light fixtures, etc. to ensure compliance with the contract documents. In order to do so, the A/E shall be familiar with the progress and quality of the work throughout the construction period and verify that the work is being performed in a manner that, when completed, will comply with the Contract Documents. Timely corrective measures shall be taken along the way to ensure that problems are not deferred until the final punch list is compiled at the end of the project.
- b) The A/E shall conduct a preliminary observation of the completed project with the Prime Contractor as part of a regular construction progress meeting. The prime contractor shall submit to the PO a punch list of any defects and omissions noted. At an appropriate time, the PO shall conduct a final observation to verify that the Prime Contractor has adequately corrected defects, deficiencies and omissions. A Certificate of Substantial Completion (similar to AIA Document G704) with the results shall be forwarded to the PO.
- c) The Prime Contractor shall receive and forward to the PO for the PO's review and records written warranties and related documents required by the Contract Documents and assembled by the Contractor.

7) Reimbursing Government Contractor For Items Purchased And Stored



- a) When the prime contractor notifies the P.O. of items purchased and stored, the A/E and Prime Contractor shall accompany the PO for inspection and validity of stored material – upon which the PO shall approve reimbursement to the contractor.

8) As-built Drawings

- a) The A/E shall keep a current set of prints noting thereon any deviations or clarifications generated by A/E supplemental instructions. Any changes during construction shall be made on the contract drawings and changes made in CAD files. Changes shall be published from updated CAD files. Before completion of construction, the Construction Contractor shall provide the A/E with as-built maintained in the field. The A/E shall correct the contract drawings and update the CAD files to reflect changes indicated on both A/E and Contractor marked-up prints. Marked-up construction prints and corrected drawings plus two CDs or DVDs of the 'As Built formatted as AutoCAD files of Record As-Built' shall be forwarded to the PO.

9) Construction Schedule

- a) Provide a baseline construction schedule with each submission. The baseline schedule shall include Work Breakdown Structure and milestones. This baseline construction schedule will be used as the Government baseline to be utilized to compare with the Construction Contractor baseline schedule at the time of construction bidding.

10) Close-out

- a) At the close of the project, the Contractor shall package all documents related to the project (including submittals) in an orderly manner and send them to the PO for archiving.



SAMPLE FOR BLDG 10 RENOVATIONS

STATEMENT OF WORK FOR ARCHITECT-ENGINEER (A/E) SERVICES

A. BACKGROUND

The National Heart, Lung, and Blood Institute (NHLBI) is planning for an Echocardiography Reading Center (Echo RC), and is in need of space suitable to the program. The new program space will be provided through renovation in Building 10. The Echo RC will house staff scientists and support staff. The Program of Requirements (POR) has been developed based on input from the customers. The Scientific Director is responsible for the research conducted in the facility and Executive Officer is responsible for finances.

B. PROJECT DESCRIPTION

The Echo RC will accommodate general purpose laboratories, bio-safety level laboratories, shared analytical laboratories, and support spaces. The facility shall be designed to facilitate interaction between scientists and support staff. The facility shall employ sustainable design features to achieve flexibility, energy efficiency, and quality work environment. The facility will house scientific equipment with special requirements. The construction cost of the facility is estimated to be \$ xxxxxx.

Project Title:	xxxxxxxxxx
Work Request Number:	xxxxxxxxxx
Location:	xxxxxxxxxx

C. PROJECT MANAGEMENT

The Architect/Engineer (A/E) shall have responsibilities concerning Project Management as defined herein.

The A/E shall appoint a Project Manager (PM), who shall be the Government's single point of contact, and provide all necessary project representation for the successful accomplishment of the work. The A/E project manager shall be thoroughly familiar with all requirements and schedules. The A/E project manager shall be identified in the A/E proposal prior to contract award.

D. CODES & STANDARDS

The Echo RC shall be designed in compliance with applicable codes and industry standards for the location of the facility.

1) Model Building Codes

The Echo RC shall be designed with applicable model building code for the location of the facility. The design shall use other appropriate codes and industry standards such as: the Life Safety Code (NFPA 101), Fire Protection for Laboratories Using Chemicals (NFPA 45), Standard for the Installation of Sprinkler Systems (NFPA 13), and Health care Facilities (NFPA 99). (Note: The Department of Health and Human Services (DHHS) as an agency of the Government



of the United States of America, derives its authority from the Congress of the United States, and is not subject to laws, ordinances, regulations established by state and local governments or authorities of a lesser jurisdiction.)

2) Federal Regulations

The Echo RC shall be designed in compliance with all applicable Federal Regulations including but not necessarily limited to the following: Uniformed Federal Accessibility Standards, OSHA 29CFR 1910; The National Environmental Policy Act of 1969 (NEPA); The Endangered Species Act; The National Historic Preservation Act of 1966; The Archeological and Historic Preservation Act; The Wild and Scenic Rivers Act; 40CFR Environmental which includes: Safe Drinking Water Act, Clean Air Act, Clean Water Act, Toxic Substance Control Act, Solid Waste Disposal Act, and RCRA; Executive Order 11990 (Wetlands); Executive Order 11988 (Floodplains); Executive Order 12088 (Compliance with State environmental laws); National Capital Planning Commission (NCPC) "Master Planning Regulations"; Energy Policy Act of 1992; Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), etc.

3) Departmental Regulations

The Echo RC shall be designed in compliance with "Guide for the Care and Use of Laboratory Animals" (NIH Publication 85-23), and "Biosafety in Microbiological and Biomedical Laboratories (BMBL), 5th Edition, January 2007 (DHHS Publication).

4) Agency Design Policies

The Echo RC shall be designed in compliance with the NIH Design Requirements Manual (DRM).

E. SCOPE OF SERVICES

The A/E shall provide professional services for all architectural and engineering disciplines; material and labor necessary to provide a set of construction documents to facilitate the construction of the Echo RC.

5) Submittals and Deliverables

The A/E shall make five (5) design submittals at the following stages: Schematic Design (15%), Design Development (30%), Construction documents (70%), Construction documents (95%), and Construction documents (100%).

a) Schematic Design

The schematic design constituting 15% design completion consists of but not necessarily limited to the following:

schematic site, floor plans, elevations and sections drawn to scale, exterior and interior perspective or axiometric drawings necessary to explain the concept, table of content specifications, broad order of magnitude (square foot) cost estimate, storm drainage, structural, HVAC, plumbing, and electrical calculations.



See attached A/E checklist and NIH DRM for detailed requirements.

b) Design Development

Design development constituting 35% of design completion consists of but not necessarily limited to the following in addition to all items required during schematic design phase:

Site grading and drainage plan, site utilities plan, site pavement plan, landscape plan, sediment control plan, site profiles, definitive floor plans indicated with demolition and new work for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, final perspective or axiometric drawings necessary to explain the design for presentation purposes, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules, plumbing riser diagram, one line electrical diagram, communication riser diagrams, out line specifications, systems cost-estimate, final storm drainage and structural, HVAC, plumbing, and electrical calculations.

See attached A/E checklist and NIH DRM for detailed requirements.

c) Construction Documents Phase – 70%

Construction documents constituting 70% of design completion consists of but not necessary limited to the following in addition to all items required during design development phase:

Site grading and drainage plan, site profiles, site utilities plan, site pavement plans and profiles, landscape plan and plant schedules, sediment control plan, floor plans indicated with demolition and new work for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules details for each discipline drawn to scale, plumbing raiser diagram, one line electrical diagram, electrical panel schedules, communication riser diagrams, specifications, quantity takeoff cost-estimate, and updated calculations.

See attached A/E checklist and NIH DRM for detailed requirements.

d) Construction Documents Phase – 95%

Construction documents constituting 95% of design completion consists of but not necessarily limited to the following in addition to all items required during construction document 70% phase.

Site grading and drainage plan, site profiles, site utilities plan, site pavement plans and profiles, landscape plan and plant schedules, sediment control plan, floor plans indicated with demolition and new work for each design discipline, elevations, cross, longitudinal and wall sections, interior elevations, reflected ceiling plans drawn to scale, finish and door schedules, major equipment locations for mechanical and electrical systems, equipment schedules with facility numbers (See section F. Facility Numbers), details for each discipline drawn to scale, plumbing raiser diagram, one line electrical diagram, electrical panel schedules, communication and data layouts, and one line diagrams, specifications, and quantity takeoff cost-estimate.



See attached A/E checklist and NIH DRM for detailed requirements.

e) **Construction Documents Phase – 100%**

Construction documents constituting 100% of design completion consists of to all items required during construction document 95% phase.

All drawings, specifications, calculations and reports shall incorporate previously accepted review comments. The A/E shall provide electronic copy of all CAD drawings in AutoCAD format; electronic copy of specifications, calculations and reports.

See attached A/E checklist and NIH DRM for detailed requirements.

6) Project Meetings

The A/E shall prepare and provide meeting minutes to the PO within 7 working days for all meetings.

a) **Progress Meetings**

Progress meetings will be held at the National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland. The purpose of the progress meetings is to review the progress of the project in accordance with the schedule, status of submittals, and resolve any outstanding issues.

b) **Review Meetings**

The review meetings may be scheduled by the Project Officer (PO) to clarify review comments from various disciplines. The Government will provide appropriate representatives authorized to make technical and programmatic decisions necessary to maintain progress. The A/E shall send appropriate representatives consistent with the level of development and the nature of review. The representative(s) shall be qualified and authorized to make the technical decisions as required to maintain effective progress.

c) **User Meetings**

Meetings with users will be scheduled by the PO to discuss requirements of special laboratory equipment, any required operational protocol followed by the users and other functional requirements.

F. GOVERNMENT FURNISHED ITEMS

8) POR

The A/E shall design the Echo RC in accordance with the POR.

9) Topographic Survey of the site, and

10) Geotechnical Report and recommendations



G. FIELD SURVEYS

The A/E shall perform field surveys that identify existing conditions to ascertain items necessary to accomplish the project. This may include measurements of the existing utilities within the scope of work prior to demolition, to verify the design conditions will be obtainable.

H. PLANNING AND COORDINATION DRAWINGS

If requested, the A/E shall provide planning and coordination sketches and/or drawings showing the proposed connections, circuitry, etc. Sketches and/or drawings shall be submitted to the Contracting Officer (CO) for review and approval prior to the start of work. Utility and Structural capacities must be verified during the design phase for projects in existing facilities. Analysis/reports need to be provided to and analyzed by NIH to approve proposed changes to existing systems.

I. FACILITY NUMBERS

Inventory control of equipment maintained by the Office of Research Facilities is tracked via facility numbers. The Division of Property Management will issue the facility numbers for all new equipment.

- 6) On the demolition plan, the A/E shall indicate the designated facility number for all equipment being removed.
- 7) The A/E shall request facility numbers for all new mechanical, plumbing, and electrical equipment from the Division of Property Management via the PO.
- 8) The facility numbers and labeling requirements shall be incorporated into 95% construction documents.

J. BUILDING 10 COMPLEX – CONSTRUCTION RISK ASSESSMENT (CRA)

- 1) The A/E shall incorporate all applicable Construction Risk Measures (CRM) on the construction documents. For tasks that will be performed in the Building 10 Complex, the Construction Contractor shall comply with CRM that identify and address hazards that could potentially compromise patient care, treatment, and services in occupied areas of the Building 10 Complex (i.e., Buildings 10, 10B (ACRF), CRC, and NMR Imaging Center). Hazards include air quality requirements, infection control measures, utility requirements, noise, vibration, and emergency procedures. The development of the CRA begins as soon as the PO obtains a basic scope from the customer and he/she sends the Project Notification to the CRA Team, who in turn provides a risk assessment based on the limited information at the time. The CRM must be implemented prior to the project execution phase and be maintained through demolition, construction or renovation till the completion of the project.
- 2) For an A/E, as the design is developed the CRA may change as noted above and those changes must be incorporated in the drawings. For a construction contractor, (provided a design was done) all of the information necessary should be located on the drawings. However, it may be necessary to meet with the CRA team or NIH Representatives to verify a compliance plan. If no design is done, (i.e., walk and talk small projects) then the Construction Contractor is responsible to develop sketches to verify a plan which NIH can approve.



- a) The Contractor shall obtain the CRA information specific to each project/task from the PO to identify, develop, and implement control measures required for the “TYPE, GROUP, and CLASS” of area in which work will be performed (using the Patient Risk Group Drawings) and for adjacent areas that may be affected by the work.
- b) The Contractor shall complete the information included in the CRA procedure, distribute this information to the PO and other persons designated by the PO and receive approval from the Government prior to starting work.
- c) The contractor shall repeat risk assessment process each time when the location, scope or character of work changes. Construction risk measures include scheduled times and thresholds for debris containment; vibration and noise; barriers to contain particulates including sticky carpet mats, smoke-tight wall boards, air pressure differentials, and filtration devices; redundant or comparable safeguards to maintain effective odor removal, air conditioning, humidification, heating, critical air quality and clinical parameters required for patient care and the safety of all occupants, and emergency procedures. The “TYPE, GROUP, and LOCATION” of the work determines when and to what extent construction risk measures applies to the work performed by the Contractor.
- d) The NIH Division of the Fire Marshal [the fire safety and authority having jurisdiction (AHJ)] as well as the PO will monitor renovation and construction areas for compliance with the CRA measures.
- e) The NIH AHJ shall approve compliance with the CRA measures during the construction phase.
- f) Daily Inspections:
 - i) The Contractor’s Superintendent or Project Manager shall monitor compliance with CRA measures on a daily basis.
 - ii) Contractor shall address CRA requirements in their daily report that shall be provided to the PO.
 - iii) Non compliance with CRA measures is sufficient cause for a “Stop Work Order”.

K. BUILDING 10 COMPLEX INTERIM LIFE SAFETY MEASURES (ILSM)

The A/E shall incorporate the following ILSM on the construction documents. For tasks that will be performed in the Building 10 Complex, the Contractor shall comply with the ILSM established by the NIH Division of the Fire Marshal or the Clinical Center (CC). These measures shall be implemented for all construction, renovation and alteration work and periods when the work compromises the fire protection systems such that the facility does not meet applicable provisions of the Life Safety Code®.

- 1) The Contractor shall post at the entrance and exit of construction site the following;
 - a) Construction sign
 - b) ILSM check list from DFM
 - c) Construction risk assessment from CRC team
 - d) CRA check list found on Qualtrax must be updated daily and posted
 - e) Additional ILSM memo provided by DFM(if required)
 - f) Approved Burn Permit
 - g) Fire watch sign (if any), and
 - h) Hazmat abatement sign must be posted prior to undertaking the work. The abatement subcontractor must coordinate work in advance and ensure that the site is secure and restricting access to site is contractor’s responsibility.
- 2) Contractor shall post or kept on site at the entrance and exit of construction site the following;



- a) Copy of the stamped and signed permit document issued by the DFM either posted or kept at site, and
 - b) Maintain MSDS binder at the construction site.
- 3) All contract employees shall abide by the no smoking policy when working in or around the perimeter of the facility.
- a) All contract employees shall abide by the no smoking policy when working in or around the perimeter of the facility.
 - b) All corridors and stairs required for emergency egress shall remain clear and unobstructed at all times.
 - c) Access to emergency services and for fire, police, and other emergency forces shall remain free and unobstructed at all times.
 - d) When normal access or exiting paths need to be changed or modified in anyway, this action shall be done only with prior written approval by the AHJ. The AHJ will keep the NIH Fire Department and relevant occupants notified of all route changes.
 - e) Existing fire alarm, detection, and suppression systems shall remain in good working order. All modifications or planned shutdowns of the fire protection systems must be scheduled and approved by maintenance engineering. It is the responsibility of maintenance engineering to notify the AHJ and the NIH Fire Department of all modifications in these systems and to ensure that temporary, but equivalent, fire safety measures are in place when the operation of any fire system is impaired. Temporary and equivalent systems must be tested monthly.
 - f) All work areas will be separated from the remaining portion of the building with smoke-tight partitions constructed with noncombustible or fire-retardant materials. All barriers shall have clean, smooth surfaces and provide a contiguous seal to minimize the migration of construction dust as well as smoke.
 - g) Because the building's air pressure is negative relative to the outdoors, work that involves a break in an exterior wall shall be protected with two parallel noncombustible or fire-retardant partitions to minimize energy loss, property damage, and occupants' discomfort or exposure to chemical vapors and bioaerosols.
 - h) Penetrations in fire and smoke walls contiguous with occupied areas will be properly sealed at the end of each work shift.
 - i) All individuals must obtain a NIH Hazardous Work Permit from the NIH Division of the Fire Marshal by calling 301-496-0414 prior to the start of any welding, cutting, or use of an open flame.
 - i) Fire safety measures as required by the NIH Hazardous Work Permit shall be conspicuously posted at the work site and accessible at all times. Measures may include fire extinguishers, blankets, and other suppression methods designated by the AHJ or NIH Fire Department.
 - ii) Commensurate with the fire hazard potential, the NIH Fire Department may provide employees and contractors who perform work requiring an NIH Hazardous Work Permit training in the use of portable fire extinguishers.
 - j) Prior to use, the PO, with the CC safety officer and CC Office of Facility Management will assess the risks associated with the flammables, oxidizers, irritants, and other potentially hazardous chemicals proposed for use in the work area.
 - i) The contractor will provide the Material Safety Data Sheets (MSDS) for chemicals used on the site in accordance with provisions of the OSHA Hazard Communication Act. The contractor must keep a binder containing all MSDS for chemicals approved for use at the worksite---where it is readily available for employees and emergency responders at NIH.



- ii) Flammable and oxidizing chemicals on the jobsite shall be limited to a 1-day supply. Additional supplies shall not be stored in a building unless an approved storage area is designated by the AHJ.
- iii) Flammable compressed gas cylinders shall be limited to a 1-day supply. Additional cylinders shall not be stored in a building unless an approved storage area is designated by the AHJ.
- iv) Compressed gas cylinders shall be securely stored in an approved cart.
- k) Wastes shall be removed from the worksite at the end of each work shift or as needed.
- l) Until completion of the construction project, all combustible storage on the jobsite shall be kept at the minimum level acceptable to the AHJ for daily operations.

4) Procedures

The NIH Division of the Fire Marshal [the fire safety "authority having jurisdiction" (AHJ)], as well as the project officers will monitor renovation and construction areas for compliance with the ILSM.

- a) The NIH AHJ shall approve all completed work for compliance with provisions of the National Fire Codes prior to acceptance and beneficial occupancy of the space.
- b) Daily Inspections

The Contractor's Project Manager or Superintendent shall monitor compliance with the ILSM on a daily basis.

- i) Contractor shall address ILSM requirements in their daily report that shall be provided to the PO.
- ii) Non-compliance with checklist is sufficient cause for a "Stop Work Order".

L. SCHEDULE

- 1) The work shall proceed only after the issuance of the Notice to Proceed (NTP) by the CO for the activities indicated.
- 2) The actual performance of the work and the delivery of the required documents shall be in accordance with the following submittal schedule which also indicates the performance time for each review stage.

SUBMITTALS AND QUANTITIES			PERFORMANCE TIME (CALENDAR DAYS)	
SUBMITTAL	Paper copies	CD	A/E	GOV
Submittal #1 (Schematic Design)	xx	xx	xx	xx
Submittal #2 (Design Development)	xx	xx	xx	xx
Submittal #3 (Construction Document 70%)	xx	xx	xx	xx
Submittal #4 (Construction Document 95%)	xx	xx	xx	xx
Submittal #5 (Construction Document 100%)	xx	xx	xx	xx



M. ESTIMATED CONSTRUCTION COSTS WITH RESPECT TO DESIGNING WITHIN FUNDING LIMITATIONS

- 1) The A/E shall accomplish the design services required under this contract so as to permit the award of a contract, using standard Federal Acquisition Regulation procedures for the construction of the facilities designed at a price that does not exceed the estimated construction contract price as set forth in Paragraph 3 below. When bids or proposals for the construction contract are received that exceed the estimated price, the contractor shall perform such redesign effort as required to enable award within the funding limitation. If the unfavorable bids or proposals are the result of conditions beyond the A/E's reasonable control, the A/E shall not be required to perform such additional services without compensation.
- 2) The A/E shall promptly advise the CO if they find that the project being designed will exceed or is likely to exceed funding limitations and they are unable to design a usable (fully functional) facility within the funding limitations. Upon receipt of such information, the CO will review the contractor's revised estimate of construction cost. The CO may authorize a change in the Estimated Construction Contract Price (ECCP). If it is determined that the original ECCP was not sufficient to allow a construction contract award within the amount specified, at the option of the CO, the ECCP may be increased or the scope of work reduced commensurate with available funds. When bids or proposals are not solicited or are unreasonably delayed, the Government shall prepare the ECCP based on the design submitted at the time the project is advertised for construction. This ECCP shall be used in lieu of bids or proposals to determine compliance with the funding limitation.
- 3) The ECCP (to the mid-point of construction) for the project described in this contract is xxxx.

N. REVIEWS

- 1) The PO will coordinate all required Government reviews and reviews of other Government-contracted services.
- 2) The A/E shall conform to the submission schedules and requirements as defined herein for the work of this contract. The A/E shall allocate technical manpower and other resources so as to steadily progress toward milestone dates and monitor the work of consultants to insure concurrent steady progress. The A/E shall request information, determinations, and similar direction in sufficient time to permit the Governments development and delivery of the required information without delay to the schedule.
- 3) The A/E shall endeavor, in the planning of the work, to anticipate information requirements and request information as soon as the need for it becomes apparent. Insofar as possible, the A/E shall work around areas requiring clarification so as to minimize any delay to the project as a whole. Should delay occur, the A/E shall work closely and cooperatively with the PO to develop and implement methods to regain or minimize lost time.
- 4) It is imperative that the A/E and its consultants recognize that the NIH reviews are general in nature; that the detailed checking for technical accuracy, sufficiency, and coordination is the sole responsibility of the A/E and his consultants. Notwith-standing Government approval, the A/E shall remain liable for all damages resulting from design errors and negligent performance by the A/E or its consultants.



- 5) Following each submittal, the PO will return to the A/E written comments on the submitted work. The Government may use web-based system to provide comments in which case the A/E shall provide responses using the same system.
- 6) All review comments shall be incorporated into the work prior to the next submittal, unless the reviewer directs the A/E to disregard the comment. In this event the A/E shall send a memo reporting the directive to the PO and CO.
- 7) The A/E shall provide a written reply to all comments with the next submission on the Review Comment forms. If the A/E intends to disregard a comment, the A/E shall provide a written explanation of variance with the comment to the PO within seven (7) calendar days after receipt of the Government review comments.
- 8) At the option of the Government, the PO may request on-board review of submittal of progress prints to insure that progress is being sustained.
- 9) The A/E may request on-board reviews. These reviews shall be at the discretion of the PO.

O. PROJECT CONTACT PERSONS:

- 1) CONTRACTING OFFICER (overall authority in all matters for this project):

Mr. xxxxxxxxxxxx
National Institutes of Health
AE-CCB, Office of Acquisition
13 South Drive, MSC xxxx
Building 13, Room xxxx
Bethesda, Maryland 20892
Telephone: (301) xxx - xxxx

- 2) PROJECT OFFICER (project management and the Contractor Officer's Technical Representative (COTR) for this project):

Ms. xxxxxxxxxxxx
Division of xxxxxxxxxxxx
13 South Drive, MSC xxxx
Building 13, Room xxx
Bethesda, Maryland 20892
Telephone: (301) xxx - xxxx

In this scope of work, the Government point of contact will be the PO and the A/E point of contact will be the PM. All correspondence shall only be issued either through the PO or the PM.

P. OPTIONS:

At the option of the Government the A/E shall provide the following post design activities. The A/E Post-Design Services shall be performed during the project construction phase for the period of construction by qualified personnel who shall have proven knowledge of this type of construction and competence in construction and observation. For the purpose of this contract, the construction phase is defined as the



period of performance between the issuance of the Notice to Proceed with construction and the final acceptance by the PO of the completed construction contract. The services are to be performed in a timely and expeditious manner.

11) Construction Inspections

- c) The A/E shall perform on-site construction observation in conjunction with each construction meeting throughout the duration of the construction to verify the conformance with the contract documents included in the construction contract. The frequency of the meeting will be discussed and decided by the PO depending upon the construction status but typically they should occur the same day of the progress meetings. The A/E shall observe and report (to the prime contractor) work in place and visible at the time of observation. The A/E shall also verify that the Prime Contractor is maintaining up-to-date as-built mark-ups.
- d) On the basis of such on-site observations, the A/E shall keep the prime contractor informed of progress, quality of work, and deficiencies in the work of the Contractor. A complete log of each inspection trip shall be maintained throughout the construction period of performance, and made available to the PO on a bi-weekly basis. Site trips and expenditure of time on matters related to clarification due to inadequacies, errors and/or omissions in the contract plans and specifications, shall be performed at no cost to the Government.

12) Progress Meetings

- a) The PO shall hold construction progress review meetings at the project site with the Construction Contractor, A/E representatives, and other NIH officials at least once every two weeks to discuss progress of the contract and related issues/problems identified during construction so as to provide timely resolutions on the requirements or the intent of the contract documents. The Prime Contractor shall take minutes of all progress meetings and send copies to all attendees no later than one-week after each meeting. The A/E shall assign a primary staff member to attend each progress meeting. If there are standing technical issues, technical meetings will be held on the other two weeks.

13) Request for Information

- a) All requests for information (RFIs) and questions submitted by the Contractor shall be given to the A/E for resolution. The A/E's interpretation shall be documented in writing or in the form of drawings on a supplemental instruction form (similar to AIA G 710). A/E supplemental instructions shall be uniquely and sequentially numbered. The A/E responses to RFIs shall be provided in a timely manner so as to avoid interruptions to the flow of work and minimize schedule delays.
- b) The A/E shall use an information tracking system to ensure that all RFIs and other construction issues are monitored for timely response, and brought to closure.

14) Construction Submittal Review

- a) The A/E shall review and shall recommend either "reviewed", "reviewed as noted" or disapproval of shop drawings, material samples, manufacturer's clarifications, etc., for



which the contract specifications require approval by NIH. Submittals must be looked at from two perspectives: First, which pieces of submittal data are not meeting the scheduled date? This requires a detailed examination of the control log, and flagging of late submittals. Second, submittals must meet the intent of the contract documents. The A/E shall include notes specifically addressing any corrections to be made to each submittal. Each submittal with approval shall be kept in the A/E's office file until the project is completed. Marked-up copies and the A/E's recommendations shall be delivered to the contractor within ten working days of their receipt by the A/E unless otherwise directed. Simultaneously, the A/E shall send the PO the status of returned submittals to the contractor. The A/E shall use an information tracking system to ensure that all submittals are received and processed on time.

15) Change Orders

- a) The Prime Contractor shall prepare Change Orders and Construction Change Directives, with supporting documentation (similar to AIA Document G701 & G714) and data necessary for the PO and CO approval and execution in accordance with the Contract Documents.

The Prime contractor shall clearly indicate the source of change as being

- Due to design deficiency, and/or conflict
- Due to unforeseen conditions,
- Due to client's new request.

- b) The A/E shall keep track of the above changes, and constantly update the ratios of cost of these changes with respect to the cost of construction. If requested by the PO, the A/E shall participate, and assist in negotiating these changes.

16) Punch List

- a) The Prime Contractor shall keep the PO informed of the progress and quality of the work, and shall endeavor to advise the PO of defects and deficiencies in the work in writing. The A/E and Prime Contractor shall observe the entire installation such as sprinkler system, light fixtures, etc. to ensure compliance with the contract documents. In order to do so, the A/E shall be familiar with the progress and quality of the work throughout the construction period and verify that the work is being performed in a manner that, when completed, will comply with the Contract Documents. Timely corrective measures shall be taken along the way to ensure that problems are not deferred until the final punch list is compiled at the end of the project.
- b) The A/E shall conduct a preliminary observation of the completed project with the Prime Contractor as part of a regular construction progress meeting. The prime contractor shall submit to the PO a punch list of any defects and omissions noted. At an appropriate time, the PO shall conduct a final observation to verify that the Prime Contractor has adequately corrected defects, deficiencies and omissions. A Certificate of Substantial Completion (similar to AIA Document G704) with the results shall be forwarded to the PO.
- c) The Prime Contractor shall receive and forward to the PO for the PO's review and records written warranties and related documents required by the Contract Documents and assembled by the Contractor.



17) Reimbursing Government Contractor For Items Purchased And Stored

- a) When the prime contractor notifies the P.O. of items purchased and stored, the A/E and Prime Contractor shall accompany the PO for inspection and validity of stored material – upon which the PO shall approve reimbursement to the contractor.

18) As-built Drawings

- a) The A/E shall keep a current set of prints noting thereon any deviations or clarifications generated by A/E supplemental instructions. Any changes during construction shall be made on the contract drawings and changes made in CAD files. Changes shall be published from updated CAD files. Before completion of construction, the Construction Contractor shall provide the A/E with as-built maintained in the field. The A/E shall correct the contract drawings and update the CAD files to reflect changes indicated on both A/E and Contractor marked-up prints. Marked-up construction prints and corrected drawings plus two CDs or DVDs of the 'As Built formatted as AutoCAD files of Record As-Built' shall be forwarded to the PO.

19) Construction Schedule

- a) Provide a baseline construction schedule with each submission. The baseline schedule shall include Work Breakdown Structure and milestones. This baseline construction schedule will be used as the Government baseline to be utilized to compare with the Construction Contractor baseline schedule at the time of construction bidding.

20) Close-out

- a) At the close of the project, the Contractor shall package all documents related to the project (including submittals) in an orderly manner and send them to the PO for archiving.



Architect-Engineer (A/E) Checklist of Services

The following architectural and engineering checklist of services defines the comprehensive requirements required for projects at the NIH. It is meant as a guide for obtaining uniformity and coherence in the presentation of design documents. Each project officer will determine the submittal requirements based on the size and complexity of the project.

Schematic Design Phase Submission 15%

Schematic design phase submission at a minimum shall include the following requirements, as applicable to the project. All plan drawings shall indicate the north arrow, column lines and the scale of the drawing.

A Site/Landscape

- All site documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

1) Drawings

- a) Existing site plan
 - (1) Vicinity Plan
 - (2) Location of benchmark that will control all project elevations
 - (3) Orient north to be the top of the drawings in plan view
 - (4) Major landscaping
 - Major trees and trophy vegetation
 - Rock outcroppings
 - Bodies of water
 - Fences and barriers
 - (5) Site features and conditions
 - Existing contours especially at major grade changes
 - Visible flood zones or hazards
 - Property lines
 - Outline of building
 - Layout leases or easements
 - Setbacks
 - Preliminary geotech information
 - Proposed soil boring locations
 - Identifiable site constraints
 - Utility lines
 - Manholes, drains, utility access
 - Security features
 - Known historic or archaeological impact items
 - (6) Paved surfaces
 - Major streets
 - Vehicular routes
 - Curbs
 - Walks
 - Pedestrian access routes
 - Bicycle paths and parking



- Parking with handicapped locations
- Service areas
- Other paved areas
- (7) Existing structures
- (8) Existing buildings
- (9) Other elements
 - Nuisance land uses
 - Convenience nodes (mass transit, drop off area)
- b) Alternate schemes (indicate number)

2) Reports/Calculations

- a) Basis of Design report
 - (1) Utilities statement: companies, agencies, individual contacts
 - Electrical power
 - Mechanical
 - Site utilities
 - Fire protection
 - (2) Analysis/description of conceptual design
 - Design objectives
 - Environmental determinants
 - Site utilities
 - Land forms
 - Site lighting
 - Pest management
 - Irrigation system
 - Lawns and plantings based on programming
 - Grading
 - Physical site characteristics
 - Impact of building on site
 - Impact of site on building
 - (3) Concept plan for drainage and grading
 - (4) Demolition requirements
 - Pest management
 - (5) Alternative materials, systems, and equipment
 - Site utilities
 - Fire protection
 - Paving
 - Other

B Architectural

- All architectural documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

1) Drawings

- a) Floor Plans
 - (1) Floor plan of each level
 - Area names
 - Room names
 - Public areas



- Service areas
 - Column lines
 - North Arrow
 - Capacity information (number of people, seating, etc.)
 - Departmental assignments
 - Floor elevations in coordination with civil
 - Light wells
 - Mechanical areas
 - Multilevel spaces
 - Partition locations
 - Planning grid or module
 - Preliminary equipment and description
 - Relative wall thickness
 - Security features
 - Skylights
 - Vertical transportation
- (2) Fire protection and means of egress plan
- List features required by code
 - List features required by NFPA Standard 101
 - Fire protection analysis
 - Fire areas
 - Fire walls
 - Smoke zones
 - Travel distances
 - Areas of refuge
- (3) Proposed lab module plan
- Basic layout
 - Relation to structure
- b) Interiors
- (1) Interior space allocation and utilization plan
- Preliminary furniture and equipment plan
 - Indicate major materials and systems
 - Outline of finishes
- c) Exterior
- (1) Building exterior elevations
- Indicate surface materials for all areas
 - Finish grades
 - Major floor elevations above and below grade
 - Exposed mechanical and electrical equipment
 - Sketch elevations or perspectives of buildings
 - Description of various design features
- d) Sections
- (1) Building section (cross and longitudinal)
- Relative thickness of floors
 - Relative thickness of walls



- Major floor elevations
- Finish grades
- Major room names
- Important site easements
- Significant mechanical and electrical equipment
- Relationship to site contours
- Above-ceiling zoning analysis

2) Reports/Calculations

- b) Basis of Design report
- c) Architectural program
- d) Code analysis
 - (1) Define building type
 - (2) Define use category
- e) Area analysis
 - (1) Gross area tabulations
 - (2) Area tabulations for net and gross design areas by floor
 - (3) Space tabulation of net by room
 - (4) Review and verify area calculation guideline functions
 - (5) Comparison of areas and POR
- f) Alternative materials, systems, and equipment

C Structural

- All structural documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

1) Drawings

- a) Floor Plans
 - (1) Building outline – plan view with column lines related to architectural plan
 - (2) Indicate contemplated column footprint size
 - (3) Column lines
 - (4) North Arrow
- b) Section
 - (1) Indicate contemplated beam configuration and depth.
 - (2) Indicate interstitial levels

2) Reports/Calculations

- a) Basis of Design report
 - (1) Systems outlines
 - (2) Development of conceptual design solutions in coordination with other disciplines
 - (3) Design live loads and design wind loads stated.
 - (4) Two possible structural systems
- b) Indicate status of obtaining geotechnical data for structural design
- c) Code analysis

D Mechanical

- All mechanical documentation shall:



- Be coordinated with similar activities in other disciplines
- Address requirements in the program (POR) and the DRM

1) Drawings

- a) Floor Plans
 - (1) Locate mechanical HVAC equipment
 - (2) Lay out major components
 - (3) Coordinate locations and size of mechanical rooms with architectural plans
 - (4) Coordinate locations and size of vertical shafts with architectural plans
 - (5) Identify connections to major utilities
 - Steam
 - Chilled water
 - Natural gas
 - (6) Indicate intakes and exhausts relationships to:
 - loading docks
 - emergency generator
 - adjacent buildings
 - Wind direction

2) Reports/Calculations

- a) Basis of Design report
- b) Code analysis
- c) Design conditions
 - (1) Outside air temperature
 - (2) Inside air temperature
 - (3) Air changes
 - (4) Relative humidity
 - (5) Utility pressure
 - (6) Methodology for utility demands
- d) Requirements for HVAC services
- e) Special requirements
 - (1) Fume hood
 - (2) Biosafety cabinet
 - (3) Other local exhaust requirements
 - (4) Constant-temperature rooms
 - (5) Clean rooms
- f) Overall HVAC system concepts
- g) Equipment type and redundancies
- h) Energy recovery systems
- i) Preliminary equipment sizes based on building gross square feet area
- j) Preliminary energy budget
- k) Life-cycle cost analysis
- l) Analysis of conceptual design solutions
 - (1) Energy source
 - (2) Energy conservation
 - (3) Heating and ventilating
 - (4) Air conditioning
- m) Alternative materials, systems, and equipment



E Plumbing

- All plumbing documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

1) Drawings

- a) Floor Plans
 - (1) Locate plumbing equipment
 - (2) Lay out major components
 - (3) System flow diagrams indicating the basic arrangement, general distribution concept, and key features of each plumbing/piping system
 - (4) Coordinate locations and size of vertical shafts with architectural plans
 - (5) Identify connections to major utilities
 - Steam
 - Chilled water
 - Natural gas
 - Water
 - Special water (deionized)
 - Sewer
 - Specialty gases (systems or tanks)
 - Vacuum
 - Compressed air

2) Reports/Calculations

- a) Basis of Design report
- b) Code analysis
- c) Basic system arrangement and zoning
- d) Primary features
- e) General sizing criteria (Flow and Pressure)
- f) Equipment type and redundancies
- g) Provisions to be included for future loading and flexibility
- h) Outline of proposed system materials
- i) Present conditions
- j) Requirements for plumbing services
- k) Special requirements i.e. booster systems
- l) Water supply analysis/test results specific to building site
 - (1) Radioactive waste
 - (2) Waste recovery
- m) Overall plumbing system concepts
- n) Analysis of conceptual design solutions
- o) Alternative materials, systems, and equipment

F Fire Protection

- All fire protection documentation shall:
 - Be coordinated with other disciplines
 - Address requirements in the program (POR) and the DRM



1) Drawings

- a) Plans
 - (1) Locate fire protection equipment or systems
 - (2) Lay out major components

2) Reports/Calculations

- a) Basis of Design report
- b) Code analysis
- c) Present conditions
- d) Requirements for fire protection
- e) Requirement for a fire pump and preliminary size
- f) Overall system concepts
- g) Analysis of conceptual design solutions
- h) Alternative materials, systems, and equipment
- i) Calculation of the required water supply
- j) Hydrostatic flow test
- k) Preliminary sprinkler water supply calculations
- l) Schematic plans with overall fire protection concepts
- m) Special fire suppression systems
 - (1) Descriptions
 - (2) Locations
 - (3) Justification for use
- n) Integrated fire alarm
- o) Alternative materials, systems, and equipment
- p) Protection analysis report for each alternative

G Electrical

- All electrical documentation shall:
 - Be coordinated with other disciplines
 - Address requirements in the program (POR) and the DRM

1) Drawings

- a) Site Plans
 - (1) Locate connection to medium voltage distribution
 - (2) Locate emergency generators
- b) Floor Plans
 - (1) Locate electrical distribution equipment
 - (2) Coordinate locations and size of electrical rooms/closets with architectural plans
 - (3) Single line indication of major feeder routes
 - (4) Coordinate locations of vertical shafts with architectural plans
- c) Riser Diagram for normal and emergency power distribution

2) Reports/Calculations

- a) Basis of Design report
 - (1) Code analysis
 - (2) Description of primary service available
 - (3) Overall electrical system concept
 - (4) Analysis of conceptual design solutions



- (5) Description of all proposed systems
- (6) Description of emergency power system
- b) Energy budget
 - Proposed annual usage
 - Maximum design loads
 - Test for compliance with all applicable energy codes

H Telecommunications

- All telecommunication documentation will:
 - Be coordinated with other disciplines
 - Address requirements in the program (POR) and the DRM

1) Drawings

- a) Site Plans
 - (1) Locate connection to telecommunication distribution
- b) Floor Plans
 - (1) Locate telecommunication equipment
 - (2) Coordinate locations and size of telecommunication rooms/closets with architectural plans
 - (3) Single line indication of major pathway routes
 - (4) Coordinate locations of vertical shafts with architectural plans
- c) Riser Diagram for telecommunication distribution

2) Reports/Calculations

- a) Basis of Design report
 - (1) Description of telecommunication service available
 - (2) Overall telecommunication system concept
 - (3) Analysis of conceptual design solutions
 - (4) Description of all proposed systems (Public address, audio visual system, distributed antenna system)

I Costs

- Cost analysis
 - Preliminary cost based on an square meter/ square foot or broad order of magnitude cost estimate



Design Development Phase Submission 35%

Design development phase submission at a minimum, shall include following requirements as applicable to the project in addition to the requirements from schematic design phase. All plan drawings shall indicate the north arrow, column lines and the scale of the drawing.

A Site/Landscape

- All Site documentation shall:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Schematic Design 15% phase

1) Drawings

- a) Plans
 - (1) Vicinity Plan updated as required
 - (2) Existing Site Plan updated as required
 - Facilities that may have interruption of any utility
 - (3) Proposed site plan
 - Existing site information
 - Building footprint
 - Spot elevations at building
 - Proposed contours
 - Key design elements
 - Major landscaping
 - Utility lines
 - Concept plan for drainage and grading
 - Vehicular access routes
 - Parking Area
 - Loading dock location and proposed access route
 - Coordinate location of loading docks such that they are not near air intakes.
 - Proposed pedestrian access routes
 - Proposed service areas
 - Construction marshalling information
 - Location for excavated material
 - Site access routes for marshalling project supplies
 - Staging areas
 - Construction office trailer locations
 - Utility hookups, construction trailer
 - Limits of work
 - Indication of future surrounding improvements
 - (4) Demolition plan
 - Preliminary demolition and proposed removal

2) Reports/Calculations

- a) Basis of Design report
 - (1) Establish final scope
 - Relationships
 - Form
 - Size



- Appearance
- Utilities statement: companies, agencies, individual contacts
- Analysis/description of conceptual design solutions
- Site safety plan
 - Fire protection
 - Hazardous material handling
- Storm water management report
- Erosion/sediment control report
- Concept plan for drainage and grading
- Demolition requirements
- Alternative materials, systems, and equipment

B Architectural

- All architectural documentation will:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Schematic Design 15% phase

1) Drawings

a) Plans

- (1) Floor plans of each level
 - Identification of existing and new construction
 - Double line plans with precise wall thickness
 - All programmed rooms
 - Equipment rooms
 - Signal rooms
 - Electrical rooms
 - Telephone closets
 - Mechanical rooms
 - Shafts
 - Circulation corridors
 - Stairs
 - Ladders
 - Elevators
 - Number
 - Type
 - Size
 - Automatic conveyances
 - Room names
 - Department or area names
 - Planning grid
 - Structural grid
 - Floor elevations
 - Equipment
 - Furnishings and other space-defining elements
 - Multilevel spaces
 - Light wells
 - Significant mechanical equipment
 - Significant electrical equipment



- Capacity information (number of people, seating, etc.)
 - Overall dimensions
 - Plan and layout of typical or repetitive spaces
 - Fire protection
 - Fire walls
 - Smoke walls
 - Smoke zones
 - (2) Roof plan
 - Major roof elements
 - Skylights
 - Hatches
 - Major mechanical equipment
 - Major electrical equipment
 - Elevator machine rooms
 - (3) Reflected ceiling plan
 - Areas of special interest
 - Major components
 - (4) Fire protection egress plan
 - (5) Proposed lab module
- b) Interiors
- (1) Interior space allocation and utilization plan
 - Establish the final scope relative to interior construction
 - Finish Schedule
 - Finishes
 - Colors
 - Artwork
 - Special interior design features
 - Furniture and Equipment
 - Furnishings
 - Equipment selections
 - Materials
- c) Interior Elevations
- (1) Building interior elevations
 - Typical spaces
 - Major spaces
 - Areas of special interest
 - Areas of special complexity
- d) Exterior Elevations
- (1) Building exterior elevations
 - Indicate all surface materials for all areas
- e) Sections and Details
- (1) Building sections
 - Set floor-to-floor
 - Establish floor elevations
 - Set interstitial space dimensions



- (2) Wall sections
 - Typical wall sections
 - At window
 - At solid wall
 - At parapets and roofs
 - At finished grades and footings
- (3) Construction sections
 - Typical stairways
 - Typical elevator shaft and machine room
 - Utility coordination cross-sections

2) Reports/Calculations

- a) Basis of Design report
- b) Area analysis
- c) Alternative materials, systems, and equipment
- d) Outline of program
- e) Design description narrative
- f) Design concepts and objectives
- g) Tabulation of net and gross areas
- h) Growth potential
- i) Alternate schemes
- j) Building envelope analysis
 - (1) Recommendations for overall building envelope
 - (2) Review of thermal vapor flow and moisture
 - (3) Recommendation for vapor barriers
 - (4) Recommendation for vapor isolation
- k) Asbestos report
- l) Vertical transportation recommendations
 - (1) Elevators
 - Number
 - Type
 - Size
 - Weight capacity
 - Speed
 - Arrangement
 - (2) Other requirements

C Structural

- All reports and other documentation will:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in each discipline
 - Address all comments from the Schematic Design 15% phase

1) Drawings

- a) Floor plans
 - (1) Structural floor plans, each level coordinated with architectural development
 - Indicate soil bearing capacities
 - Indicate potential structural framing system that coordinates with architectural and suitable for vibration transmission limitation required by scientific program
 - Fixed column reference lines



- Basic structural system and dimensions
 - Bearing walls
 - Major bracing locations
 - Locate typical bay - relate to architectural
 - Preliminary sizing of major components
 - Columns
 - All framing members identified
 - Girders
 - Beams
 - Joists
 - Indicate structural framing systems
- (2) Structural foundation plans
- Footings
 - Foundation walls
 - Retaining walls
 - Grade beams
- (3) Details
- Foundation details
 - Typical framing details
 - Subdrainage
 - Waterproofing
 - Dampproofing

2) Reports/Calculations

- a) Basis of Design report
 - (1) Existing conditions
 - Underlying soil-bearing capacities
- b) Calculations for support of hydronic and hydraulic piping
- c) Vibration requirements and analysis
- d) Summary of structural systems requirements
- e) Fire-resistive construction requirements
- f) Development of alternatives
 - (1) Foundation design criteria
 - (2) Coordination with piping systems that require support
 - (3) Laboratory vibration analysis
 - (4) Final structural design criteria
 - (5) Comparative cost analysis of at least two structural systems
- g) Critical coordination clearances
- h) Column schedules

D Mechanical

- All Mechanical documentation will:
 - Be a minimum of 35% completed
 - Be coordinated with similar activities in other disciplines
 - Address and provide responses to all comments from Schematic Design 15% phase

1) Drawings

- a) Floor Plans
 - (1) Block layouts of mechanical spaces



- Layout of major components in equipment rooms
 - Approximate equipment sizes and capacities
 - Required space for equipment
 - Required chases and clearances
 - Acoustical and vibration control
 - Visual impacts
 - Single line presentation of ductwork systems
 - Single line HVAC piping mains
 - BAS controls
 - Energy conservation measures
 - Shafts
- (2) Laboratory planning modules
- b) System diagrams
- c) Control diagrams

2) Reports/Calculations

- a) Basis of Design report
- (1) Plant analysis
 - (2) Design intent and scope of systems
 - (3) Systems outline for proposed project
 - Heating source
 - Refrigeration source
 - HVAC systems
 - Energy conservation
 - Redundancies
 - (4) Indoor design conditions U-value calculations
 - (5) Outdoor design conditions U-value calculations
 - (6) Theoretical water vapor migration
 - (7) Dew point and condensation potential
- b) Room by room load calculations for space cooling and heating
- c) Ductwork sizing in plenums and shafts
- d) Energy analysis for at least three HVAC systems
- e) Building energy model
- f) Life cycle cost analysis
- g) Energy recovery analysis
- (1) Energy conservation analysis
- h) Connected load requirements
- i) Wind analysis and laboratory exhaust plume study
- j) Energy study
- (1) Alternate methods of energy conservation
 - Associated advantages
 - Associated disadvantages
 - Payback calculations
 - Utility company rebates
 - (2) Alternate methods of energy recovery
 - Associated advantages
 - Associated disadvantages
 - Payback calculations
 - Utility company rebates



E Plumbing

- All Plumbing documentation will:
 - Be a minimum of 35% completed
 - Be coordinated with similar activities in other disciplines
 - Address and provide responses to all comments from Schematic Design 15% phase

1) Drawings

- a) Floor Plans
 - (1) Layout of major components
 - (2) Plumbing fixtures
 - (3) Distribution layouts
 - (4) Booster system requirements
 - (5) Utilities
 - (6) Piped gas systems
 - (7) Hot water
 - (8) Water softening
 - (9) Plumbing piping mains
 - (10) Drainage piping mains (Waste and storm)
 - (11) Shafts
 - (12) Plumbing specialties (High Purity Water, Medical gases)
 - (13) Pipe materials
- b) Plumbing riser diagrams

2) Reports/Calculations

- a) Basis of Design report
- b) Coordination with structural for support of piping
- c) Provide cut-sheets for plumbing fixtures and equipment, with primary features/ anticipated design options identified
- d) Plumbing calculations
 - (1) Pump sizing
 - (2) Tank sizing

F Fire Protection

- All Fire protection documentation shall:
 - Be a minimum of 35% completed
 - Be coordinated with similar activities in other disciplines
 - Address and provide responses to all comments from Schematic Design 15% phase

1) Drawings

- a) Floor Plans
 - (1) New fire protection mains
 - (2) Booster system requirements
 - (3) Fire pump requirements
 - (4) Preliminary equipment layouts
 - (5) Required space for equipment
 - (6) Block layouts for fire protection system

2) Reports/Calculations

- a) Basis of Design report



- (1) Strategy for meeting life safety codes
 - (2) List any upgrade requirements to achieve fire protection policy
 - (3) Sprinkler calculations
 - (4) Fire Pump calculations
 - (5) Fire alarm requirements
- b) Approximate sizes and capacities of major components

G Electrical

- All Electrical documentation will:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Schematic Design 15% phase

1) Drawings

- a) Site Plan
 - (1) Feeder/conduit routing for medium voltage distribution
 - (2) Location of emergency generators and feeder/conduit routing
 - (3) Preliminary details for site electrical work
- b) Floor Plans
 - (1) Layout of major components in all electrical equipment rooms
 - (a) Preliminary sizes of major components
 - (b) UPS
 - (c) High-voltage systems
 - (d) Primary transformers
 - (e) Emergency generator
 - (2) Identify special features
 - (a) Underfloor raceways
 - (b) Floor outlets
 - (c) Occupancy sensors
- c) Tentative layouts of components where space is critical
- d) Lighting plans
 - (1) Location of lighting fixtures
 - (2) Type of lighting fixtures
- e) Laboratory planning module
- f) Updated riser diagram for normal and emergency power distribution with feeder, conduit and transformer sizes

2) Reports/Calculations

- a) Basis of Design report
 - (1) Electrical plant analysis
 - (2) Criteria for lighting
 - (3) Criteria for electrical system
 - (4) Building automation concept
 - (5) Systems outline and types of systems
- b) Overall building connected load requirements
 - (1) Normal power
 - (2) Emergency power
- c) Electrical service sizing calculations
- d) Preliminary sizing for Transformers, generator, UPS etc.
- e) Agreement from each utility company or agency on design development drawings



H Telecommunication

- All telecommunication documentation will:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Schematic Design 15% phase

1) Drawings

- a) Site Plan
 - (1) Conduit routing for telecommunication distribution
 - (2) Preliminary details for site electrical work
- b) Floor Plans
 - (1) Layout of major components in all telecommunication equipment rooms
 - Preliminary sizes of major components
 - (2) Telephone connections
 - (3) Data connections
- c) Tentative layouts of components where space is critical
- d) Laboratory planning module
- e) Updated riser diagram for telecommunication distribution conduit sizes

2) Reports/Calculations

- a) Updated basis of design report

I Specifications

- 1) General and supplemental conditions of contract
- 2) Outline of specifications or itemized list with criteria and quality standards
 - a) Significant architectural materials
 - b) Engineering systems
 - c) Equipment
- 3) Outline of project specifications
- 4) Request for justification of proprietary items

J Costs

- 1) Cost analysis
 - a) Systems Cost estimate
 - (1) Approximate quantities
 - (2) Identification of potential items for value engineering
 - b) Budget outline
 - (1) Construction cost
 - (2) Owner's cost
 - (3) Project cost
 - (4) Total Cost
 - (5) Equipment included in budget
 - (6) Equipment by owner

K Schedules

- 1) Construction schedule and phasing in bar chart form
- 2) Project schedule diagram with phases of development



L Presentation

- 1) Study sketches
- 2) Preliminary perspectives
- 3) Rendered perspective
- 4) Models
 - a) Study models
 - b) CADD models
 - c) Presentation model at scale

M Review

- Ensure compliance with the NIH design requirements manual (DRM)
- Review and approve general architectural materials
- Respond in writing to all schematic design materials
- Submit all documents for review
- Attend review meetings as necessary to answer questions



Construction Document Phase Submission 70%

70 % Construction document phase submission at a minimum shall include following requirements as applicable to the project in addition to the requirements from design development design phase. All plan drawings shall indicate the north arrow, column lines and the scale of the drawing.

A Site/Landscape

- All Site documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

1) Drawings

- a) Floor Plans
 - (1) Vicinity plan updated as required
 - (2) Existing site plan updated as required
 - (3) Proposed site plan
 - (a) Existing site information
 - (b) Dimension major site features
 - (c) Building footprint
 - Grade elevations at each building corner
 - Grade elevations at entrances, and critical areas
 - First floor elevations
 - Overall dimensions
 - (d) Key design elements
 - (e) Major landscaping
 - (f) Utility lines
 - (g) Concept plan for drainage and grading
 - (h) Vehicular access routes
 - Profile and alignment of all new roads
 - (i) Pedestrian access routes
 - (j) Parking
 - All striping
 - All unique spaces
 - Dimensions
 - (k) Walks
 - Dimensions
 - Paving joints
 - (l) Curbs
 - Dimensions
 - (m) Service areas
 - Dimensions
 - (4) Staking plan
 - (5) Proposed contours
 - (a) Grading at all altered areas
 - (6) Construction marshalling information
 - (a) Locate and outline
 - (b) Locate temporary utility hookup
 - (7) Indications of phasing
 - (8) Limits of work



- (9) Indication of future surrounding improvements
 - (10) Indication of artwork
 - (11) Location of signage
 - (a) Location(s) of construction sign
 - (12) Security measures
 - (13) Planting plan
 - (a) Location of all trees, shrubs, and lawns
 - (b) Complete planting list
 - (c) Planting details
 - (14) Preliminary landscape details
 - (15) Demolition plan
 - (16) Utility plot plan
 - (a) Existing utilities and their connections
 - Proposed trunk sewers
 - Water distribution loop
 - Fire water distribution loop
 - Gas distribution mains
 - Location arrangement of water treatment equipment
- b) Details

2) Reports/Calculations

- a) Site construction document design report
 - (1) Establishment of final scope
 - (2) Utilities statement: companies, agencies, individual contacts
 - (3) Analysis/description of conceptual design solutions
 - (4) Coordination with NIH Utilities Master Plan
 - (a) Verify location, sizing, and timing of all required interfaces
 - (b) Provide schedule confirmation of any utility work
 - (5) Site safety plan
 - (6) Storm water management report
 - (7) Erosion/sediment control report
 - (8) Review planting plan against master plan
 - (9) Concept plan for drainage and grading
 - (10) Demolition requirements
 - (11) Alternative materials, systems, and equipment

B Architectural

- All Architectural documentation will:
 - Be a minimum of 70% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

1) Drawings

- a) Entire project site on one sheet for reference
- b) General notes
- c) Reference and coordination symbols
- d) Enlarged plan bubbles
 - (1) Section indications
 - (2) Exterior elevation keys
 - (3) Interior elevation keys



- (4) Wall type indications
- e) All dimensions
 - (1) Overall
 - (2) Column grid
 - (3) Locating dimensions
 - Partitions
 - Openings
 - Equipment
- f) Floor Plans of each level
 - (1) All room names
 - (2) Room numbers
 - (3) Accurate door size, and swings
 - (4) Safety and protective elements
 - (5) Wall-mounted items
 - (6) Shelving and special features
 - (7) Fire extinguishers
 - Fire hoses
 - Lead linings
 - Radio frequency shielding
 - (8) Fixed equipment
 - (9) Portable equipment
 - (10) Plumbing fixtures placed and identified
 - Sinks
 - Showers
 - Tubs
 - Toilets
 - Toilet stalls
 - Eyewash
 - Safety showers
 - Any item requiring plumbing
 - (11) Construction dimension
- g) Roof plan
 - (1) Materials
 - (2) Elevations
 - (3) Slopes
 - (4) Drains
 - (5) Other penetrations
 - (6) Window-washing system
 - Davits
 - Bollards
 - Rails
 - Equipment
- h) Reflected ceiling plans
 - (1) Suspended ceiling grids
 - (2) Lighting fixtures
 - (3) Diffusers
 - (4) Registers
 - (5) Sprinkler heads
 - (6) Ceiling-mounted equipment
 - (7) Exit signs



- (8) Equipment
- i) Enlarged plans
 - (1) Special spaces
 - (2) Stairs
- j) Fire protection egress plans
- k) Interior elevations
- l) Interior wall sections
- m) Coordination utility cross-section at a minimum 12.5 mm scale
 - (1) Corridors
 - (2) Mechanical rooms
 - (3) Utility placements
 - (4) Access areas / Area ways
- n) Utility discipline zones
 - (1) Coordination with existing structural
 - (2) Coordination with new structural
- o) Vertical circulation
 - (1) Dimensional locations
 - Elevator cars
 - Elevator entrances
 - Counterweights
 - Hoistway vents
 - Trap doors for lowering overhead
- p) Schedules
 - (1) Door schedules
 - (2) Finish schedules

2) Reports/Calculations

- a) Updated basis of design
- b) Vertical transportation
 - (1) Required capacity
 - (2) Speed and control system
 - (3) Physical space requirements
 - Hoistway enclosure
 - Pits
 - Cabs
 - Machine rooms
 - Entrances

C Structural

- All Structural documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

1) Drawings

- a) Structural floor plans for each level and roof
 - (1) Final column reference lines
 - (2) Structural system dimensions
 - (3) Size bearing walls
 - (4) Major bracing locations
 - Bracing type



- Dimensions
- (5) Indication of typical bay
- (6) Sizing of major components
- (7) Column sizes
- (8) Structural Load information
 - Horizontal (wind and seismic)
 - Live loads
 - Dead loads
- (9) All framing members sized
 - Girders
 - Beams
 - Joists
 - Open web joists
 - Concrete joists
 - Waffle slab
 - Space frames
 - Lintels
 - Type, extent, and direction of framing
 - Reference structural items to schedule
 - Slabs
- b) Structural foundation plans
 - (1) Size of caissons
 - (2) Size of footings
 - (3) Size of foundation walls
 - (4) Size of grade beams
- c) Structural notes
- d) Critical coordination clearances
- e) Sections and details
- f) Column and beam schedules
- g) Details
 - (1) Reinforcing
 - Size
 - Spacing
 - Elevation of reinforcing
 - Type
 - Depths
- h) Dimensioned foundation details



- (1) Large openings
 - (2) Nonstandard beam to column framing
 - (3) Concrete stairs
 - (4) Exterior wall construction
 - (5) Window wash supports
 - (6) Anchors and ties
 - (7) Elevator shaft details
 - (8) Vibration isolation details
 - (9) Large mechanical equipment and anchorage
 - (10) Typical framing details
 - (11) Standard structural steel connections
 - (12) Sump pump systems
 - (13) Reference to appropriate schedules
- i) Correlation with architectural and mechanical features
- (1) Indicate major mechanical/electrical equipment removal/replacement routes

2) Reports/Calculations

- a) Updated basis of design
- b) Structural report
 - Final structural system
 - Design codes
 - Identification of design stresses
 - Allowable foundation bearing capacity
 - Compaction requirements
- c) Special condition
 - Shoring/underpinning of adjacent structures
- d) Schedules
 - Slabs
 - Beams
 - Columns

D Mechanical

- All mechanical documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

1) Drawings

- a) Floor Plans
 - (1) Legend
 - (2) Mechanical Plan showing ducts
 - Double line drawing of ducts >150 mm (6 in.)
 - Single line drawing of ducts ≤150 mm (6 in.)



- (3) Indicate size of ducts
 - (4) Indicate insulation/moisture prevention
 - (5) Fire dampers
 - (6) Smoke dampers
 - (7) Balancing dampers
 - (8) Location of supply diffusers, return and exhaust grilles coordinated with reflected ceiling plan
 - (9) Location of all equipment
 - (10) Indicate smoke detectors
 - Within ducts
 - In air-handling units
 - (11) Special or complex ductwork
 - b) Sections
 - (1) Drawing sections
 - Through equipment rooms
 - Typical ductwork
 - c) Details
 - (1) Details of unique conditions
 - (2) Control diagrams with legend and operating description
 - Air conditioning systems
 - Exhaust systems
 - Refrigeration systems
 - Process systems
 - d) Schedules
 - (1) Equipment schedules
 - Air conditioning
 - Ventilation units
 - Refrigeration elements
 - Cooling towers
 - Fans
 - Pumps
 - Specialty systems
- 2) Reports/Calculations**
- a) Design reports
 - (1) Sizing calculations for ducts
 - (2) Combustion air supply calculations
 - Boiler plants
 - Ventilation system
 - Heating system
 - (3) Calculations for fan pressures and pump heads
 - (4) Calculations for required sound attenuation of major fans
 - (5) Calculations for process systems

E Plumbing

1) Drawings

- a) Plumbing system plan drawings
 - (1) Create legends



- (2) Show location and size of equipment
 - Pumps
 - Tanks (3)
 - Locate piping
 - Double line drawing and piping >150 mm
 - Single line drawing and piping ≤150 mm
 - (4) Indicate size of pipes
 - (5) Indicate insulation/moisture prevention
 - (6) Indicate piping system
 - Chilled water
 - Condenser water
 - Hot water
 - Steam piping (including low quantities)
 - Waste
 - Storm
 - Sanitary
 - Vent
 - Oxygen
 - Nitrous oxide
 - Medical compressed air
 - Shop compressed air
 - Fuel gas
 - Vacuum outlets
 - High purity water
 - Animal watering system
 - Additional piping used for the project
 - (7) Walk-in coolers, freezers, cold rooms
 - Refrigeration systems
 - Schematic piping
 - Wiring diagrams
 - Automatic controls
 - b) Plot plan for outside of building underground distribution
 - (1) Blowers
 - c) Riser diagrams
 - d) Details
 - (1) Detailing
 - Unique conditions
 - Vibration isolation engineering
 - e) One line flow and control diagrams
 - (1) Chilled water
 - (2) Condenser water
 - (3) Hot water
 - (4) Steam piping (including low quantities)
 - (5) Air conditioning steam
 - f) Schedules
- 2) **Reports/Calculations**
- a) Design report
 - (1) Equipment selections based on manufacturer's catalog data
 - (2) Sizing calculations



- Piping mains and principal branches
- Boiler
- Condensate tank
- Feedwater heater capacities
- Feedwater storage capacity
- High purity water capacity
- Animal watering system capacity
- (3) Capacity, discharge pressure, and net positive suction pressure
 - Condensate transfer pumps
 - Boiler feedwater pumps
 - Pressure-reducing valves
 - Safety valves
 - Oil tanks and pumps
 - Gas systems including medical gas system
 - Blow-down systems

F Fire Protection

1) Drawings

- a) Plan drawings
 - (1) Create legends
 - (2) Indicate existing systems
 - (3) Show location and size of equipment
 - (4) Locate piping
 - (5) Indicate size of pipes
 - (6) Equipment layouts
- b) Ceiling plan drawings
 - (1) Sprinkler locations

2) Reports/Calculations

- a) Fire Protection Design Report
 - Update Basis of Design

G Electrical and Communications

- All Electrical documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

1) Drawings

- a) Updated site plan indicating location of:
 - (1) Feeder/conduit routing for medium voltage distribution
 - (2) Location of emergency generators and feeder/conduit routing
 - (3) Transformer vaults
 - (4) Pad mount transformer location
 - (5) Auxiliary power system connection
 - (6) Engine generator sets
 - (7) Unit substations
 - (8) Other major equipment



- b) Updated floor plans with
 - (1) Room numbers
 - (2) Room titles
 - (3) Area functions
 - (4) Lighting fixtures indicated with type, switching and circuiting information
 - (5) Outlets for power with circuiting information
 - (6) Connections for mechanical and plumbing equipment with disconnect and circuiting information
 - (7) Layout of major components in all electrical equipment rooms
 - (8) Layouts for special systems
- c) One line riser diagram of electrical distribution
- d) One line riser diagram of auxiliary power distribution
- e) Panel schedules
- f) Light fixture schedules
- g) Riser diagrams for:
 - (1) Grounding
 - (2) Fire alarm
 - (3) Telephone
 - (4) Paging
 - (5) Television
 - (6) All low-voltage systems

2) **Reports/Calculations**

- a) Update basis of design report
- b) Lighting calculations
- c) Load calculations
- d) Short circuit calculations
- e) Voltage drop calculations
- f) Arc flash analysis

H Telecommunication

- All telecommunication documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

1) Drawings

- a) Update site Plan
 - (1) Conduit routing for telecommunication distribution
 - (2) Details for site electrical work
- b) Floor Plans
 - (1) Layout of major components in all telecommunication equipment rooms
 - Sizes of major components
 - (2) Telephone connections
 - (3) Data connections
- c) Layouts of components where space is critical
- d) Laboratory planning module
- e) Updated riser diagram for telecommunication distribution conduit sizes



2) Reports/Calculations

- a) Updated basis of design report

I Specifications

- 1) General and supplemental conditions of contract
- 2) Edited project specifications
- 3) Request for justification of proprietary items

J Summary

- All reports and other documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in each discipline
 - Address all comments from the Design Development 35% phase
- 1) Review energy study
- 2) Revised Basis of Design report

K Cost

- 1) Quantity Takeoff Cost Estimate
 - a) Revision of cost estimate
 - b) Revision of cost outline
 - c) Quantity takeoff
 - d) Labor cost by trade and specifications section
 - e) Material cost by trade and specifications section
- 2) Revised specifications
- 3) Equipment
 - a) Use of owner-furnished material/equipment
 - b) Special manufacturing requirements
 - c) Delivery requirements
 - d) Storage requirements
 - e) Manufacturer's plans and details for installation

L Schedule

- 1) Construction schedule
 - a) Bar chart
 - b) Narrative report
 - Long lead items
 - Delivery times
 - Scheduling instructions
 - Phasing instructions
 - Optimum construction efficiency
- 2) Design schedule
- 3) Occupancy schedule

M Presentation

- 1) Revised renderings
- 2) Revised models



N Review

- 1) Review and approval of architectural materials
- 2) Review and approval of architectural material details
 - a) Openings
 - b) Windows
 - c) Doors
 - d) Room Numbering
 - e) Penetrations
 - f) Walls
 - g) Copings
 - h) Roofing system
 - i) Water proofing
 - j) Caulking
 - k) Flashing
- 3) Respond in writing to all comments from Design Development 35% phase
- 4) Submit all documents for review
- 5) Attend review meetings as necessary to answer questions



Construction Document Phase Submission 95%

95 % Construction document phase submission at a minimum shall include following requirements as applicable to the project in addition to the requirements from design development design phase. All plan drawings shall indicate the north arrow, column lines and the scale of the drawing.

A Site/Landscape

- All Site documentation will:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Document 70% phase

1) Drawings

- a) Floor Plans
 - (1) Updated Vicinity Plan
 - (2) Updated Existing Site Plan
 - (3) Proposed Site Plan
 - Erosion control measures
 - Existing site information
 - Dimension major site features
 - Building footprint
 - Key design elements
 - Major landscaping
 - Utility lines
 - Concept plan for drainage and grading
 - Vehicular access routes
 - Pedestrian access routes
 - Parking
 - Walks
 - Curbs
 - Service areas
 - Staking plan
 - Proposed contours
 - Construction marshalling information
 - Indications of phasing
 - Limits of work
 - Indication of future surrounding improvements
 - Indicate artwork
 - Locate signage
 - Security measures
 - (4) Planting plan
 - Location of all trees, shrubs, and lawns
 - Complete planting list
 - Planting details
 - (5) Landscape details
 - (6) Demolition plan
 - (7) Utility plot plan
 - Existing utilities and their connections
 - Proposed trunk sewers
 - Water distribution loop



- Fire water distribution loop
- Gas distribution mains
- Location arrangement of water treatment equipment

(8) Alternate schemes

2) Reports/Calculations

- a) Site Construction Document Design Report
 - Update Basis of Design

B Architectural

- All Architectural documentation will:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Document 70% phase

1) Drawings

- a) Entire project site on one sheet for reference
- b) Floor plans of each level
 - (1) Indication of art work
 - (2) Signage location
 - (3) Interior planting
- c) Roof plan
- d) Reflected ceiling plans
- e) Floor covering plan
 - (1) Material type
 - (2) Graphics
 - (3) Patterns
- f) Enlarged plans
- g) Fire protection egress plan
- h) Lab modules
- i) Equipment Plan
- j) Interior space allocation and utilization plan
- k) Interior elevations
 - (1) Signage location
- l) Exterior elevations
- m) Signage location
- n) Building sections
- o) Construction details
 - (1) Any unique condition not previously covered
- p) Installation plans
 - (1) Furniture
 - (2) Equipment
- q) List of new and reused items
 - (1) Number
 - (2) Cross-referenced to details
 - (3) Cross-referenced to specifications
- r) Updated schedules
 - (1) Door schedules
 - (2) Finish schedules
 - (3) Equipment schedules



2) Reports/Calculations

- a) Architectural Design report
 - Update Basis of Design

C Structural

- All Structural documentation will:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Document 70% phase

1) Drawings

- a) Structural floor plans for each level and roof
 - (1) Column reference lines
 - (2) Final dimensions
 - (3) All bracing
 - (4) Sizing of all components
 - (5) Special provisions for installation or removal of equipment
- b) Structural foundation plans
 - (1) Locate grades
 - (2) Locate cleanout manholes
 - (3) Locate trenches
 - (4) Locate area wells
 - (5) Locate and dimension all elevator pits
 - (6) Locate elevation of bottom of footing
 - (7) Indicate concrete member
 - Dimensions
 - Size
 - Spacing
 - Reinforcing
 - (8) Locate finished and unfinished spaces
 - (9) Pipe sleeves through footings
 - (10) Pipe sleeves through below grade walls
 - (11) Caissons
 - Bottom elevation
 - Bell size
 - (12) Elevations
 - (13) Top of slab elevations
 - (14) Top of steel elevations
- c) Details
 - (1) Sections and details
 - (2) Critical coordination clearances
 - (3) Details
 - (4) Clarification of lengths or arrangement of reinforcement
 - Any condition not previously addressed
- d) Schedules
 - (1) Schedule for reinforcing bar
 - (2) Column schedule
- e) Structural notes
- f) Correlation with architectural and mechanical features



2) Reports/Calculations

- a) Structural report
 - (1) Completed computations
 - (2) Special condition
 - (3) General note
 - (4) Boring logs
 - (5) Girder diagrams
 - Live loads
 - Uniform loads
 - Concentrated loads
 - Reactions
 - Girder material
 - Stresses

D Mechanical

- All mechanical documentation will:
 - Be a minimum of 95% complete
 - Be coordinated with similar activities in other disciplines
 - Address all remarks from Design Development 70% phase

1) Drawings

- a) Completed floor Plans
 - (1) Legend
 - (2) Mechanical Plan showing ducts
 - Double line drawing of ducts >150 mm (6 in.)
 - Single line drawing of ducts ≤150 mm (6 in.)
 - (3) Indicate size of ducts
 - (4) Indicate insulation/moisture prevention
 - (5) Fire dampers
 - (6) Smoke dampers
 - (7) Balancing dampers
 - (8) Location of all equipment
 - (9) Indicate smoke detectors
 - Within ducts
 - In air-handling units
 - (10) Special or complex ductwork
- b) Completed Sections
 - (1) Drawing sections
 - Through equipment rooms
 - Typical ductwork
- c) Completed Details
 - (1) Details of unique conditions
 - (2) Control diagrams with legend and operating description
 - Air conditioning systems
 - Exhaust systems
 - Refrigeration systems
- d) Completed Schedules
 - (1) Equipment schedules with facility numbers and labeling requirements.
 - Air conditioning
 - Ventilation units



- Refrigeration elements
- Cooling towers
- Fans
- Pumps

2) Reports/Calculations

- a) Completed basis of design report
- b) Completed Design reports
 - (1) Sizing calculations for ducts
 - (2) Combustion air supply calculations
 - Boiler plants
 - Ventilation system
 - Heating system
 - (3) Calculations for fan pressures and pump heads
 - (4) Calculations for required sound attenuation of major fans

E Plumbing

- All plumbing documentation will:
 - Be a minimum of 95% complete
 - Be coordinated with similar activities in other disciplines
 - Address all remarks from Construction Documentation 70% phase

1) Drawings

- a) Completed plumbing system plan drawings
 - (1) Legends
 - (2) Show location and size of equipment
 - Pumps
 - Tanks (3)
- Locate piping
- Double line drawing and piping >150 mm
 - Single line drawing and piping ≤150 mm
- (4) Indicate size of pipes
 - (5) Indicate insulation/moisture prevention
 - (6) Indicate piping system
 - Chilled water
 - Condenser water
 - Hot water
 - Steam piping (including low quantities)
 - Waste
 - Sanitary
 - Vent
 - Oxygen
 - Nitrous oxide
 - Medical compressed air
 - Shop compressed air
 - Fuel gas
 - Vacuum outlets
 - Additional piping used for the project
 - (7) Walk-in coolers, freezers, cold rooms



- Refrigeration systems
- Schematic piping
- Wiring diagrams
- Automatic controls
- b) Plot plan for outside of building underground distribution
 - (1) Blowers
- c) Riser diagrams
- d) Details
 - (1) Detailing
 - Unique conditions
 - Vibration isolation
- e) One line flow and control diagrams
 - (1) Chilled water
 - (2) Condenser water
 - (3) Hot water
 - (4) Steam piping (including low quantities)
 - (5) Air conditioning steam
- f) Completed schedules
 - (1) Equipment schedules with facility numbers and labeling requirements.
 - Water heaters
 - Pumps

2) **Reports/Calculations**

- a) Design report
 - (1) Equipment selections based on manufacturer's catalog data
 - (2) Sizing calculations
 - Piping mains and principal branches
 - Boiler
 - Condensate tank
 - Feedwater heater capacities
 - Feedwater storage capacity
 - (3) Capacity, discharge pressure, and net positive suction pressure
 - Condensate transfer pumps
 - Boiler feedwater pumps
 - Pressure-reducing valves
 - Safety valves
 - Oil tanks and pumps
 - Gas systems
 - Blow-down systems

F Fire Protection

- All fire protection documentation will:
 - Be a minimum of 95% complete
 - Be coordinated with similar activities in other disciplines
 - Address all remarks from Construction Documentation 70% phase

1) **Drawings**

- a) Plan drawings
 - (1) Create legends
 - (2) Indicate existing systems



- (3) Show location and size of equipment
- (4) Locate piping
- (5) Indicate size of pipes
- (6) Equipment layouts
- b) Ceiling plan drawings
 - (1) Sprinkler locations

2) **Reports/Calculations**

- a) Fire Protection Design Report
 - Update Basis of Design

G Electrical and Communications

- All Electrical documentation shall:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Documentation 70% phase

1) **Drawings**

- a) Completed site plan indicating location of:
 - (1) Feeder/conduit routing for medium voltage distribution
 - (2) Location of emergency generators and feeder/conduit routing
 - (3) Transformer vaults
 - (4) Pad mount transformer location
 - (5) Auxiliary power system connection
 - (6) Engine generator sets
 - (7) Unit substations
 - (8) Other major equipment
- b) Completed floor plans with
 - (1) Room numbers
 - (2) Room titles
 - (3) Area functions
 - (4) Lighting fixtures indicated with type, switching and circuiting information
 - (5) Outlets for power with circuiting information
 - (6) Connections for mechanical and plumbing equipment with disconnect and circuiting information
 - (7) Layout of major components in all electrical equipment rooms
 - (8) Layouts for special systems
- c) One line riser diagram of electrical distribution
- d) One line riser diagram of auxiliary power distribution
- e) Completed panel schedules
- f) Light fixture schedules
- g) Riser diagrams for:
 - (1) Grounding
 - (2) Fire alarm
 - (3) Telephone
 - (4) Paging
 - (5) Television
 - (6) All low-voltage systems



2) **Reports/Calculations**

- a) Update basis of design report
- b) Lighting calculations
- c) Load calculations
- d) Short circuit calculations
- e) Voltage drop calculations
- f) Arc flash analysis

H Telecommunication

- All telecommunication documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Document 70% phase

1) **Drawings**

- a) Update site Plan
 - (1) Conduit routing for telecommunication distribution
 - (2) Details for site electrical work
- b) Floor Plans
 - (1) Layout of major components in all telecommunication equipment rooms
 - Sizes of major components
 - (2) Telephone connections
 - (3) Data connections
- c) Layouts of components where space is critical
- d) Laboratory planning module
- e) Updated riser diagram for telecommunication distribution conduit sizes

2) **Reports/Calculations**

- a) Updated basis of design report

I Specifications

- 1) General and supplemental conditions of contract
- 2) Completed project specifications
- 3) Request for justification of proprietary items

J Summary

- All reports and other documentation will:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in each discipline
 - Address all comments from the Construction Document 70% phase
- 1) Basis of Design report
 - 2) Cost estimates
 - 3) Specifications
 - 4) Schedules
 - 5) All design calculations
 - 6) Presentation
 - Finished rendering
 - Final model



7) Reviews

- Respond in writing to all 70% of Construction Document comments
- Submit all documents for review
- Attend review meetings as necessary to answer questions



Construction Document Phase Final Submission 100%

- 1) All drawings, reports and other documentation will:
 - Be 100% completed
 - Be coordinated with similar activities in each discipline
- 2) Final Basis of Design report for all disciplines
- 3) Final cost estimates
- 4) Final specifications
- 5) Drawings (sealed by registered architect, landscape architect, and professional engineers responsible for the design)
- 6) Facility number information for all new mechanical, plumbing and electrical equipment
- 7) Final schedules
- 8) Final design calculations (sealed by registered architect, landscape architect, and professional engineers responsible for the design)
- 9)
- 10) Presentation
- 11) Finished rendering
 - Final model
- 12) Reviews
 - Written responses to all 95% of Construction Document Phase comments
 - Submit all documents for review
 - Attend review meetings as necessary to answer questions
- 13) Final deliverable
 - Electronic copy of CADD Drawings
 - Electronic copy of specifications
- 14) Assistance to the government in preparation of:
 - Invitation for bids, or other solicitation method
 - Phasing or commissioning requirements



Architect-Engineer (A/E) Checklist of Services for Renovations

The following architectural and engineering checklist of services defines the comprehensive requirements required for projects at the NIH. It is meant as a guide for obtaining uniformity and coherence in the presentation of design documents. Each project officer will determine the submittal requirements based on the size and complexity of the project.

Schematic Design Phase Submission 15%

Schematic design phase submission at a minimum shall include the following requirements, as applicable to the project. All plan drawings shall indicate the north arrow, column lines and the scale of the drawing.

A Site/Landscape

- All site documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

1) Drawings

- a) Existing site plan
 - (10) Vicinity Plan
 - (11) Location of benchmark that will control all project elevations
 - (12) Orient north to be the top of the drawings in plan view
 - (13) Major landscaping
 - Major trees and trophy vegetation
 - Rock outcroppings
 - Bodies of water
 - Fences and barriers
 - (14) Site features and conditions
 - Existing contours especially at major grade changes
 - Visible flood zones or hazards
 - Property lines
 - Outline of building
 - Layout leases or easements
 - Setbacks
 - Preliminary geotech information
 - Proposed soil boring locations
 - Seismic conditions
 - Identifiable site constraints
 - Utility lines
 - Manholes, drains, utility access
 - Security features
 - Known historic or archaeological impact items
 - (15) Paved surfaces
 - Major streets
 - Vehicular routes
 - Curbs
 - Walks



- Pedestrian access routes
- Bicycle paths and parking
- Parking with handicapped locations
- Service areas
- Other paved areas
- (16) Existing structures
- (17) Existing buildings
- (18) Buildings/Structures/other items to be demolished or removed
- (19) Other elements
 - Nuisance land uses
 - Convenience nodes (mass transit, drop off area)
- b) Alternate schemes (indicate number)

2) Reports/Calculations

- b) Basis of Design report
 - (1) Utilities statement: companies, agencies, individual contacts
 - Electrical power
 - Mechanical
 - Site utilities
 - Fire protection
 - (2) Analysis/description of conceptual design
 - Design objectives
 - Environmental determinants
 - Site utilities
 - Land forms
 - Site lighting
 - Pest management
 - Irrigation system
 - Lawns and plantings based on programming
 - Grading
 - Physical site characteristics
 - Impact of building on site
 - Impact of site on building
 - (3) Concept plan for drainage and grading
 - (4) Demolition requirements
 - Pest management
 - (5) Alternative materials, systems, and equipment
 - Site utilities
 - Fire protection
 - Paving
 - Other

B Architectural

- All architectural documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

3) Drawings

- a) Floor Plans
 - (4) Demolition plan of each level



- Limit of demolition work
 - (5) Floor plan of each level – New work
 - Area names
 - Room names
 - Public areas
 - Service areas
 - Column lines
 - North Arrow
 - Capacity information (number of people, seating, etc.)
 - Departmental assignments
 - Floor elevations in coordination with civil
 - Light wells
 - Mechanical areas
 - Multilevel spaces
 - Partition locations
 - Planning grid or module
 - Preliminary equipment and description
 - Relative wall thickness
 - Security features
 - Skylights
 - Vertical transportation
 - (6) Fire protection and means of egress plan
 - List features required by code
 - List features required by NFPA Standard 101
 - Fire protection analysis
 - Fire areas
 - Fire walls
 - Smoke zones
 - Travel distances
 - Areas of refuge
 - (7) Proposed lab module plan
 - Basic layout
 - Relation to structure
- b) Interiors
- (2) Interior space allocation and utilization plan
 - Preliminary furniture and equipment plan
 - Indicate major materials and systems
 - Outline of finishes
- c) Exterior
- (2) Building exterior elevations
 - Indicate surface materials for all areas
 - Finish grades
 - Major floor elevations above and below grade
 - Exposed mechanical and electrical equipment
 - Sketch elevations or perspectives of buildings
 - Description of various design features



- d) Sections
 - (2) Building section (cross and longitudinal)
 - Relative thickness of floors
 - Relative thickness of walls
 - Major floor elevations
 - Finish grades
 - Major room names
 - Important site easements
 - Significant mechanical and electrical equipment
 - Relationship to site contours
 - Above-ceiling zoning analysis

4) Reports/Calculations

- a) Basis of Design report
- b) Architectural program
- c) Code analysis
 - (1) Define building type
 - (2) Define use category
- d) Area analysis
 - (1) Gross area tabulations
 - (2) Area tabulations for net and gross design areas by floor
 - (3) Space tabulation of net by room
 - (4) Review and verify area calculation guideline functions
 - (5) Comparison of areas and POR
- e) Alternative materials, systems, and equipment

C Structural

- All structural documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

3) Drawings

- b) Floor Plans
 - (3) Demolition plan of each level
 - Limit of demolition work
 - (4) Building outline – plan view with column lines related to architectural plan
 - (5) Indicate contemplated column footprint size
 - (6) Column lines
 - (7) North Arrow
- c) Sections
 - (8) Indicate contemplated beam configuration and depth.
 - (9) Indicate interstitial levels

4) Reports/Calculations

- a) Basis of Design report
 - (1) Systems outlines
 - (2) Development of conceptual design solutions in coordination with other disciplines



- (3) Design live loads and design wind loads stated.
- (4) Two possible structural systems
- b) Indicate status of obtaining geotechnical data for structural design
- c) Code analysis

D Mechanical

- All mechanical documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

3) Drawings

- a) Floor Plans
 - (7) Demolition plan of each level
 - Limit of demolition work
 - (8) New work plan of each level
 - (9) Locate new and existing mechanical HVAC equipment
 - (10) Lay out major components
 - (11) Coordinate locations and size of mechanical rooms with architectural plans
 - (12) Coordinate locations and size of vertical shafts with architectural plans
 - (13) Identify connections to major utilities
 - Steam
 - Chilled water
 - Natural gas
 - (14) Indicate intakes and exhausts relationships to:
 - loading docks
 - emergency generator
 - adjacent buildings
 - Wind direction

4) Reports/Calculations

- n) Basis of Design report
- o) Code analysis
- p) Design conditions
 - (7) Outside air temperature
 - (8) Inside air temperature
 - (9) Air changes
 - (10) Relative humidity
 - (11) Utility pressure
 - (12) Methodology for utility demands
- q) Requirements for HVAC services
- r) Special requirements
 - (6) Fume hood
 - (7) Biosafety cabinet
 - (8) Other local exhaust requirements
 - (9) Constant-temperature rooms
 - (10) Clean rooms
- s) Overall HVAC system concepts
- t) Equipment type and redundancies
- u) Energy recovery systems



- v) Preliminary equipment sizes based on building gross square feet area
- w) Preliminary energy budget
- x) Life-cycle cost analysis
- y) Analysis of conceptual design solutions
 - (5) Energy source
 - (6) Energy conservation
 - (7) Heating and ventilating
 - (8) Air conditioning
- z) Alternative materials, systems, and equipment

E Plumbing

- All plumbing documentation shall:
 - Be coordinated with similar activities in other disciplines
 - Address requirements in the program (POR) and the DRM

3) Drawings

- a) Floor Plans
 - (6) Demolition plan of each level
 - Limit of demolition work
 - (7) New work plan of each level
 - (8) Locate new and existing plumbing equipment
 - (9) Lay out major components
 - (10) System flow diagrams indicating the basic arrangement, general distribution concept, and key features of each plumbing/piping system
 - (11) Coordinate locations and size of vertical shafts with architectural plans
 - (12) Identify connections to major utilities
 - Steam
 - Chilled water
 - Natural gas
 - Water
 - Special water (deionized)
 - Sewer
 - Specialty gases (systems or tanks)
 - Vacuum
 - Compressed air

4) Reports/Calculations

- p) Basis of Design report
- q) Code analysis
- r) Basic system arrangement and zoning
- s) Primary features
- t) General sizing criteria (Flow and Pressure)
- u) Equipment type and redundancies
- v) Provisions to be included for future loading and flexibility
- w) Outline of proposed system materials
- x) Present conditions
- y) Requirements for plumbing services
- z) Special requirements i.e. booster systems



- aa) Water supply analysis/test results specific to building site
 - (3) Radioactive waste
 - (4) Waste recovery
- bb) Overall plumbing system concepts
- cc) Analysis of conceptual design solutions
- dd) Alternative materials, systems, and equipment

F Fire Protection

- All fire protection documentation shall:
 - Be coordinated with other disciplines
 - Address requirements in the program (POR) and the DRM

3) Drawings

- a) Floor Plans
 - (3) Demolition plan of each level
 - Limit of demolition work
 - (4) New work plan of each level
 - (5) Locate new and existing fire protection equipment or systems
 - (6) Lay out major components

4) Reports/Calculations

- q) Basis of Design report
- r) Code analysis
- s) Present conditions
- t) Requirements for fire protection
- u) Requirement for a fire pump and preliminary size
- v) Overall system concepts
- w) Analysis of conceptual design solutions
- x) Alternative materials, systems, and equipment
- y) Calculation of the required water supply
- z) Hydrostatic flow test
- aa) Preliminary sprinkler water supply calculations
- bb) Schematic plans with overall fire protection concepts
- cc) Special fire suppression systems
 - (4) Descriptions
 - (5) Locations
 - (6) Justification for use
- dd) Integrated fire alarm
- ee) Alternative materials, systems, and equipment
- ff) Protection analysis report for each alternative

G Electrical

- All electrical documentation shall:
 - Be coordinated with other disciplines
 - Address requirements in the program (POR) and the DRM

3) Drawings

- a) Site Plans
 - (1) Locate connection to medium voltage distribution



- (2) Locate emergency generators
- (3) Indicate demolition work
- b) Floor Plans
 - (5) Demolition plan of each level
 - Limit of demolition work
 - (6) New work plan of each level
 - (7) Locate electrical distribution equipment
 - (8) Coordinate locations and size of electrical rooms/closets with architectural plans
 - (9) Single line indication of major feeder routes
 - (10) Coordinate locations of vertical shafts with architectural plans
- b) Riser Diagram for normal and emergency power distribution

4) Reports/Calculations

- c) Basis of Design report
 - (1) Code analysis
 - (2) Description of primary service available
 - (3) Overall electrical system concept
 - (4) Analysis of conceptual design solutions
 - (5) Description of all proposed systems
 - (6) Description of emergency power system

H Telecommunications

- All telecommunication documentation will:
 - Be coordinated with other disciplines
 - Address requirements in the program (POR) and the DRM

3) Drawings

- a) Site Plans
 - (1) Locate connection to telecommunication distribution
 - (2) Indicate demolition work
- c) Floor Plans
 - (5) Demolition plan of each level
 - Limit of demolition work
 - (6) New work plan of each level
 - (7) Locate new and existing telecommunication equipment
 - (8) Coordinate locations and size of telecommunication rooms/closets with architectural plans
 - (9) Single line indication of major pathway routes
 - (10) Coordinate locations of vertical shafts with architectural plans
- b) Riser Diagram for telecommunication distribution

4) Reports/Calculations

- b) Basis of Design report
 - (1) Description of telecommunication service available
 - (2) Overall telecommunication system concept
 - (3) Analysis of conceptual design solutions
 - (4) Description of all proposed systems (Public address, audio visual system, distributed antenna system)



I Costs

- Cost analysis
 - Preliminary cost based on an square meter/ square foot or broad order of magnitude cost estimate



Design Development Phase Submission 35%

Design development phase submission at a minimum, shall include following requirements as applicable to the project in addition to the requirements from schematic design phase. All plan drawings shall indicate the north arrow, column lines and the scale of the drawing.

N Site/Landscape

- All Site documentation shall:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Schematic Design 15% phase

3) Drawings

b) Plans

- (5) Vicinity Plan updated as required
- (6) Existing Site Plan updated as required
 - Facilities that may have interruption of any utility
- (7) Proposed site plan
 - Existing site information
 - Building footprint
 - Spot elevations at building
 - Proposed contours
 - Key design elements
 - Major landscaping
 - Utility lines
 - Concept plan for drainage and grading
 - Vehicular access routes
 - Parking Area
 - Loading dock location and proposed access route
 - Coordinate location of loading docks such that they are not near air intakes.
 - Proposed pedestrian access routes
 - Proposed service areas
 - Construction marshalling information
 - Location for excavated material
 - Site access routes for marshalling project supplies
 - Staging areas
 - Construction office trailer locations
 - Utility hookups, construction trailer
 - Limits of work
 - Indication of future surrounding improvements
- (8) Demolition plan
 - Preliminary demolition and proposed removal

4) Reports/Calculations

b) Basis of Design report

- (2) Establish final scope
 - Relationships
 - Form
 - Size



- Appearance
- Utilities statement: companies, agencies, individual contacts
- Analysis/description of conceptual design solutions
- Site safety plan
 - Fire protection
 - Hazardous material handling
- Storm water management report
- Erosion/sediment control report
- Concept plan for drainage and grading
- Demolition requirements
- Alternative materials, systems, and equipment

O Architectural

- All architectural documentation will:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Schematic Design 15% phase

3) Drawings

- f) Plans
 - (6) Demolition plan of each level
 - (7) Floor plans of each level
 - Identification of existing and new construction
 - Double line plans with precise wall thickness
 - All programmed rooms
 - Equipment rooms
 - Signal rooms
 - Electrical rooms
 - Telephone closets
 - Mechanical rooms
 - Shafts
 - Circulation corridors
 - Stairs
 - Ladders
 - Elevators
 - Number
 - Type
 - Size
 - Automatic conveyances
 - Room names
 - Department or area names
 - Planning grid
 - Structural grid
 - Floor elevations
 - Equipment
 - Furnishings and other space-defining elements
 - Multilevel spaces
 - Light wells
 - Significant mechanical equipment



- Significant electrical equipment
 - Capacity information (number of people, seating, etc.)
 - Overall dimensions
 - Plan and layout of typical or repetitive spaces
 - Fire protection
 - Fire walls
 - Smoke walls
 - Smoke zones
- (8) Roof plan
- Major roof elements
 - Skylights
 - Hatches
 - Major mechanical equipment
 - Major electrical equipment
 - Elevator machine rooms
- (9) Reflected ceiling plan
- Areas of special interest
 - Major components (10)
- Fire protection egress plan
- (11) Proposed lab module
- g) Interiors
- (2) Interior space allocation and utilization plan
- Establish the final scope relative to interior construction
 - Finish Schedule
 - Finishes
 - Colors
 - Artwork
 - Special interior design features
 - Furniture and Equipment
 - Furnishings
 - Equipment selections
 - Materials
- h) Interior Elevations
- (2) Building interior elevations
- Typical spaces
 - Major spaces
 - Areas of special interest
 - Areas of special complexity
- i) Exterior Elevations
- (2) Building exterior elevations
- Indicate all surface materials for all areas
- j) Sections and Details
- (4) Building sections
- Set floor-to-floor dimensions
 - Establish floor elevations



- Set interstitial space dimensions
 - (5) Wall sections
 - Typical wall sections
 - At window
 - At solid wall
 - At parapets and roofs
 - At finished grades and footings
 - (6) Construction sections
 - Typical stairways
 - Typical elevator shaft and machine room
 - Utility coordination cross-sections
- 4) Reports/Calculations**
- m) Basis of Design report
 - n) Area analysis
 - o) Alternative materials, systems, and equipment
 - p) Outline of program
 - q) Design description narrative
 - r) Design concepts and objectives
 - s) Tabulation of net and gross areas
 - t) Growth potential
 - u) Alternate schemes
 - v) Building envelope analysis
 - (5) Recommendations for overall building envelope
 - (6) Review of thermal vapor flow and moisture
 - (7) Recommendation for vapor barriers
 - (8) Recommendation for vapor isolation
 - w) Asbestos report
 - x) Vertical transportation recommendations
 - (3) Elevators
 - Number
 - Type
 - Size
 - Weight capacity
 - Speed
 - Arrangement
 - (4) Other requirements

P Structural

- All reports and other documentation will:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in each discipline
 - Address all comments from the Schematic Design 15% phase

3) Drawings

- a) Floor plans
 - (4) Demolition Plan
 - (5) Structural floor plans, each level coordinated with architectural development
 - Indicate soil bearing capacities



- Indicate potential structural framing system that coordinates with architectural and suitable for vibration transmission limitation required by scientific program
- Fixed column reference lines
- Basic structural system and dimensions
- Bearing walls
- Major bracing locations
- Locate typical bay - relate to architectural
- Preliminary sizing of major components
- Columns
- All framing members identified
 - Girders
 - Beams
 - Joists
- Indicate structural framing systems
- (6) Structural foundation plans
 - Footings
 - Foundation walls
 - Retaining walls
 - Grade beams
- (7) Details
 - Foundation details
 - Typical framing details
 - Subdrainage
 - Waterproofing
 - Dampproofing

4) Reports/Calculations

- i) Basis of Design report
- (2) Existing conditions
 - Underlying soil-bearing capacities
- j) Calculations for support of hydronic and hydraulic piping
- k) Vibration requirements and analysis
- l) Summary of structural systems requirements
- m) Fire-resistive construction requirements
- n) Development of alternatives
 - (6) Foundation design criteria
 - (7) Coordination with piping systems that require support
 - (8) Laboratory vibration analysis
 - (9) Final structural design criteria
 - (10) Comparative cost analysis of at least two structural systems
- o) Critical coordination clearances
- p) Column schedules

Q Mechanical

- All Mechanical documentation will:
 - Be a minimum of 35% completed
 - Be coordinated with similar activities in other disciplines
 - Address and provide responses to all comments from Schematic Design 15% phase



3) Drawings

- d) Floor Plans
 - (3) Demolition plan
 - (4) Locate associated existing mechanical equipment
 - (5) Indicate connection to major utilities
 - (6) Block layouts of mechanical spaces
 - Layout of major components in equipment rooms
 - Approximate equipment sizes and capacities
 - Required space for equipment
 - Required chases and clearances
 - Acoustical and vibration control
 - Visual impacts
 - Single line presentation of ductwork systems
 - Single line HVAC piping mains
 - BAS controls
 - Energy conservation measures
 - Shafts
 - (7) Laboratory planning modules
- e) System diagrams
- f) Control diagrams

4) Reports/Calculations

- b) Basis of Design report
 - (1) Plant analysis
 - (2) Design intent and scope of systems
 - (3) Systems outline for proposed project
 - Heating source
 - Refrigeration source
 - HVAC systems
 - Energy conservation
 - Redundancies
 - (4) Indoor design conditions U-value calculations
 - (5) Outdoor design conditions U-value calculations
 - (6) Theoretical water vapor migration
 - (7) Dew point and condensation potential
- k) Room by room load calculations for space cooling and heating
- l) Ductwork sizing in plenums and shafts
- m) Energy analysis for at least three HVAC systems
- n) Building energy model
- o) Life cycle cost analysis
- p) Energy recovery analysis
 - (1) Energy conservation analysis
- q) Connected load requirements
- r) Wind analysis and laboratory exhaust plume study
- s) Energy study
 - (3) Alternate methods of energy conservation
 - Associated advantages
 - Associated disadvantages
 - Payback calculations
 - Utility company rebates



- (4) Alternate methods of energy recovery
 - Associated advantages
 - Associated disadvantages
 - Payback calculations
 - Utility company rebates

R Plumbing

- All Plumbing documentation will:
 - Be a minimum of 35% completed
 - Be coordinated with similar activities in other disciplines
 - Address and provide responses to all comments from Schematic Design 15% phase

1) Drawings

- c) Floor Plans
 - (14) Demolition Plans
 - (15) Locate associated existing mechanical equipment
 - (16) Indicate connection to major utilities
 - (17) Layout of major components
 - (18) Plumbing fixtures
 - (19) Distribution layouts
 - (20) Booster system requirements
 - (21) Utilities
 - (22) Piped gas systems
 - (23) Hot water
 - (24) Water softening
 - (25) Plumbing piping mains
 - (26) Drainage piping mains (Waste and storm)
 - (27) Shafts
 - (28) Plumbing specialties (High Purity Water, Medical gases)
 - (29) Pipe materials
- d) Plumbing riser diagrams

2) Reports/Calculations

- e) Basis of Design report
- f) Coordination with structural for support of piping
- g) Provide cut-sheets for plumbing fixtures and equipment, with primary features/ anticipated design options identified
- h) Plumbing calculations
 - (3) Pump sizing
 - (4) Tank sizing

S Fire Protection

- All Fire protection documentation shall:
 - Be a minimum of 35% completed
 - Be coordinated with similar activities in other disciplines
 - Address and provide responses to all comments from Schematic Design 15% phase



1) Drawings

- b) Floor Plans
 - (1) Demolition plans
 - (2) Locate new and existing equipment
 - (3) New fire protection mains
 - (4) Booster system requirements
 - (5) Fire pump requirements
 - (6) Preliminary equipment layouts
 - (7) Required space for equipment
 - (8) Block layouts for fire protection system

2) Reports/Calculations

- c) Basis of Design report
 - (6) Strategy for meeting life safety codes
 - (7) List any upgrade requirements to achieve fire protection policy
 - (8) Sprinkler calculations
 - (9) Fire Pump calculations
 - (10) Fire alarm requirements
- d) Approximate sizes and capacities of major components

T Electrical

- All Electrical documentation will:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Schematic Design 15% phase

1) Drawings

- g) Site Plan
 - (1) Feeder/conduit routing for medium voltage distribution
 - (2) Location of emergency generators and feeder/conduit routing
 - (3) Preliminary details for site electrical work
 - (4) Indication of demolition work
- h) Floor Plans
 - (1) Demolition plans
 - (2) Layout of major components in all electrical equipment rooms
 - (a) Preliminary sizes of major components
 - (b) UPS
 - (c) High-voltage systems
 - (d) Primary transformers
 - (e) Emergency generator
 - (3) Identify special features
 - (a) Underfloor raceways
 - (b) Floor outlets
 - (c) Occupancy sensors
- i) Tentative layouts of components where space is critical
- j) Lighting plans
 - (1) Location of lighting fixtures
 - (2) Type of lighting fixtures



- k) Laboratory planning module
- l) Updated riser diagram for normal and emergency power distribution with feeder, conduit and transformer sizes

2) Reports/Calculations

- f) Basis of Design report
 - (1) Electrical plant analysis
 - (2) Criteria for lighting
 - (3) Criteria for electrical system
 - (4) Building automation concept
 - (5) Systems outline and types of systems
- g) Overall building connected load requirements
 - (1) Normal power
 - (2) Emergency power
- h) Electrical service sizing calculations
- i) Preliminary sizing for Transformers, generator, UPS etc.
- j) Agreement from each utility company or agency on design development drawings

U Telecommunication

- All telecommunication documentation will:
 - Be a minimum of 35% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Schematic Design 15% phase

1) Drawings

- f) Site Plan
 - (1) Conduit routing for telecommunication distribution
 - (2) Preliminary details for site electrical work
 - (3) Indication of demolition work
- g) Floor Plans
 - (1) Demolition plans
 - (2) Layout of major components in all telecommunication equipment rooms
 - Preliminary sizes of major components
 - (3) Telephone connections
 - (4) Data connections
- h) Tentative layouts of components where space is critical
- i) Laboratory planning module
- j) Updated riser diagram for telecommunication distribution conduit sizes

2) Reports/Calculations

- b) Updated basis of design report

V Specifications

- 5) General and supplemental conditions of contract
- 6) Outline of specifications or itemized list with criteria and quality standards
 - d) Significant architectural materials
 - e) Engineering systems
 - f) Equipment



- 7) Outline of project specifications
- 8) Request for justification of proprietary items

W Costs

- 2) Cost analysis
 - c) Systems Cost estimate
 - (3) Approximate quantities
 - (4) Identification of potential items for value engineering
 - d) Budget outline
 - (7) Construction cost
 - (8) Owner's cost
 - (9) Project cost
 - (10) Total Cost
 - (11) Equipment included in budget
 - (12) Equipment by owner

X Schedules

- 3) Construction schedule and phasing in bar chart form
- 4) Project schedule diagram with phases of development

Y Presentation

- 5) Study sketches
- 6) Preliminary perspectives
- 7) Rendered perspective
- 8) Models
 - d) Study models
 - e) CADD models
 - f) Presentation model at scale

Z Review

- Ensure compliance with the NIH design requirements manual (DRM)
- Review and approve general architectural materials
- Respond in writing to all schematic design materials
- Submit all documents for review
- Attend review meetings as necessary to answer questions



Construction Document Phase Submission 70%

70 % Construction document phase submission at a minimum shall include following requirements as applicable to the project in addition to the requirements from design development design phase. All plan drawings shall indicate the north arrow, column lines and the scale of the drawing.

O Site/Landscape

- All Site documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

3) Drawings

- c) Floor Plans
 - (17) Vicinity plan updated as required
 - (18) Existing site plan updated as required
 - (19) Proposed site plan
 - (a) Existing site information
 - (b) Dimension major site features
 - (c) Building footprint
 - Grade elevations at each building corner
 - Grade elevations at entrances, and critical areas
 - First floor elevations
 - Overall dimensions
 - (d) Key design elements
 - (e) Major landscaping
 - (f) Utility lines
 - (g) Concept plan for drainage and grading
 - (h) Vehicular access routes
 - Profile and alignment of all new roads
 - (i) Pedestrian access routes
 - (j) Parking
 - All striping
 - All unique spaces
 - Dimensions
 - (k) Walks
 - Dimensions
 - Paving joints
 - (l) Curbs
 - Dimensions
 - (m) Service areas
 - Dimensions
 - (20) Staking plan
 - (21) Proposed contours
 - (a) Grading at all altered areas
 - (22) Construction marshalling information
 - (a) Locate and outline
 - (b) Locate temporary utility hookup
 - (23) Indications of phasing
 - (24) Limits of work



- (25) Indication of future surrounding improvements
- (26) Indication of artwork
- (27) Location of signage
 - (a) Location(s) of construction sign
- (28) Security measures
- (29) Planting plan
 - (a) Location of all trees, shrubs, and lawns
 - (b) Complete planting list
 - (c) Planting details
- (30) Preliminary landscape details
- (31) Demolition plan
- (32) Utility plot plan
 - (a) Existing utilities and their connections
 - Proposed trunk sewers
 - Water distribution loop
 - Fire water distribution loop
 - Gas distribution mains
 - Location arrangement of water treatment equipment
- d) Details

4) Reports/Calculations

- b) Site construction document design report
 - (12) Establishment of final scope
 - (13) Utilities statement: companies, agencies, individual contacts
 - (14) Analysis/description of conceptual design solutions
 - (15) Coordination with NIH Utilities Master Plan
 - (c) Verify location, sizing, and timing of all required interfaces
 - (d) Provide schedule confirmation of any utility work
 - (16) Site safety plan
 - (17) Stormwater management report
 - (18) Erosion/sediment control report
 - (19) Review planting plan against master plan
 - (20) Concept plan for drainage and grading
 - (21) Demolition requirements

P Architectural

- All Architectural documentation will:
 - Be a minimum of 70% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

3) Drawings

- q) Entire project site on one sheet for reference
- r) General notes
- s) Reference and coordination symbols
- t) Enlarged plan bubbles
 - (5) Section indications
 - (6) Exterior elevation keys
 - (7) Interior elevation keys
 - (8) Wall type indications



- u) All dimensions
 - (4) Overall
 - (5) Column grid
 - (6) Locating dimensions
 - Partitions
 - Openings
 - Equipment
- v) Demolition plan of each level
- w) Floor Plans of each level
 - (12) All room names
 - (13) Room numbers
 - (14) Accurate door size, and swings
 - (15) Safety and protective elements
 - (16) Wall-mounted items
 - (17) Shelving and special features
 - (18) Fire extinguishers
 - Fire hoses
 - Lead linings
 - Radio frequency shielding
 - (19) Fixed equipment
 - (20) Portable equipment
 - (21) Plumbing fixtures placed and identified
 - Sinks
 - Showers
 - Tubs
 - Toilets
 - Toilet stalls
 - Eyewash
 - Safety showers
 - Any item requiring plumbing
 - (22) Construction dimension
- x) Roof plan
 - (7) Materials
 - (8) Elevations
 - (9) Slopes
 - (10) Drains
 - (11) Other penetrations
 - (12) Window-washing system
 - Davits
 - Bollards
 - Rails
 - Equipment
- y) Reflected ceiling plans
 - (9) Suspended ceiling grids
 - (10) Lighting fixtures
 - (11) Diffusers
 - (12) Registers
 - (13) Sprinkler heads
 - (14) Ceiling-mounted equipment
 - (15) Exit signs



- (16) Equipment
- z) Enlarged plans
 - (3) Special spaces
 - (4) Stairs
- aa) Fire protection egress plans
- bb) Interior elevations
- cc) Interior wall sections
- dd) Coordination utility cross-section at a minimum 12.5 mm scale
 - (5) Corridors
 - (6) Mechanical rooms
 - (7) Utility placements
 - (8) Access areas / Area ways
- ee) Utility discipline zones
 - (3) Coordination with existing structural
 - (4) Coordination with new structural
- ff) Vertical circulation
 - (2) Dimensional locations
 - Elevator cars
 - Elevator entrances
 - Counterweights
 - Hoistway vents
 - Trap doors for lowering overhead
- gg) Schedules
 - (3) Door schedules
 - (4) Finish schedules

4) Reports/Calculations

- a) Updated basis of design
- b) Vertical transportation
 - (4) Required capacity
 - (5) Speed and control system
 - (6) Physical space requirements
 - Hoistway enclosure
 - Pits
 - Cabs
 - Machine rooms
 - Entrances

Q Structural

- All Structural documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

3) Drawings

- j) Demolition plan of each level
- k) Structural floor plans for each level and roof
 - (10) Final column reference lines
 - (11) Structural system dimensions
 - (12) Size bearing walls
 - (13) Major bracing locations



- Bracing type
- Dimensions
- (14) Indication of typical bay
- (15) Sizing of major components
- (16) Column sizes
- (17) Structural Load information
 - Horizontal (wind and seismic)
 - Live loads
 - Dead loads
- (18) All framing members sized
 - Girders
 - Beams
 - Joists
 - Open web joists
 - Concrete joists
 - Waffle slab
 - Space frames
 - Lintels
 - Type, extent, and direction of framing
 - Reference structural items to schedule
 - Slabs
- l) Structural foundation plans
 - (5) Size of caissons
 - (6) Size of footings
 - (7) Size of foundation walls
 - (8) Size of grade beams
- m) Structural notes
- n) Critical coordination clearances
- o) Sections and details
- p) Column and beam schedules
- q) Details
 - (2) Reinforcing
 - Size
 - Spacing
 - Elevation of reinforcing
 - Type
 - Depths
- r) Dimensioned foundation details



- (14) Large openings
- (15) Nonstandard beam to column framing
- (16) Concrete stairs
- (17) Exterior wall construction
- (18) Window wash supports
- (19) Anchors and ties
- (20) Elevator shaft details
- (21) Vibration isolation details
- (22) Large mechanical equipment and anchorage
- (23) Typical framing details
- (24) Standard structural steel connections
- (25) Sump pump systems
- (26) Reference to appropriate schedules
- s) Correlation with architectural and mechanical features
 - (1) Indicate major mechanical/electrical equipment removal/replacement routes

4) Reports/Calculations

- e) Updated basis of design
- f) Structural report
 - Final structural system
 - Design codes
 - Identification of design stresses
 - Allowable foundation bearing capacity
 - Compaction requirements
- g) Special condition
 - Shoring/underpinning of adjacent structures

R Mechanical

- All mechanical documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

3) Drawings

- e) Demolition Plans
- f) Floor Plans
 - (12) Legend
 - (13) Mechanical Plan showing ducts
 - Double line drawing of ducts >150 mm (6 in.)
 - Single line drawing of ducts ≤150 mm (6 in.)
 - (14) Indicate size of ducts
 - (15) Indicate insulation/moisture prevention
 - (16) Fire dampers
 - (17) Smoke dampers
 - (18) Balancing dampers
 - (19) Location of supply diffusers, return and exhaust grilles coordinated with reflected ceiling plan
 - (20) Location of all equipment
 - (21) Indicate smoke detectors
 - Within ducts
 - In air-handling units



- (22) Special or complex ductwork
- g) Sections
 - (2) Drawing sections
 - Through equipment rooms
 - Typical ductwork
- h) Details
 - (3) Details of unique conditions
 - (4) Control diagrams with legend and operating description
 - Air conditioning systems
 - Exhaust systems
 - Refrigeration
 - Process systems
- i) Schedules
 - (2) Equipment schedules
 - Air conditioning
 - Ventilation units
 - Refrigeration elements
 - Cooling towers
 - Fans
 - Pumps
 - Specialty systems

4) Reports/Calculations

- b) Design reports
 - (6) Sizing calculations for ducts
 - (7) Combustion air supply calculations
 - Boiler plants
 - Ventilation system
 - Heating system
 - (8) Calculations for fan pressures and pump heads
 - (9) Calculations for required sound attenuation of major fans
 - (10) Calculations for process systems

S Plumbing

3) Drawings

- g) Demolition plans
- h) Plumbing system plans
 - (8) Create legends
 - (9) Show location and size of equipment
 - Pumps
 - Tanks (10)
 - Locate piping
 - Double line drawing and piping >150 mm
 - Single line drawing and piping ≤150 mm
 - (11) Indicate size of pipes
 - (12) Indicate insulation/moisture prevention
 - (13) Indicate piping system
 - Chilled water
 - Condenser water



- Hot water
 - Steam piping (including low quantities)
 - Waste
 - Storm
 - Sanitary
 - Vent
 - Oxygen
 - Nitrous oxide
 - Medical compressed air
 - Shop compressed air
 - Fuel gas
 - Vacuum outlets
 - High purity water
 - Animal watering system
 - Additional piping used for the project
 - (14) Walk-in coolers, freezers, cold rooms
 - Refrigeration systems
 - Schematic piping
 - Wiring diagrams
 - Automatic controls
 - i) Plot plan for outside of building underground distribution
 - (2) Blowers
 - j) Riser diagrams
 - k) Details
 - (2) Detailing
 - Unique conditions
 - Vibration isolation engineering
 - l) One line flow and control diagrams
 - (6) Chilled water
 - (7) Condenser water
 - (8) Hot water
 - (9) Steam piping (including low quantities)
 - (10) Air conditioning steam
 - m) Schedules
- 4) **Reports/Calculations**
- b) Design report
 - (4) Equipment selections based on manufacturer's catalog data
 - (5) Sizing calculations
 - Piping mains and principal branches
 - Boiler
 - Condensate tank
 - Feedwater heater capacities
 - Feedwater storage capacity
 - High purity water capacity
 - Animal watering system capacity
 - (6) Capacity, discharge pressure, and net positive suction pressure
 - Condensate transfer pumps
 - Boiler feedwater pumps
 - Pressure-reducing valves



- Safety valves
- Oil tanks and pumps
- Gas systems including medical gas system
- Blow-down systems

T Fire Protection

3) Drawings

- c) Demolition plans
- d) Plan drawings
 - (7) Create legends
 - (8) Indicate existing systems
 - (9) Show location and size of equipment
 - (10) Locate piping
 - (11) Indicate size of pipes
 - (12) Equipment layouts
- e) Ceiling plan drawings
 - (2) Sprinkler locations

4) Reports/Calculations

- b) Fire Protection Design Report
 - Update Basis of Design

U Electrical and Communications

- All Electrical documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

3) Drawings

- h) Updated site plan with demolition work and indicating location of:
 - (1) Feeder/conduit routing for medium voltage distribution
 - (2) Location of emergency generators and feeder/conduit routing
 - (3) Transformer vaults
 - (4) Pad mount transformer location
 - (5) Auxiliary power system connection
 - (6) Engine generator sets
 - (7) Unit substations
 - (8) Other major equipment
- i) Demolition plans
- j) Updated floor plans with
 - (9) Room numbers
 - (10) Room titles
 - (11) Area functions
 - (12) Lighting fixtures indicated with type, switching and circuiting information
 - (13) Outlets for power with circuiting information
 - (14) Connections for mechanical and plumbing equipment with disconnect and circuiting information
 - (15) Layout of major components in all electrical equipment rooms
 - (16) Layouts for special systems



- k) One line riser diagram of electrical distribution
- l) One line riser diagram of auxiliary power distribution
- m) Panel schedules
- n) Light fixture schedules
- o) Riser diagrams for:
 - (1) Grounding
 - (2) Fire alarm
 - (3) Telephone
 - (4) Paging
 - (5) Television
 - (6) All low-voltage systems

4) **Reports/Calculations**

- g) Update basis of design report
- h) Lighting calculations
- i) Load calculations
- j) Short circuit calculations
- k) Voltage drop calculations
- l) Arc flash analysis

V Telecommunication

- All telecommunication documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Design Development 35% phase

1) **Drawings**

- f) Update site Plan
 - (1) Conduit routing for telecommunication distribution
 - (2) Details for site electrical work
 - (3) Demolition work
- g) Demolition plans
- h) Floor Plans
 - (1) Layout of major components in all telecommunication equipment rooms
 - Sizes of major components
 - (2) Telephone connections
 - (3) Data connections
- i) Layouts of components where space is critical
- j) Laboratory planning module
- k) Updated riser diagram for telecommunication distribution conduit sizes

2) **Reports/Calculations**

- b) Updated basis of design report

W Specifications

- 4) General and supplemental conditions of contract
- 5) Edited project specifications
- 6) Request for justification of proprietary items



X Summary

- All reports and other documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in each discipline
 - Address all comments from the Design Development 35% phase
- 3) Review energy study
- 4) Revised Basis of Design report

Y Cost

- 4) Quantity Takeoff Cost Estimate
 - f) Revision of cost estimate
 - g) Revision of cost outline
 - h) Quantity takeoff
 - i) Labor cost by trade and specifications section
 - j) Material cost by trade and specifications section
- 5) Revised specifications
- 6) Equipment
 - f) Use of owner-furnished material/equipment
 - g) Special manufacturing requirements
 - h) Delivery requirements
 - i) Storage requirements
 - j) Manufacturer's plans and details for installation

Z Schedule

- 4) Construction schedule
 - c) Bar chart
 - d) Narrative report
 - Long lead items
 - Delivery times
 - Scheduling instructions
 - Phasing instructions
 - Optimum construction efficiency
- 5) Design schedule
- 6) Occupancy schedule

AA Presentation

- 3) Revised renderings
- 4) Revised models

BB Review

- 6) Review and approval of architectural materials
- 7) Review and approval of architectural material details
 - l) Openings
 - m) Windows
 - n) Doors
 - o) Room Numbering
 - p) Penetrations
 - q) Walls
 - r) Copings



- s) Roofing system
- t) Water proofing
- u) Caulking
- v) Flashing
- 8) Respond in writing to all comments from Design Development 35% phase
- 9) Submit all documents for review
- 10) Attend review meetings as necessary to answer questions



Construction Document Phase Submission 95%

95 % Construction document phase submission at a minimum shall include following requirements as applicable to the project in addition to the requirements from design development design phase. All plan drawings shall indicate the north arrow, column lines and the scale of the drawing.

K Site/Landscape

- All Site documentation will:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Document 70% phase

3) Drawings

b) Floor Plans

- (1) Updated Vicinity Plan
- (2) Updated Existing Site Plan
- (3) Proposed Site Plan
 - Erosion control measures
 - Existing site information
 - Dimension major site features
 - Building footprint
 - Key design elements
 - Major landscaping
 - Utility lines
 - Concept plan for drainage and grading
 - Vehicular access routes
 - Pedestrian access routes
 - Parking
 - Walks
 - Curbs
 - Service areas
 - Staking plan
 - Proposed contours
 - Construction marshalling information
 - Indications of phasing
 - Limits of work
 - Indication of future surrounding improvements
 - Indicate artwork
 - Locate signage
 - Security measures
- (4) Planting plan
 - Location of all trees, shrubs, and lawns
 - Complete planting list
 - Planting details
- (5) Landscape details
- (6) Demolition plan
- (7) Utility plot plan
 - Existing utilities and their connections
 - Proposed trunk sewers
 - Water distribution loop



- Fire water distribution loop
 - Gas distribution mains
 - Location arrangement of water treatment equipment
- (8) Alternate schemes

4) Reports/Calculations

- b) Site Construction Document Design Report
- Update Basis of Design

L Architectural

- All Architectural documentation will:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Document 70% phase

3) Drawings

- s) Entire project site on one sheet for reference
- t) Demolition plan of each level
- u) Floor plans of each level
 - (1) Indication of art work
 - (2) Signage location
 - (3) Interior planting
- v) Roof plan
- w) Reflected ceiling plans
- x) Floor covering plan
 - (4) Material type
 - (5) Graphics
 - (6) Patterns
- y) Enlarged plans
- z) Fire protection egress plan
- aa) Lab modules
- bb) Equipment Plan
- cc) Interior space allocation and utilization plan
- dd) Interior elevations
 - (2) Signage location
- ee) Exterior elevations
- ff) Signage location
- gg) Building sections
- hh) Construction details
 - (2) Any unique condition not previously covered
- ii) Installation plans
 - (3) Furniture
 - (4) Equipment
- jj) List of new and reused items
 - (4) Number
 - (5) Cross-referenced to details
 - (6) Cross-referenced to specifications
- kk) Updated schedules
 - (4) Door schedules
 - (5) Finish schedules



(6) Equipment schedules

4) Reports/Calculations

- b) Architectural Design report
 - Update Basis of Design

M Structural

- All Structural documentation will:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Document 70% phase

3) Drawings

- g) Demolition plan of each level
- h) Structural floor plans for each level and roof
 - (6) Column reference lines
 - (7) Final dimensions
 - (8) All bracing
 - (9) Sizing of all components
 - (10) Special provisions for installation or removal of equipment
- i) Structural foundation plans
 - (15) Locate grades
 - (16) Locate cleanout manholes
 - (17) Locate trenches
 - (18) Locate area wells
 - (19) Locate and dimension all elevator pits
 - (20) Locate elevation of bottom of footing
 - (21) Indicate concrete member
 - Dimensions
 - Size
 - Spacing
 - Reinforcing
 - (22) Locate finished and unfinished spaces
 - (23) Pipe sleeves through footings
 - (24) Pipe sleeves through below grade walls
 - (25) Caissons
 - Bottom elevation
 - Bell size
 - (26) Elevations
 - (27) Top of slab elevations
 - (28) Top of steel elevations
- j) Details
 - (5) Sections and details
 - (6) Critical coordination clearances
 - (7) Details
 - (8) Clarification of lengths or arrangement of reinforcement
 - Any condition not previously addressed
- k) Schedules
 - (3) Schedule for reinforcing bar



- (4) Column schedule
- l) Structural notes
- m) Correlation with architectural and mechanical features

4) Reports/Calculations

- b) Structural report
 - (6) Completed computations
 - (7) Special condition
 - (8) General note
 - (9) Boring logs
 - (10) Girder diagrams
 - Live loads
 - Uniform loads
 - Concentrated loads
 - Reactions
 - Girder material
 - Stresses

N Mechanical

- All mechanical documentation will:
 - Be a minimum of 95% complete
 - Be coordinated with similar activities in other disciplines
 - Address all remarks from Design Development 70% phase

3) Drawings

- e) Demolition plans
- f) Completed floor Plans
 - (11) Legend
 - (12) Mechanical Plan showing ducts
 - Double line drawing of ducts >150 mm (6 in.)
 - Single line drawing of ducts ≤150 mm (6 in.)
 - (13) Indicate size of ducts
 - (14) Indicate insulation/moisture prevention
 - (15) Fire dampers
 - (16) Smoke dampers
 - (17) Balancing dampers
 - (18) Location of all equipment
 - (19) Indicate smoke detectors
 - Within ducts
 - In air-handling units
 - (20) Special or complex ductwork
- g) Completed Sections
 - (2) Drawing sections
 - Through equipment rooms
 - Typical ductwork
- h) Completed Details
 - (3) Details of unique conditions
 - (4) Control diagrams with legend and operating description
 - Air conditioning systems
 - Exhaust systems
 - Refrigeration systems



- i) Completed Schedules
 - (2) Equipment schedules with facility numbers and labeling requirements.
 - Air conditioning
 - Ventilation units
 - Refrigeration elements
 - Cooling towers
 - Fans
 - Pumps

4) Reports/Calculations

- c) Completed basis of design report
- d) Completed Design reports
 - (5) Sizing calculations for ducts
 - (6) Combustion air supply calculations
 - Boiler plants
 - Ventilation system
 - Heating system
 - (7) Calculations for fan pressures and pump heads
 - (8) Calculations for required sound attenuation of major fans

O Plumbing

- All plumbing documentation will:
 - Be a minimum of 95% complete
 - Be coordinated with similar activities in other disciplines
 - Address all remarks from Construction Documentation 70% phase

3) Drawings

- g) Demolition plans
- h) Completed plumbing system plan drawings
 - (8) Legends
 - (9) Show location and size of equipment
 - Pumps
 - Tanks (10)
 - Locate piping
 - Double line drawing and piping >150 mm
 - Single line drawing and piping ≤150 mm
 - (11) Indicate size of pipes
 - (12) Indicate insulation/moisture prevention
 - (13) Indicate piping system
 - Chilled water
 - Condenser water
 - Hot water
 - Steam piping (including low quantities)
 - Waste
 - Sanitary
 - Vent
 - Oxygen
 - Nitrous oxide
 - Medical compressed air
 - Shop compressed air



- Fuel gas
- Vacuum outlets
- Additional piping used for the project
- (14) Walk-in coolers, freezers, cold rooms
 - Refrigeration systems
 - Schematic piping
 - Wiring diagrams
 - Automatic controls
- i) Plot plan for outside of building underground distribution
 - (2) Blowers
- j) Riser diagrams
- k) Details
 - (2) Detailing
 - Unique conditions
 - Vibration isolation
- l) One line flow and control diagrams
 - (6) Chilled water
 - (7) Condenser water
 - (8) Hot water
 - (9) Steam piping (including low quantities)
 - (10) Air conditioning steam
- m) Completed schedules
 - (2) Equipment schedules with facility numbers and labeling requirements.
 - Water heaters
 - Pumps
- 4) **Reports/Calculations**
 - b) Design report
 - (4) Equipment selections based on manufacturer's catalog data
 - (5) Sizing calculations
 - Piping mains and principal branches
 - Boiler
 - Condensate tank
 - Feedwater heater capacities
 - Feedwater storage capacity
 - (6) Capacity, discharge pressure, and net positive suction pressure
 - Condensate transfer pumps
 - Boiler feedwater pumps
 - Pressure-reducing valves
 - Safety valves
 - Oil tanks and pumps
 - Gas systems
 - Blow-down systems

P Fire Protection

- All fire protection documentation will:
 - Be a minimum of 95% complete
 - Be coordinated with similar activities in other disciplines
 - Address all remarks from Construction Documentation 70% phase



3) **Drawings**

- c) Demolition plans
- d) Plan drawings
 - (7) Create legends
 - (8) Indicate existing systems
 - (9) Show location and size of equipment
 - (10) Locate piping
 - (11) Indicate size of pipes
 - (12) Equipment layouts
- e) Ceiling plan drawings
 - (2) Sprinkler locations

4) **Reports/Calculations**

- b) Fire Protection Design Report
 - Update Basis of Design

Q Electrical and Communications

- All Electrical documentation shall:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Documentation 70% phase

3) **Drawings**

- h) Completed site plan with demolition work and indicating location of:
 - (1) Feeder/conduit routing for medium voltage distribution
 - (2) Location of emergency generators and feeder/conduit routing
 - (3) Transformer vaults
 - (4) Pad mount transformer location
 - (5) Auxiliary power system connection
 - (6) Engine generator sets
 - (7) Unit substations
 - (8) Other major equipment
- i) Demolition plans
- j) Completed floor plans with
 - (9) Room numbers
 - (10) Room titles
 - (11) Area functions
 - (12) Lighting fixtures indicated with type, switching and circuiting information
 - (13) Outlets for power with circuiting information
 - (14) Connections for mechanical and plumbing equipment with disconnect and circuiting information
 - (15) Layout of major components in all electrical equipment rooms
 - (16) Layouts for special systems
- k) One line riser diagram of electrical distribution
- l) One line riser diagram of auxiliary power distribution
- m) Completed panel schedules
- n) Light fixture schedules
- o) Riser diagrams for:
 - (1) Grounding
 - (2) Fire alarm



- (3) Telephone
- (4) Paging
- (5) Television
- (6) All low-voltage systems

4) **Reports/Calculations**

- g) Update basis of design report
- h) Lighting calculations
- i) Load calculations
- j) Short circuit calculations
- k) Voltage drop calculations
- l) Arc flash analysis

R Telecommunication

- All telecommunication documentation will:
 - Be a minimum of 70% complete
 - Be coordinated with similar activities in other disciplines
 - Address all comments from Construction Document 70% phase

1) **Drawings**

- f) Update site Plan
 - (1) Conduit routing for telecommunication distribution
 - (2) Details for site electrical work
 - (3) Demolition work
- g) Demolition plans
- h) Floor Plans
 - (1) Layout of major components in all telecommunication equipment rooms
 - Sizes of major components
 - (2) Telephone connections
 - (3) Data connections
- i) Layouts of components where space is critical
- j) Laboratory planning module
- k) Updated riser diagram for telecommunication distribution conduit sizes

2) **Reports/Calculations**

- b) Updated basis of design report

S Specifications

- 4) General and supplemental conditions of contract
- 5) Completed project specifications
- 6) Request for justification of proprietary items

T Summary

- All reports and other documentation will:
 - Be a minimum of 95% completed
 - Be coordinated with similar activities in each discipline
 - Address all comments from the Construction Document 70% phase



- 8) Basis of Design report
- 9) Cost estimates
- 10) Specifications
- 11) Schedules
- 12) All design calculations
- 13) Presentation
 - Finished rendering
 - Final model
- 14) Reviews
 - Respond in writing to all 70% of Construction Document comments
 - Submit all documents for review
 - Attend review meetings as necessary to answer questions

Construction Document Phase Final Submission 100%

- 15) All drawings, reports and other documentation will:
 - Be 100% completed
 - Be coordinated with similar activities in each discipline
- 16) Final Basis of Design report for all disciplines
- 17) Final cost estimates
- 18) Final specifications
- 19) Drawings (sealed by registered architect, landscape architect, and professional engineers responsible for the design)
- 20) Facility number information for all new mechanical, plumbing and electrical equipment
- 21) Final schedules
- 22) Final design calculations (sealed by registered architect, landscape architect, and professional engineers responsible for the design)
- 23)
- 24) Presentation
- 25) Finished rendering
 - Final model
- 26) Reviews
 - Written responses to all 95% of Construction Document Phase comments
 - Submit all documents for review
 - Attend review meetings as necessary to answer questions
- 27) Final deliverable
 - Electronic copy of CADD Drawings
 - Electronic copy of specifications
- 28) Assistance to the government in preparation of:
 - Invitation for bids, or other solicitation method
 - Phasing or commissioning requirements



Engineering Analysis

All designs for new structures (including designs for new wing additions or other additions to existing structures that modify the height and area or change the use group), modifications, renovations, and alterations that include the addition or modification of fire protection systems or egress components shall have a “Fire Protection Engineering Analysis” performed by a registered fire protection engineer at the concept and final design phase. A registered fire protection engineer is defined as a professional engineer (PE) with expertise in the field of fire protection engineering as demonstrated by passing the National Council of Examiners for Engineers and Surveyors “Principals and Practice Examination” in the discipline of fire protection engineering. A “Fire Protection Engineering Analysis” shall contain the following key features:

- Overview of all active and passive fire protection for the proposed facility.
- List of all fire protection features required by the codes or standards referenced above. All fire protection and life safety features shall be suitably integrated.
- Type of construction.
- Classification of occupancy.
- Analysis of fire resistance ratings required by hazardous materials in excess of the exempt amounts identified in the IBC.
- Fire-resistance rating of all structural components (floors, columns, and bearing walls, exterior walls, and roof), clearly specifying the applicable industry design guide and/or UL designation for the protection scheme for each component.
- Location of all fire-rated assemblies used for the enclosure of all stairs, shafts, openings, and/or the separation of fire areas and the fire-rated components (doors, dampers) necessary to protect openings in these barriers; indicating the hourly rating of these barriers and the components protecting openings, clearly specifying the applicable industry design guide and/or UL designation for each barrier.
- Location of all smoke barriers and the smoke-rated components (doors, dampers) necessary to protect openings in these barriers; clearly specifying the applicable industry design guide and/or UL designation for each smoke-rated component.
- Building separation or exposure protection, including temporary construction separation protection required by NFPA 241 requirements.
- Fire protection criteria references.
- Occupant load and exit calculations based on NFPA 101 Life Safety Code (LSC) requirements, including analysis of existing exit requirements during construction.
- Automatic extinguishing systems, including the identification of sprinkler-protected areas and areas protected by other automatic suppression means.
- Manual extinguishing equipment, including type and size of equipment, and areas of coverage. There is no longer a requirement to install manual extinguishing units in laboratories on the Bethesda and Poolesville campuses. Other areas of the country shall follow the local jurisdictional requirements.
- Fire standpipe system, including hose valve size and thread type, and areas of coverage.
- Water supply analysis determining system requirements and adequacy of the present water supply, and the need for a fire pump assembly. The water supply data shall be obtained by the A/E via fire hydrant flow tests. The water supply analysis shall include consideration of hydraulic gradient/supply pressure fluctuations, peak demand conditions, and known future expansion loads on the supply main to provide an accurate representation of available supply conditions. Flow test results and the associated analysis and calculations shall be transmitted to DFM for concurrence before use in the design process.
- Description of Fire Department (FD) access, including location of FD key box, roof access, distance of fire hydrants from the structure, distance of each side of the structure from the street, distance of



fire-standpipe and/or sprinkler connections from the road, and distance of fire-standpipe and/or sprinkler connections from the closest fire hydrant.

- Automatic detection/fire alarm system, including identification of detection requirements, zoning arrangements, elevator control system interconnection, and evacuation alarm description.

Appendix B

Integrated POR Checklist, Sustainability Checklist, PDRI, and FPAA

Program of Requirements Checklist

Section Title	Yes	No	Source of Information	Area	Remarks
1. Introduction			B&F Plan - Congressional Appropriations language as a basis for the information		
2. General Overview					
2.A Background					
2.A.1 Program Mission			The program mission statement is provided by the IC		
2.A.2 Existing Conditions			Information on existing facilities can be obtained from several sources such as the NIH Master Plan, facility assessment reports, ICs and the Division of Facilities Planning.		
2.A.3 Need for the Proposed Project			The need of the proposed project must be consistent with the B&F write-up or the Congressional appropriation language.		
2.B Staffing and Organizational Structure					
2.B.1 Organization Chart			Provided by the IC or other NIH organization		
2.B.2 Staff Summary			Provided by the IC or other NIH organization		
3. Site					
3.A Site Description			This information is from the Site Selection Report and the images are scanned from the NIH Master Plan		
3.A.1 Site Size and Condition			This information is from the Site Selection Report		
3.B Accessibility			This information is from the Site Selection Report		
3.C Physical Features			This information is from the Site Selection Report		
3.D Environmental Features			This information is from the Site Selection Report		
3.E Integration with the NIH's Present and Future Plans			This information is from the Site Selection Report		
3.F Utilities			This information is from the Site Selection Report		
3.G Site Development Cost			This information is from the Site Selection Report		
3.H Environmental Review					
3.H.1 Natural Resources			This information is provided by the Environmental Checklist		
3.H.2 Pollution			This information is provided by the Environmental Checklist		

3.H.3 Population

This information is provided by the Environmental Checklist

3.H.4 Human Services

This information is provided by the Environmental Checklist

3.H.5 Human Values

This information is provided by the Environmental Checklist

4. Design Parameters

4.A Any Space

Any space could be any space category or functional areas such as laboratories, offices, etc. The actual space should be listed. If the proposed buildings has more than one function than repeat the list starting with "B".

4.A.1 Activity Analysis

4.A.2 Design Goals and Objectives

4.A.2.1 Quality of Life

4.A.2.2 Natural Light

4.A.2.3 Lighting

4.A.2.4 Noise

4.A.2.5 Vibration

4.A.2.6 Interaction

4.A.2.7 Efficiency

4.A.2.8 Graphics/Signage

4.A.3 General Planning Parameters

4.A.3.1 Modular Space Planning

4.A.3.2 Flexibility

4.A.3.3 Capability

4.A.3.4 Expansion

4.A.3.5 Engineering Design Parameters

In this section discuss engineering parameter that affect space such as distribution of utilities, structural columns, etc.

5. Space Descriptions and Occupancy Requirements

5.A Any Space Category

Any space could be any space category or functional areas such as laboratories, offices, etc. The actual space should be listed. If the proposed buildings has more than one function than repeat the list starting with "B".

5.A.1 Any Space Descriptions

Describe all spaces in the proposed facility

5.B Space Summary Table

See Exhibit X2-5-E for an example

6. Functional Relationships and Concepts

Develop appropriate graphics suitable for the project. See Exhibit X-5-E for examples

7. Design Standards

7.A Applicable Federal Regulations

7.B Applicable Departmental Regulations

7.C Applicable Agency Regulations

7.D Applicable Local Code Regulations

7.E Utility Company Regulations

7.F Industry Standards

8. Design Criteria and Recommendations

8.A Civil

8.B Sustainability

8.C Architecture

8.D Structural

8.E HVAC

8.F BAS

8.G Plumbing

8.H Fire Protection

8.I Electrical

**8.J Communications -
Telephone and Data**

8.K Miscellaneous

8.K.1 Security

8.K.2 Safety

**8.K.3 Operations and
Maintenance**

9. Budget

9.A Facility Cost Estimate

9.A.1 Land Acquisition

9.A.2 Design

9.A.3 Construction

9.A.4 Equipment

9.A.5 Other

9.B Related Cost Estimate

9.B.1 Special Studies

9.B.2 Pre-Project Planning

9.B.3 Activation

**9.B.4 Special Purpose
Equipment**

10. Schedule

Sustainability Checklist

Project Title	Is Project Certified?	Rating System	Level of Certification		
<i>General Laboratory for Cellular Biology</i>	We will achieve gold	LEED™ Green Globes	Certified Gold		
Mandated Requirements	Requirement Definition	Will the requirement be met?	Where is it documented?	How will requirement be met?	Comments
I. Employ Integrated Design Principles					
Integrated Project Team (IPT)	Meets Appendix E[1] definition; same requirement as for leased properties.	Yes	<i>Project charter/IPT Organizational Chart, draft NIH Design Requirements (DRM)</i>	<i>IPT will include members as required by HHS Sustainability Plan, Appendix E.</i>	<i>The IPT will include a LEED –accredited professional provided by the Division of Environmental Protection.</i>
Performance Goals	Establishes goals in accordance with MOU[2] definition (e.g., energy, water, etc.).	Yes	<i>Goals are included in this FPAA Sustainability checklist.</i>	<i>Goals for all applicable MOU elements will be established. The IPT will review design documents and monitor construction to ensure that these goals are met.</i>	<i>IPT will verify goals are met through design reviews. The Integrated Project Team will maintain the services of a LEED (or equivalent) accredited professional to assist the IPT in identifying and implementing sustainable design measures.</i> <i>Goal and targets may be refined after IPT reviews the design documents.</i>

Life Cycle Cost Analysis (LCCA)	Performance goals include LCCA meeting MOU definition.	Yes	<i>LCCA Report</i>	<i>The IPT will ensure that the LCCA will be performed and use its findings in the selection of sustainable elements of the design and the level of certification to be achieved.</i>	<i>Sustainability features will be selected based upon results of the LCCA. Alternatives for energy and greenhouse gas emissions will be assessed using NIST BEES software. The A&E shall perform a computerized energy analysis and a LCCA using a professional recognized and proven program that makes hourly calculations as a basis. Suitable programs include: Carrier E20-11 HAP, DOE 2.1 or latest version, Trane Trace Ultra or Blast.</i>
Commissioning	Identify commissioning practices in accordance with MOU definition.	NA	<i>Commissioning plan</i>	<i>IPT will ensure that the entire suite is commissioned in accordance with the NIH Design Requirements Manual (DRM) and MOU.</i>	<i>Commissioning is essential to the performance of the scientific equipment. There will be a third party commissioning team engaged to represent the owner.</i>
II. Optimize Energy Performance					
Energy Efficiency	Establish energy performance targets in accordance with: MOU definition EPA Act 2005[3] Executive Order 13423[4]	Yes Yes	<i>NIH draft Design Requirements Manual (DRM).</i>	<i>IPT will the design for meeting energy reduction targets and requirements.</i>	<i>This project is too small in area to impact on energy reduction of the entire building. Since we are occupying a space that was not previously occupied, this project will</i>

Overall Energy Efficiency	Establish overall energy efficiency targets consistent with the OPDIV's plan to meet energy efficiency requirements of Executive Order 13423.	Yes	<i>NIH draft Design Requirements Manual (DRM), NIH FY2007 Energy Report (includes implementation plan)</i>	<i>IPT verification of contract requirements for energy efficient equipment. Commissioning to verify performance goals are met.</i>	<i>actually increase the Overall goals are to improve energy efficiency and reduce green house gas emissions through the reduction of energy intensity. The IPT will create a list of desired energy goals and the project will be documented in accordance with the NIH draft Design Requirements Manual. Due to the limited proportion of the facility being renovated, overall energy efficiency gains are limited to high efficiency lighting that will be installed in the area. Any building equipment installed will be Energy Star compliant where practicable.</i>
Measurement and Verification	All utilities shall be metered and a plan for verification is completed consistent with the MOU and EPAAct 2005.	Yes No NA		<i>The project area is relatively small. Sub-metering is may not be practical</i>	<i>This project will tap into existing utilities downstream of any existing meters.</i>
III. Protect and Conserve Water					

Indoor Water	Establish indoor water conservation targets consistent with MOU and EAct 2005.	Yes	<i>Draft Design Requirements Manual (DRM)</i>	<i>IPT list of water conservation targets</i>	<i>The project will have only 1 lab sink with limited amounts of water being consumed. Low flow faucets will be utilized to conserve water.</i>
Outdoor Water	Establish outdoor water conservation targets consistent with MOU and EAct 2005.	Yes		The project has no outdoor water use.	<i>This project is totally within the building envelope and will not include any landscaping or outdoor water usage.</i>
Overall Water Conservation	Establish overall water consumption targets	Yes	<i>FPAA</i>	<i>Water conservation features will be</i>	<i>Water conservation measures for the project</i>
IV. Enhance Indoor Environmental Quality					
Ventilation & Thermal Comfort	Performance targets are consistent with MOU	Yes No NA	<i>A/E Scope of Work, design</i>	<i>HVAC systems will meet the current ASHRAE</i>	
Moisture Control	Establish moisture control strategy in	Yes No NA	<i>NIH Design Guidelines.</i>	<i>Vapor retarders, air barriers, and/or a</i>	<i>Moisture control will meet the NIH design guidelines,</i>
Daylighting	Performance targets are consistent with MOU and EAct 2005 requirements.	Yes No NA		<i>The project is located in the basement of Bldg. 37. Daylighting is not desirable for an imaging suite function.</i>	<i>This project is located in the basement, in an interior space. Daylighting is not feasible. It is also not desirable due to the usage of the space.</i>
Low-emitting Materials	Establish targets and select certification systems for use of low-	Yes No NA	<i>NIH Standard design guidelines and FPAA</i>	<i>IPT will list low VOC materials target including specific certification</i>	<i>Project specifications will require LOW or no VOC content in carpets, paints,</i>
Protect Indoor Air Quality during	Performance targets are consistent with MOU	Yes No	<i>Contractor's Health and Safety</i>	<i>IPT verifies standard protective measures are</i>	<i>The IPT will include a renovation indoor air</i>
V. Reduce Environmental Impact of Materials					
Recycled Content	Establish targets for use of products with recycled content that	Yes No NA	<i>FPAA checklist, and NIH Guidelines</i>	<i>Requirements for recycled content in material will meet or exceed NIH</i>	<i>IPT will evaluate the use of recycled content construction material</i>
Biobased Content	Establish targets for use	Yes No NA	<i>FPAA checklist,</i>	<i>Utilize biobased products</i>	<i>The IPT will create a list</i>

	of products with biobased content in		<i>NIH Guidelines</i>	<i>made from rapidly renewable resources and</i>	<i>of targets based on materials used in the</i>
Construction Waste	Performance targets are consistent with MOU requirements.	Yes No	<i>NIH Controlled Material specifications,</i>	<i>NIH Controlled Material specifications require recycling of debris from</i>	<i>Waste from this project will be handled under the NIH campus solid waste</i>
Ozone Depleting Compounds	Insure no ozone depleting compounds are used during or after	Yes No	<i>Federal Green Construction Guide and other</i>	<i>IPT verifies and documents – Review MSDS to insure no use of</i>	<i>Specifications will require contractors to follow the Federal Green</i>
National Environmental Policy Act (NEPA)	Project complies with NEPA requirements and implements mitigation measures	Yes No	<i>NEPA and project design documents</i>	<i>NIH Division of Environmental Protection is initiating a review to determine the appropriate level and need for NEPA documentation, namely: a categorical exclusion determination. Mitigation measures identified, if any, will be included in the design documents.</i>	
Other Environmental Regulations	Project is reviewed for applicable Federal, state and local environmental regulations.	Yes No	<i>NIH Environmental Checklist, POR, FPAA, PDRI</i>	<i>NIH Environmental Checklist will be completed by the IPT in conjunction with NIH Division of Environmental Protection. The checklist covers all applicable regulations with environmental compliance and ensures required permits and licenses are obtained.</i>	<i>NIH-DEP is reviewing the applicable USAG regulations, Maryland state environmental regulations, and Frederick County MD laws pertaining to environmental compliance, to ensure the project meets applicable local, state, and federal environmental laws and regulations.</i>

Environmental Baseline Survey	Project site and affected facilities have been assessed for contamination and other environmental risks.	Yes No NA	<i>Environmental Hazmat Survey Report / NIH-DEP decommissioning protocol for laboratories.</i>	<i>IPT ensures completion of environmental baseline survey. IPT will use the NIH decommissioning protocol as its guiding document for contamination & environmental risk assessment.</i>	<i>A detailed survey of the areas slated for renovation has been submitted to NIH Division of Environmental Protection for their use. Survey finding will be use to remediate all hazmat substances during demolition activities. A Final clearance survey will then be performed.</i>
Environmental Management System	Project meets specific goals and targets, management controls and reporting requirements established by the facility-level EMS	Yes No NA	<i>EMS Environmental Management Plans and audit reports</i>	<i>IPT reviews applicable EMS Environmental Management Plans and ensures implementation of management controls and reporting requirements to obtain identified goals. The EMS audit program accesses and reports on compliance with EMP's.</i>	<i>The most recent EMP's for the facility sustainability developed under the NIH EMS required compliance with HHS Sustainability Implementation Plan requirements.</i>
Asset Management Planning	Project is coordinated with Real Property Asset Management Plan (RAMP)	Yes No NA	<i>FPAA, Real Property Asset Management Plan and Design Documents</i>	<i>IPT reviews RAMP requirements and ensures design compliance</i>	<i>The project will be designed and executed in accordance with Executive Order (EO) 13327 to promote the efficient and economical use of affected Federal real property resources.</i>

[\[1\] Department of Health and Human Services Sustainable Buildings Implementation Plan, Appendix E: Integrated Project Team Definition & Charter](#)

[\[2\] Department of Health and Human Services Sustainable Buildings Implementation Plan, Appendix A: Memorandum of Understanding](#)

^[3] <http://www.energy.gov/about/EPAAct.htm>

^[4] <http://www.whitehouse.gov/news/releases/2007/01/20070124-2.html> “Strengthening Federal Environmental Energy and Transportation Management”

Project Definition Rating Index

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SECTION I - BASIS OF PROJECT

CATEGORY Element	Definition Level					LEVEL	SCORE	MAX SCORE	COMMENTS	
	0	1	2	3	4					5
A. BUSINESS STRATEGY										
A1. Building Use	0	1	12	23	33	44	1	1	44	Predominant use: Biomedical Research Laboratory with vivarium and administrative space.
A2. Business Justification		1					1			Business Justification is based on the following documents: Customer Information Mission Document; POR Questionnaire for Research Facilities; POR Questionnaire for Services and Support; Program of Requirements
A3. Business Plan		1	8	14	21	27	1			The NIH is requesting Congress through the U.S. Department of Health and Human Services to appropriate \$ 163,000,000 for the design and construction of the GLCB, authorized under HR-708 and SB-001 known as the Life Science Act of 2008. The financial information is documented in the FPAA and the POR
A4. Economic Analysis	0	2	8	14	20	26	2	6	21	This project is the result of Life Science Act of 2008 authorized under HR-708 and SB-001 and a Presidential Initiative. Requires a formation of top NIH scientists at the Bethesda campus. Board order of magnitude project estimate is complete and noted in the FPAA. Site selection report has been completed to determine cost impacts of potential sites. The site is located in the "Brick Modern Zone" of the mater plan. The building will be in context with its surroundings in accordance with the NIH Master Plan. This building like most of the buildings at NIH will be substantial construction and its design life is expected to exceed 50 years. This project exceeds the prospectus limit for leases and GSA will manage this project. This project is a capital lease that requires Congressional approval. Because of these concerns leasing was not an option due to urgent nature this mandate. Once the task force completes their work the building will revert to Director's reserve. At the end of the building expected life it would be totally rehabilitated or adapted reuse.
A5. Facility Requirements	0	2	9	16	23	31	1	2	31	Overall facility requirements are documented in the POR.
A6. Future Expansion/Alteration Considerations	0	1	7	12	17	22	1	1	22	Future expansion/alteration considerations are documented in the POR
A7. Site Selection Considerations	0	1	8	15	21	28	1	1	28	Site selection considerations are documented in the Site Selection Report
A8. Project Objectives Statement	0	1	4	8	11	15	1	1	15	Project Objectives Statement is documented in the POR
Sub Total							15	214		

B. OWNER PHILOSOPHIES

B1. Reliability Philosophy	0	1	5	10	14	18	1	1	18	Reliability Philosophy is documented in the POR and Volume II of the HHS Facilities Program Manual.	
B2. Maintenance Philosophy	0	1	5	9	12	16	1	1	16	Maintenance Philosophy is documented in the POR and Volume II of the HHS Facilities Program Manual.	
B3. Operating Philosophy	0	1	5	8	12	15	1	1	15	Operating Philosophy is documented in the POR and Volume II of the HHS Facilities Program Manual.	
B4. Design Philosophy	0	1	6	10	14	19	1	1	19	Design Philosophy is documented in the POR and the NIH Design Requirements Manual & Master Plan.	
Sub Total							4	4	68		

C. PROJECT REQUIREMENTS

C1. Value Analysis Process	0	1	6	10	14	19	2	6	19	Value Analysis process is documented in the Sustainability Checklist and POR with respect to sustainable design.
C2. Project Design Criteria	0	1	7	13	18	24	1	1	24	Project design criteria is documented in the POR and NIH Design Requirements Manual
C3. Evaluation of Existing Facilities	0	2	7	13	19	24	1	2	24	This project is the result of Life Science Act of 2008 authorized under HR-708 and SB-001 and a Presidential Initiative. Most of the existing facilities at NIH is utilized or over utilized as documented in HHS Utilization Improvement Action Plan.
C4. Scope of Work Overview	0	1	5	9	13	17	2	5	17	Scope of work overview is documented in the POR, RFP and FPAA
C5. Project Schedule	0	2	6	11	15	20	1	2	20	Project Schedule is documented in the POR, RFP and FPAA
C6. Project Cost Estimate	0	2	8	15	21	27	1	2	27	Project cost estimate is documented in the POR and FPAA
Sub Total							18	131		

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SECTION II - BASIS OF DESIGN

CATEGORY Element	Definition Level						LEVEL	SCORE	MAX SCORE	COMMENTS
	0	1	2	3	4	5				

D. SITE INFORMATION

D1. Site Layout	0	1	4	7	10	14	1	1	14	Site surveys are documented in the Site Selection Report; the NIH Master Plan and POR
D2. Site Surveys	0	1	4	8	11	14	1	1	14	Site surveys are documented in the Site Selection Report; the NIH Master Plan and POR
D3. Civil/Geotechnical Information	0	2	6	10	14	19	1	2	19	Civil/Geotechnical Information is documented in topographic surveys, NIH Master Plan and historical data
D4. Governing Regulatory Requirements	0	1	4	8	11	14	1	1	14	Governing Regulatory Requirements are documented in the POR
D5. Environmental Assessment	0	1	5	9	12	16	1	1	16	Environmental review found the project to be categorically excluded. It is documented in the Environmental Check List
D6. Utility Sources with Supply Conditions	0	1	4	7	10	13	1	1	13	Utility Sources with Supply Conditions is documented in the Site Selection Report
D7. Site Life Safety Considerations	0	1	2	4	6	8	1	1	8	Site surveys are documented in the Site Selection Report; the NIH Master Plan and POR
D8. Special Water and Waste Treatment Requirements	0	1	3	6	8	11	1	1	11	Special Water and Waste Treatment Requirements for containment and vivarium is documented in the NIH Design Requirements Manual

Sub Total	CATEGORY D TOTAL						9	109		
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E. BUILDING PROGRAMMING

E1. Program Statement	0	1	5	9	12	16	1	1	16	Program Statement is documented in POR
E2. Building Summary Space List	0	1	6	11	16	21	1	1	21	Documented in the POR
E3. Overall Adjacency Diagrams	0	1	3	6	8	10	1	1	10	Documented in the POR
E4. Stacking Diagrams	0	1	4	7	10	13	0	0	0	N/A There are no vertical functional relationships.
E5. Growth and Phased Development	0	1	5	8	12	15	0	0	0	N/A The project is fully funded and the site that is selected for this program is consistent with the NIH Master Plan
E6. Circulation and Open Space Requirements	0	1	4	7	10	13	1	1	13	Documented in the POR
E7. Functional Relationship Diagrams/Room by Rm.	0	1	3	5	8	10	1	1	10	The functional relationships are adequately documented in the POR. This project does not warrant this level of specificity.

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SECTION II - BASIS OF DESIGN											
CATEGORY Element	Definition Level						LEVEL	SCORE	MAX SCORE	COMMENTS	
	0	1	2	3	4	5					
E8. Loading/Unloading/Storage Facilities Requirements	0	1	2	4	6	8	1	1	8	Documented in the POR and the NIH Design Requirements Manual	
E9. Transportation Requirements	0	1	3	5	7	9	1	1	9	Documented in the NIH Design Requirements Manual	
E10. Building Finishes	0	1	5	8	12	15	1	1	15	Documented in the NIH Design Requirements Manual	
E11. Room Data Sheets	0	1	4	7	10	13	1	1	13	In lieu of Room Data Sheets; space descriptions and space summary tables were used to document this definition	
E12. Furnishings, Equipment, and Built-Ins	0	1	4	8	11	14	1	1	14	Documented in the POR	
E13. Window Treatment	0	1	2	3	4	5	1	1	5	Documented in the NIH Design Requirements Manual	

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SECTION II - BASIS OF DESIGN

CATEGORY Element	Definition Level						LEVEL	SCORE	MAX SCORE	COMMENTS
	0	1	2	3	4	5				
F. BUILDING/PROJECT DESIGN PARAMETERS										
F1. Civil/Site Design	0	1	4	7	11	14	3	7	14	Documented in the NIH Design Requirements Manual and POR
F2. Architectural Design	0	1	7	12	17	22	2	7	22	Documented in the NIH Design Requirements Manual and POR
F3. Structural Design	0	1	5	9	14	18	4	14	18	Documented in the NIH Design Requirements Manual and POR
F4. Mechanical Design	0	2	6	11	15	20	4	15	20	Documented in the NIH Design Requirements Manual and POR
F5. Electrical Design	0	1	5	8	12	15	4	12	15	Documented in the NIH Design Requirements Manual and POR
F6. Building Life Safety Requirements	0	1	3	5	8	10	4	8	10	Documented in the POR
F7. Constructability Analysis	0	1	4	8	11	14	5	14	14	Not documented yet
F8. Technological Sophistication	0	1	3	5	7	9	5	9	9	Not documented yet
Sub Total							CATEGORY F TOT	86	122	
G. EQUIPMENT										
G1. Equipment List	0	1	5	8	12	15	2	5	15	Documented in the NIH Design Requirements Manual and POR
G2. Equipment Location Drawings	0	1	3	5	8	10	5	10	10	Not documented yet
G3. Equipment Utility Requirements	0	1	4	6	9	11	5	11	11	Not documented yet

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3 = Some Deficiencies - Documentation is partially developed (>50%), but needs substantial information to finalize		
4 = Major Deficiencies - Preliminary defined criteria (>20%), but limited project specific documentation		
5 = Incomplete or Poor Definition - Limited definition (<20%) of criteria or none at all		

SECTION III - EXECUTION APPROACH

CATEGORY Element	Definition Level						LEVEL	SCORE	MAX SCORE	COMMENTS
	0	1	2	3	4	5				

H. PROCUREMENT STRATEGY

H1. Identify Long-Lead/Critical Equip. and Materials	0	1	4	7	10	14	5	14	14	Not documented yet
H2. Procurement Procedures and Plans	0	1	3	6	9	11	1	1	11	Acquisition Plan and RFP Completed
CATEGORY H TOTAL								15	25	

J. DELIVERABLES

J1. CADD/Model Requirements	0	0	1	2	3	4	1	0	4	Yes will use BIM and follow guidance provided in the DRM.
J2. Documentation/Deliverables	0	1	2	4	6	7	1	1	7	Documentation and Deliverables are documented in Section B of the RFP and the DRM
CATEGORY J TOTAL								1	11	

K. PROJECT CONTROL

K1. Project Quality Assurance and Control	0	1	3	4	6	8	1	1	8	Documented in the RFP Note ISO 9000 is no longer required at NIH
K2. Project Cost Control	0	1	4	7	10	13	1	1	13	Documented in the RFP. Procedures documented in Volume I of the HHS Facilities Program Manual
K3. Project Schedule Control	0	1	4	8	11	14	1	1	14	Documented in the RFP and the Acquisition Plan
K4. Risk Management	0	1	6	10	14	18	1	1	18	Documented in the Acquisition Plan
K5. Safety Procedures	0	1	3	5	7	9	1	1	9	Documented in the RFP
CATEGORY K TOTAL								5	62	

L. PROJECT EXECUTION PLAN

L1. Project Organization	0	1	3	5	8	10	1	1	10	Documented in the RFP. Procedures documented in Volume I of the HHS Facilities Program Manual
L2. Owner Approval Requirements	0	1	4	6	9	11	1	1	11	Documented in the RFP. Procedures documented in Volume I of the HHS Facilities Program Manual
L3. Project Delivery Method	0	1	5	8	12	15	1	1	15	Documented in the Acquisition Plan and RFP. Procedures documented in Volume I of the HHS Facilities Program Manual
L4. Design/Construction Plan and Approach	0	1	4	8	11	15	1	1	15	Documented in the Acquisition Plan and RFP. Procedures documented in Volume I of the HHS Facilities Program Manual
L5. Substantial Completion Requirements	0	1	3	5	7	9	1	1	9	Documented in the RFP. Procedures documented in Volume I of the HHS Facilities Program Manual
CATEGORY L TOTAL								5	60	

SECTION III TOTAL	26	158
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Project Definition Rating Index Project Score Sheet

Project: GLCB Virtual Laboratory Project

Date: 7/10/2008

Advocate Alamelu Ramesh

Facilitator

Tracey Johnson-Butler

Status of Project: Pre-Project Planning: Management Review

Overall		Score	Max Score
Section I - Basis Of Project Decision		42	413
Section II - Basis of Design		143	418
Section III - Execution Approach		26	158
TOTAL		211	989
Normalized Score 213		PDRI % SCORE 21.3%	

Top Ten - Basis of Project Decision		Score	Max Score
1.	A1. Building Use	1	44
2.	A5. Facility Requirements	2	31
3.	A7. Site Selection Considerations	1	28
4.	A2. Business Justification	1	27
5.	C6. Project Cost Estimate	2	27
6.	A3. Business Plan	2	26
7.	C2. Project Design Criteria	1	24
8.	C3. Evaluation of Existing Facilities	2	24
9.	A6. Future Expansion/Alteration Consideration	1	22
10.	A4. Economic Analysis	11	21
TOTAL		24	253
		PDRI % BASIS OF PROJECT DECISION 9.5%	

Top Ten - Basis of Design		Score	Max Score
1.	F2. Architectural Design	7	22
2.	E2. Building Summary Space List	1	21
3.	F4. Mechanical Design	15	20
4.	D3. Civil/Geotechnical Information	7	19
5.	F3. Structural Design	14	18
6.	D5. Environmental Assessment	1	16
7.	E1. Program Statement	1	16
8.	G1. Equipment List	15	15
9.	E5. Growth and Phased Development	0	15
10.	F5. Electrical Design	12	15
TOTAL		73	177
		PDRI % BASIS OF DESIGN SCORE 41.2%	

PROJECT SCORE SHEET - OVERALL

Facilitator: Tracey Johnson - Butler

Project Officer: Alamelu Ramesh, P.E.

Status of Project: Pre-Design

Date: July 1, 2008

<i>Overall</i>	Score	Max Score	%
Section 1 - Basis of Project Decision	37	413	9%
Section 2 - Basis of Design	143	401	36%
Section 3 - Execution Approach	26	158	16%
TOTAL	206	972	21%
PDRI TOTAL SCORE (Target = 200)		212	

Low Definition Items

Section	Level	Action	Assigned To	Due date
F3. Structural Design	4	Documented in the NIH Design Requirements Manual and POR		
F4. Mechanical Design	4	Documented in the NIH Design Requirements Manual and POR		
F5. Electrical Design	4	Documented in the NIH Design Requirements Manual and POR		
F6. Building Life Safety Requirements	4	Documented in the POR		
F7. Constructability Analysis	5	Not documented yet		
F8. Technological Sophistication	5	Not documented yet		
G2. Equipment Location Drawings	5	Not documented yet		
G3. Equipment Utility Requirements	5	Not documented yet		
H1. Identify Long-Lead/Critical Equip. and Mate	5	Not documented yet		

Facilities Project Approval Agreement



**HHS
FACILITY PROJECT
APPROVAL AGREEMENT**

1. Project No./ID N-VL1	2. Revision No.: 0
4. Budget Year: 2010	5. Date: (mm/dd/year) 6/25/2008
6.a. Total B&F Cost (\$): \$163,000,000.00	6.b Total Project Cost (\$M) \$169,200,000.00

3. Project Title:
General Laboratory for Cellular Biology

7. OPDIV/Program Office: NIH/OD/ORF/DTR/SPB	8. Installation/Location (City & State) National Institutes of Health, Bethesda, Maryland
-------------------------------------------------------	---------------------------------------------------------------------------------------------------------

9. Facility Cost Estimate (\$M)				10. Related Cost Estimate (\$M)			
Item	Amount	Funds Sources	Fiscal Year	Item	Amount	Fund Sources	Fiscal Year
a. Land Acquisition				a. Special Studies	\$ 1.10	IC	2008
b. Design	\$ 6.80	B&F	2010	b. Pre-project Planning	\$ 2.30	IC	2008
c. Construction	\$ 125.50	B&F	2011	c. Activation (include moving)	\$ 2.80	IC	2011
d. Equipment	\$ 5.70	IC	2011	d. Special Purpose Equipment	\$ 10.00	B&F	2010
e. Other (demolition of Bldg 13)	\$ 15.00	B&F	2010	e. Other	\$ -		
f. Total Facility Cost Est.	\$ 153.00			f. Total Related Cost Est.	\$ 16.20		

g. Off-Site Utilities:
 Sufficient capacity and type of off-site utilities are available to support this project.
 Costs have been included in the estimate for the required off-site utilities.

11. Category	<input checked="" type="checkbox"/> Construction	<input type="checkbox"/> Repair	12. PDRI Rating: 212 out of 1,000 at Pre-Design.
	<input type="checkbox"/> Improvements	<input type="checkbox"/> Maintenance	
	<input type="checkbox"/> Minor renovations	<input type="checkbox"/> Temporary Construction	

13. Project Requirements:

a. PMA: This project directly supports the PMA Real Property Asset Management Initiative. Yes No

b. PART: This project supports a program assessed under the Program Assessment Rating Tool. Yes No

c. Sustainable Design: This project meets the Guiding Principles of the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (EPAAct 2005 and EO 13423). Yes No

14.a. Project Description (Scope/Quantify):
 This project is to construct a new 215,000 gsf General Laboratory for Cellular Biology (GLBC) that will accommodate 7 laboratories, shared analytical laboratories, and support space. The laboratory facility will house the staff of the Scientific Director, administrative space associated with the laboratories as well as ancillary space. There will also be an animal research facility associated with the GLBC. This facility will have a high intensity of instrument or special purpose laboratories. This project will involve the demolition of Building 13.

14.b. Justification:
 The NIH is requesting Congress through the U.S. Department of Health and Human Services to appropriate \$ 163,000,000 for the design and construction of the GLCB, authorized under HR-708 and SB-001 known as the Life Science Act of 2008. The General Laboratory for Cellular Biology (GLCB) will house the staff of a special task force created by a Presidential Commission on Health. This task force is composed of eminent scientists from different Institutes (IC's), within the National Institutes of Health (NIH). The Task Force is charged with the responsibility to find the cause and cure of a recently discovered virus that attacks the human immune system. The Task Force is to report directly to the Director of NIH. For organizational and administrative purposes, the National Institute of Allergies and Infectious Diseases (NIAID) will be the lead institute. However, the Task Force will have its own director, executive officer, and scientific director. Extramural Research will be coordinated through NIAID. Once the Task Force's work is completed, the facility will become a part of the Director's reserve.

15. Schedules (Month/Year)			16. Program Commitment Approval		
a. Studies	Start	Jan-08	Authority	Signature	Date
	Complete	Dec-08			
b. Planning	Start	Jan-08	a. Project Manager	Alamelu Ramesh, Principal Responsible for Research SPB	
	Complete	Jul-08			
c. Design	Start	Sep-08	b. Project Director	Daniel G. Wheeland, Director ORF / NIH	
	Complete	Sep-10			
d. Construction	Start	N/A	c. OPDIV Board Member	Colleen Barros, Dep. Director for Management, NIH	
	Complete	N/A			
e. Activation	Start	N/A	e. Office of the Secretary	Howard D. Kelsey, DAS OFMP	
	Complete	N/A			
f. Operational	Complete	N/A			
NIH/OD/ORF/DTR/SPB			National Institutes of Health, Bethesda, Maryland		

Item 10.a. - Continued from Page 1
A geotechnical report is required to determine soil bearing capacity, location of subsurface water. The project requires major demolition of Building 13 a decontamination report is required.

Item 10.b. - Customer Information Mission Document; POR Questionnaire for Research Facilities; POR Questionnaire for Services and Support; Program of Requirements completed in March 2008.

Item 10.d. - New special equipment includes but not limited to: electron microscopes, confocal microscopes, lasers, flow cytometer, mass spectrometer, etc. (See attached POR Space Summary Tables pages 57-84)

Item 12 - A PDRI was conducted for this project in 2008 at which time it received a score of ____.

Item 13.a. -
Mission Dependency: This facility / project is mission critical because it provides the constructed space needed to respond to a Presidential initiative authorized under HR-708 and SB-001 known as the Life Science Act of 2008 to find the cause and cure of a recently discovered virus that attacks the human immune system.

Condition Index (CI) N/A new construction

Utilization: The facility is programmed to be in total compliance with HHS utilization rate for laboratories in accordance with the HHS Real Property Asset Management Plan and HHS' Utilization Action Plan.

Operating Cost: Overall NIH operating cost will decrease due to a new sustainable design and constructed asset and the demolition of a 50 year unneeded structure

Disposal: The facility will replace a unneeded facility.

Item 13.b. - Continued from Page 1
The project supports the PART assessment conducted on the B&F program with a goal to improve and maintain NIH assets. This project will provide space for NIH mission critical research. NIH PART score, received in July 2005, was a 95 or effective.



Post Occupancy Evaluation (POE) Guidance

Appendix C



Real Property Asset Management
OVERSIGHT OF THE HHS PORTFOLIO

Post Occupancy Evaluation (POE) Guidance



Post Occupancy Evaluation (POE) Guidance

1.0 Purpose

This guidance defines the typical steps required by HHS personnel in the use of the *Post Occupancy Evaluation* (POE). The POE consists of a detailed and systematic assessment of a facility that is operational and in-use. The POE is initiated at the Contract Close-out phase and/or after occupants have had sufficient time (at least 10 months) to establish operations and evaluate suitability of the facility to support the program mission. The POE process is used to determine if the facility matches program requirements, and to identify ways to improve planning, design, performance and fitness for purpose as well as an assessment of project management.

2.0 Applicability

This guidance applies to all HHS OPDIVs, and to all leases and GSA assignments over prospectus level and all projects at federally owned facilities with a total project cost of \$10 million or more (Capital Investment Review Board level projects), except staff quarters and utilities projects. The Project Management Assessment and the On-Site Evaluation components of the POE do not apply to leased facilities as defined in the HHS Facilities Program Manual (Volume I) Section 5-2, Paragraph A.1.

3.0 Responsibilities

- 3.1 All Projects at Federally Owned Facilities \geq \$10M – The OPDIVs will complete a POE, which includes a project management assessment, a customer satisfaction survey and an on-site evaluation. The Project Team will initiate the POE assessments, evaluations and surveys and will coordinate with and obtain feedback from key stakeholders.
- 3.2 All Leases and GSA Assignments Over Prospectus Level – The HHS requires their Divisions to administer and execute the customer satisfaction survey portion of the POE for these types of projects. *OPDIVs are not to request nor require that GSA administer and execute the customer satisfaction survey.* The Project Team will initiate the survey and will coordinate with and obtain feedback from key stakeholders.



Post Occupancy Evaluation (POE) Guidance

4.0 Procedure

4.1 Project Management Assessment

4.1.1 Initiate Assessment

The Project Team should complete the Project Management Assessment as part of the final Facility Project Approval Agreement (FPAA).

4.1.2 Narrative Assessment

Narrative should address at minimum the standard elements:

- Business case analysis
- Pre-project planning (i.e. Project Delivery Rating Index Analysis (PDRI))
- Procurement Delivery Contract Strategy (PDCS)
- Risk management
- Construction metrics
- Narrative may also include topics such as:
 - Communication effectiveness, including maintaining continuity and involving key stakeholders in decisions
 - Lessons learned even during the project, including any rework necessary as part of quality control and overall continual improvement
 - Identification and management of risk
 - Team building strategies including partnering, project leadership team (PLT)
 - Cost control techniques, including value engineering
 - Change management strategies, including contingency plans for delays and changes in scope
 - Process improvements and best practices as applicable

4.1.4 Final Project Management Assessment Report

The Project Team will prepare the final narrative to document the final project management assessment. This narrative will ultimately be included in the Final FPAA, Section 12, which will be distributed to OFMP, the OPDIV planning office and the facility manager.



Post Occupancy Evaluation (POE) Guidance

4.2 Customer Satisfaction Survey

4.2.1 Initiate Survey

4.2.1.1 The Project Team will be responsible for setting up an account on an online commercially available survey hosting provider (such as www.surveymonkey.com) and entering the basic project information about the facility.

4.2.2 Coordinate Key Stakeholders

Project Team will identify all survey participants and notify them via email with the web link and instructions to complete the survey. The survey pool shall include representation from the facility occupants, users, maintenance staff and project leadership team as appropriate.

4.2.3 Perform Survey

The Project Team should set a deadline for survey response comments according to the size of the project and the respondent pool. The Project Team will monitor incoming results and will send a reminder to participants to ensure survey completion..

4.2.3.1 The Project Team should set up the online survey to automatically filter questions for a particular user, so the survey participants will only need to complete the questionnaire applicable to their function (i.e., User vs. Maintainer).

4.2.4 Analyze Data

4.2.4.1 The Project Team should review the feedback including the items exceeding expectations as well as the client concerns. The Project Team should review the client concerns and identify any major problems or concerns. The Project Team should determine if there are any latent defects or ongoing equipment problems and determine any necessary action.



Post Occupancy Evaluation (POE) Guidance

4.2.5 Finalize Survey Report

4.2.5.1 After the close of the survey, the Project Team will prepare the survey hosting provider's standard tabular and graphical reports summarizing the survey results. Consideration should be given for any additional reports needed by downloading the data to an Excel spreadsheet format.

4.2.5.2 Furnish survey report copies to key stakeholders, OPDIV planning office, OPDIV Facility Director, project officer and facility manager.

4.2.5.3 Utilize the survey data results to assist in the formulation of the lessons learned component of the POE.

4.3 On-Site Evaluation

4.3.1 Initiate Evaluation

4.3.1.1 The OPDIV will plan and schedule the POE's for their facilities.

4.3.1.2 The facility should be in operation for at least ten (10) months before a POE is conducted. The survey should not be conducted until the operation has reached a relatively normal/ steady state. In some cases, this will not occur for two or three years. Initially there may be abnormal spikes in patronage. Conversely, there may be areas that are not fully staffed for operation. It is noted that if the POE can be successfully conducted prior to expiration of the construction warranty, it could potentially allow enough time to enforce the standard one year construction warranty clause if warranted defects are discovered. However, the primary consideration in scheduling is whether the functionality of the facility can be assessed relative to normal operations.



Post Occupancy Evaluation (POE) Guidance

4.3.2 Coordinate Key Stakeholders

4.3.2.1 The survey team consists of occupants or users, professional staff from each design discipline including architectural, civil/structural, mechanical, and electrical. There should also be program-planning professionals to assist in determining suitability of program department space. The design Architect/Engineer (A/E), Scientific/Medical Program staff, and Agency customer representative for the project should be invited to participate in the site visit to provide background information on the facility design. If survey responses indicate safety, health or environmental concerns, Safety and/or Environmental Staff should also participate.

4.3.2.2 Prior to a site visit, the survey team should prepare an occupant questionnaire, as per the Customer Satisfaction Survey section above, to determine what the users think of the facility, review the project Program of Requirements (POR) and related project construction documents. This will enable the survey team to better determine whether program requirements have been met. It will also save time at the site since the survey team will be familiar with the facility before arriving. Prior to the actual site visit scheduled interviews shall be arranged.

4.3.3 Perform Evaluation

4.3.3.1 The survey team shall visit the facility and inspect all exterior and interior elements of the facility and site. The survey team shall note conformance and non-conformance of the facility to the construction documents.

4.3.3.2 During the visit, survey team members shall interview the facility managers and the facility occupants to determine their observations about and reactions to the building. Persons interviewed should include the users, facility director, administrative officer, department heads, facility engineering and maintenance staff.

4.3.3.3 In conducting the survey, the information to be gathered is not limited to design or construction deficiencies. The survey team shall note successful integration of positive facility features including but not limited to:



Post Occupancy Evaluation (POE) Guidance

4.3.3.3.1 Efficient use of space including optimizing square footage and floor plan.

4.3.3.3.2 Sustainability in terms of:

- Efficiency of operations and maintenance
- Durability of finishes
- System flexibility, space adaptability
- Technologically current and adaptable, and
- Energy performance
- Renewable Resources

4.3.3.3.3 Design elements pleasing to occupants and visitors

4.3.3.3.4 Acoustics, lighting, ventilation, thermal control

4.3.3.3.5 Effective exterior design strategies

4.3.3.3.6 Control of Storm water

4.3.3.3.7 Safety measures, devices and factors

4.3.3.4 Photographs should be taken during the site visit in digital format. These will document the general appearance of the facility and site as well as specific design and construction. Necessary security approval of photography should be obtained, as necessary.

4.3.4 Finalize On-Site Evaluation Report

4.3.4.1 Place the data gathered during the project survey in an On-Site Evaluation Report, with a separate section for each technical discipline. Describe the facility briefly and document deficiencies or notably good design and construction features, using photographs for descriptive purposes. Lists of suggestions for improved solutions should also be included to correct noted deficiencies. (The development of a matrix space analysis is encouraged to show differences between the POR, design documents, actual construction, and current agency design requirements.)



Real Property Asset Management
OVERSIGHT OF THE HHS PORTFOLIO

Post Occupancy Evaluation (POE) Guidance

- 4.3.4.2 Promptly identify potential warranty items or latent defects to the Project Officer and Facility Manager and Project Officer so that timely action can be taken to enforce and benefit from the warranty.
- 4.3.4.3 Furnish copies of the report to the OPDIV planning office and the facility manager. This survey report is for information and use in planning and constructing future health care and research facilities. Make copies of the report available to all HHS OPDIVs, and any office or committee engaged in updating design criteria for use in HHS health care and research facilities construction programs.
- 4.3.4.4 Each OPDIV should develop and make available a method of posting and electronically retrieving the “Lessons Learned” during the POE process. It should be accessible by all OPDIVs, as this can be invaluable for future planning of facilities because it will make information available on items and procedures to avoid and those features that are desirable.
- 4.3.4.5 Submittal of completed survey reports is not routinely required; however, OFMP, Division of Planning and Construction may request a completed survey report be submitted for information purposes.

Additional Guidance and Information in performing the POE is available in the HHS Facilities Program Manual Volume I, Section 5-2.

5.0 Related Procedure

- 5.1 Closeout Procedures

6.0 Relevant Documents

- 6.1 HHS Facility Program Manual
- 6.2 Most current Approved FPAA and associated documents
- 6.3 Team Charter

7.0 Records – Deliverables

- 7.1 Project Management Assessment Narrative
- 7.2 On-Site Evaluation Report
- 7.3 Customer Satisfaction Survey Reports

8.0 Attachment

- 8.1 Attachment A –Customer Satisfaction Survey Core Questions

NIH Facilities Development Manual





National Institutes of Health

Facilities Development Manual