

## Architect/Engineer Project Requirements

Handbook AS-506

March 2000

Transmittal Letter 1

**A. Explanation.** This handbook replaces and makes obsolete the previous *Architect/Engineer Project Requirements, Publication 59*. It describes Postal Service requirements for architectural/engineering contracts.

**B. Distribution.**

**1. Initial.** This handbook is being distributed to the Facilities Service Offices, Design and Construction Field Office, Major Facilities Office and Major Facilities, Purchasing.

**2. Additional Copies.**

**a.** Available on the Postal Service Intranet at *ftp://56.64.59.87*

**b.** Electronic copies may be purchased from:

Corporate Visions, Incorporated  
1000 16<sup>th</sup> Street, NW  
Washington, DC 20036-5705  
202-833-4333

**c.** Printed copies may be purchased from:

Capitol Technographics Corporation  
8002D Haute Court  
Springfield, VA 22150-2215  
703-569-4651

**C. Comments and Questions.** Comments and questions may be sent to:

Manager, Design and Construction  
Facilities Headquarters  
United States Postal Service  
4301 Wilson Blvd., Suite 300  
Arlington, VA 22203-1861

**D. Effective Date.** This handbook is effective immediately.



Rudolph K. Umscheid  
Vice President  
Facilities

---

# About This Handbook

## Purpose

The purpose of Handbook AS-506, *Architect/Engineer Project Requirements*, is to provide architects and/or engineers (A/Es) who are contracted to perform design services for the Postal Service with a source of design-related requirements. This handbook can be used by design professionals as a guide to understanding the Postal Service design requirements for each type of postal project, facility, and contract.

Handbook AS-506 is also a guide for postal project managers, contracting officers, contracting officer's representatives, etc. The intent of this handbook is to provide Postal Service representatives who are involved in the construction process with a listing of design-related requirements as well as what is expected from a design professional who is contracted by the Postal Service to perform A/E services.

At the same time, this handbook should be used, adopted, and "modified" to meet specific project requirements. However, this handbook lists requirements that should not be deviated from without understanding the ramifications. Postal Service representatives need to exercise sound judgment and apply a level of reasonable care in determining when and why deviations may be necessary for any specific project. The procedures listed in this handbook should be considered the postal standards, but should not be construed as inflexible.

## Organization

Handbook AS-506 consists of the following six parts:

- Part I, General Instructions for A/E Services.
- Part II, Mail Processing Facilities.
- Part III, Customer Service Facilities.
- Part IV, Repair and Alteration Contracts.
- Part V, Design-Build Contracts.
- Part VI, Attachments.

Part I contains information that applies to Parts II through V. Parts II through V consist of four chapters: Predesign Phase A/E Services, Design Phase A/E Services, Construction Phase A/E Services, and Postconstruction Phase A/E Services. Each chapter pertains to a specific phase of the design and construction processes: predesign, design, construction, and postconstruction. The chapters are divided into specific design-oriented services that delineate requirements the A/E must follow.

Part VI contains sample work sheets that the A/E can use and references; many of the sample work sheets referenced are found on the CD-ROM titled *Building Design Standards*. This part also contains A/E services checklists for each design phase.

---

## Additional Reference Material

**This handbook must be used in conjunction with the latest version of the CD-ROM, *Building Design Standards*.** The A/E cannot start the design process without first being familiar with the postal *Building Design Standards* on the CD-ROM. The CD-ROM contains the *Master Specification*, which includes the Specification Introduction (Construction Document Standards, Specification Organization and Format, Specification Standards for Preparation of a New Section, Specification Section Pro Forma, and New Specifications Section Template).

A/Es should familiarize themselves with other postal publications, specifically, the *Construction Administration and Facilities Inspection Handbook*, published by Major Facilities Purchasing, dated July 1998. This is a handbook used by Facilities personnel involved in construction contract administration. Construction administration procedures, activities, actions, and work sheets are provided in this handbook.

## Guide to Margin References

The references in the margin refer to several types of document. Those within lines refer to Postal Service policy and procedure documents. Those with an icon of a diskette refer to documents published on a CD-ROM or disk. Those with an icon of a book refer to clauses, provisions, etc., that are part of the Design and Construction Contract System (DCCS).

---

# Architect/Engineer Project Requirements

## Top-Level Contents

	Page
<b>Transmittal Letter</b>	<b>i</b>
<b>About This Handbook</b>	<b>iii</b>
<b>Part I General Instructions for A/E Services</b>	<b>1</b>
Chapter 1, Overview	3
Chapter 2, Regulations	7
Chapter 3, Documentation	13
Chapter 4, Review and Approval	21
<b>Part II Mail Processing Facilities</b>	<b>23</b>
Chapter 1, Predesign Phase A/E Services	27
Chapter 2, Design Phase A/E Services	29
Chapter 3, Construction Phase A/E Services	67
Chapter 4, Postconstruction Phase A/E Services	87
<b>Part III Customer Service Facilities</b>	<b>91</b>
Chapter 1, Predesign Phase A/E Services	95
Chapter 2, Design Phase A/E Services	97
Chapter 3, Construction Phase A/E Services	129
Chapter 4, Postconstruction Phase A/E Services	147
<b>Part IV Repair and Alteration Contracts</b>	<b>151</b>
Chapter 1, Predesign Phase A/E Services	153
Chapter 2, Design Phase A/E Services	155
Chapter 3, Construction Phase A/E Services	183
Chapter 4, Postconstruction Phase A/E Services	203
<b>Part V Design-Build Contracts</b>	<b>207</b>
Chapter 1, Predesign Phase A/E Services	211
Chapter 2, Design Phase A/E Services	213
Chapter 3, Construction Phase A/E Services	249
Chapter 4, Postconstruction Phase A/E Services	269

---

	<b>Page</b>
<b>Part VI Attachments</b>	<b>271</b>
Chapter 1, Professional Services Estimate Work Sheets	273
Chapter 2, Background Information	283
Chapter 3, A/E Services Checklists	285

---

**Part I**  
**General Instructions for A/E Services**

**Contents**

1 Overview ..... 3

    1-1 Authority and Responsibility ..... 3

    1-2 Definitions and Roles ..... 3

        1-2.1 Construction Administrator..... 3

        1-2.2 Construction Manager..... 3

        1-2.3 Contracting Officer ..... 4

        1-2.4 Contracting Officer’s Representative ..... 4

        1-2.5 Lessor ..... 4

        1-2.6 Postal Service Project Manager..... 4

        1-2.7 Resident Engineer..... 4

    1-3 Design Approach and Economy in Design and Construction ..... 5

        1-3.1 Design Functional Overview ..... 5

        1-3.2 Cost Factors..... 5

        1-3.3 A/E Cost Estimate..... 6

2 Regulations ..... 7

    2-1 Codes, Regulations, and Permits..... 7

    2-2 Compliance With Federal Policy Requirements..... 8

        2-2.1 National Environmental Policy Act ..... 8

        2-2.2 Occupational Safety and Health Act ..... 8

        2-2.3 Equal Employment Opportunity and Affirmative Action Programs..... 8

        2-2.4 Energy Conservation..... 9

        2-2.5 Historic Preservation..... 9

        2-2.6 Federal Fire Prevention Control Act of 1974..... 9

        2-2.7 Randolph-Sheppard Act Amendments of 1974 ..... 9

        2-2.8 Physically Handicapped ..... 9

        2-2.9 Preference for Domestic Construction Materials ..... 9

        2-2.10 Labor Standards for Construction ..... 9

        2-2.11 Flood Hazard Protection ..... 10

        2-2.12 Vapor Recovery ..... 10

        2-2.13 Clean Air Act, Clean Water Act, and Safe Drinking Water Act..... 10

        2-2.14 Small, Minority-Owned, and Woman-Owned Business Requirement ... 10

        2-2.15 Asbestos ..... 11

        2-2.16 Polychlorinated Biphenyls ..... 11

        2-2.17 Urea Formaldehyde Foam ..... 11

        2-2.18 Underground Storage Tanks..... 11

---

2-2.19 Comprehensive Environmental Response, Compensation, and Liability Act.....	12
2-2.20 Resource Conservation and Recovery Act.....	12
2-2.21 Wetlands.....	12
2-2.22 Coastal Zone Management.....	12
2-2.23 Lead-Free Materials.....	12
2-3 Compliance With State Regulations.....	12
3 Documentation.....	13
3-1 Design Data.....	13
3-1.1 Postal Service Building Design Standards.....	13
3-1.2 Functional Design Specifications.....	14
3-1.3 Postal Mechanization Standards.....	14
3-2 Construction Contract Solicitation.....	14
3-2.1 Contents.....	14
3-2.2 Postal Clauses and Provisions.....	15
3-3 Construction Contract Specifications.....	15
3-3.1 General.....	15
3-3.2 Supplementary Conditions.....	16
3-3.3 Technical Specifications.....	16
3-3.3.1 General.....	16
3-3.3.2 Division 1, General Requirements.....	16
3-3.3.3 Divisions 2 Through 16.....	16
3-3.3.4 Division 17, Mechanization.....	18
3-4 Contract Drawings.....	18
3-5 Correspondence and Minutes.....	19
3-6 Schedule of A/E Submissions.....	20
3-7 Identification of Contract Deliverables.....	20
4 Review and Approval.....	21
4-1 Inspection of Professional Services.....	21
4-2 Approval of Design.....	21

---

# Part I

## General Instructions for A/E Services

### 1 Overview

#### 1-1 Authority and Responsibility

---

 Clause FB-213

These instructions describe the professional services, specifications, drawings, cost estimates, and submissions to be provided by the architect and/or engineer (A/E) under contract with the Postal Service. Within the scope of the contract, the A/E furnishes all services necessary to design a complete, functional, and economical postal facility. As part of the responsibilities, the A/E provides investigations necessary to determine requirements and coordinates with all authorities having jurisdiction over the project to ensure that construction complies with applicable federal, state, and local laws and local codes and ordinances.

The information in this part outlines the Postal Service requirements, the data to be furnished, the parameters of design, and the procedures to be followed by the A/E in developing and completing services. The A/E must provide copies of these instructions to staff and consultants to ensure compliance with all contract requirements.

The A/E must not undertake work that the firm considers to be a cost or schedule modification to the contract without prior written authorization from the contracting officer (CO).

#### 1-2 Definitions and Roles

---

Handbook P-2, 1.6

##### 1-2.1 Construction Administrator

On larger projects for which the A/E provides construction management services, the construction administrator is the on-site senior representative of the A/E. This person directs the daily technical and managerial efforts of the A/E during the construction and postconstruction phases.

##### 1-2.2 Construction Manager

The Postal Service may, at its option, retain a firm to provide construction management assistance. The construction manager (CM) is responsible for performing technical and managerial functions during design and construction. If a CM is retained during the design phase, the CM coordinates all A/E efforts for the Postal Service. CM responsibilities during design primarily consist of monitoring the A/E design and assisting the Postal Service in obtaining a building that can be constructed economically and in a timely manner. The CM may assist the Postal Service in performing value engineering and constructability reviews.

---

### 1-2.3 Contracting Officer

The contracting officer refers to the person executing this contract on behalf of the Postal Service. Contracting officers have the authority to enter into, administer, and terminate contracts and to make related decisions. They are responsible for ensuring the performance of all actions necessary for efficient and effective purchasing, ensuring compliance with the terms of the contracts, and protecting the interests of the Postal Service in all of its contractual relationships. Contracting officers have wide latitude to exercise sound business judgment based on the competitive and business needs of the Postal Service.

In meeting these responsibilities, contracting officers are expected to consult and confer with their internal business partners and purchase teams in addition to other specialists such as assigned counsel and the Inspection Service.

Contracting officers are also responsible for managing contractors and A/Es by overseeing the integrity and effectiveness of the contracting process, ensuring that all contractors and A/Es are treated fairly and objectively, and maintaining effective communications during contract performance.

### 1-2.4 Contracting Officer's Representative

Certain contracting officer responsibilities relating to suppliers and contractors may be performed by individuals acting on behalf of the contracting officer, if so appointed by the contracting officer. These individuals are referred to as contracting officer's representatives (CORs). Delegation of authority by a CO to a COR must be made in writing.

### 1-2.5 Lessor

The lessor is the party whose proposal or agreement to lease is accepted by the Postal Service.

### 1-2.6 Postal Service Project Manager

The Postal Service project manager (PM) is in charge of administering and directing design and construction contracts, including contract administration, payment requests, change requests and approvals, cost, and schedule control. The project manager is the point of contact for the A/E, construction manager, and construction contractor.

### 1-2.7 Resident Engineer

On projects with a resident engineer, the resident engineer is the on-site technical representative of the Postal Service authorized to act, within limitations, on behalf of the Postal Service. When a CM has been retained, the resident engineer is a member of the CM's staff; otherwise, the resident engineer is a member of the A/E staff.

---

*Purchasing Manual 1.5*

 Clause B-1

---

Handbook P-2, 6.1.1b

 Clause OB-21

---

## 1-3 Design Approach and Economy in Design and Construction

---

### 1-3.1 Design Functional Overview

The primary functions of a postal facility are to provide service to customers and to facilitate the processing and distribution of mail. Most of the building and site areas are designed to accommodate these functions. In addition to the employee workroom, the facility has administrative and support spaces, a post office lobby, and customer service areas, where applicable, that directly serve the public. Larger postal facilities may include a vehicle maintenance facility (VMF) for postal vehicles.

Postal facilities must be designed to be safe, functional, and cost-effective. They must provide friendly, businesslike, and efficient environments for the marketing of postal services and in which employees work.

The exterior building design and site development must complement and be in keeping with the design of other commercial and industrial buildings in the local community. The building must be easy to identify as a post office and must have easily identified entrances for both customers and employees.

Effective use of the Postal Service logo and sign and low maintenance landscaping are essential. Landscaping must be well chosen and well placed to enhance the appearance of the facility without blocking required viewing. Sites should not be overlandscaped, but should be carefully planned to be economical and effective. Plants must be chosen that are native or adapted to the area and require minimum maintenance.

Access to and from customer and employee parking areas must be safe, convenient, and pleasant. Attractive, durable materials are to be used consistently throughout the building. Building styles that are not responsive to regional and local design influences are inappropriate. Security features must be unobtrusive. Chain-link fencing and barbed wire must be made as attractive as possible without compromising security.

Customer service areas must have a unified appearance, with services, products, and information presented in an organized and well-designed manner in accordance with postal guidelines. The work and employee amenity areas must be well organized, safe, bright, colorful, spacious, well finished, and easily maintainable.

### 1-3.2 Cost Factors

It is essential to obtain the best value for money spent on facilities. Although buildings are seen as an investment in achieving high service goals, customer satisfaction, and good employee morale and productivity, economy in facility construction, operation, and maintenance is a major goal of the Postal Service. In order to achieve this goal, (a) only those elements that are necessary for the facility to function are to be provided and (b) all building, structure, and utility systems proposed for use to meet the level of quality desired by the Postal Service must also be low in cost and energy efficient, based on 20-year life-cycle cost analyses.

Therefore, the A/E must, as part of the normal design service, make a cost analysis of all building and mechanical systems based on a 20-year life cycle and must be prepared to demonstrate to the Postal Service that proposed systems and materials will achieve the greatest life-cycle cost benefit.

---

The Postal Service may, at its discretion, review the project for value engineering. This will be done before, or at the time of, the intermediate submission acceptance, and the findings will be reviewed with the A/E. After consultation with the Postal Service and within the scope of contract requirements, the A/E must incorporate into the design, without additional design fee, those items the Postal Service determines will achieve the maximum life-cycle cost benefit.

### 1-3.3 **A/E Cost Estimate**

If the A/E cost estimate at any submittal exceeds the construction cost limit as adjusted, the A/E must notify the Postal Service project manager of this one week before the shipment of the submittal. A cost estimate that indicates an overrun automatically makes the submittal unacceptable. The contractor must provide written reasons for the situation and recommend actions to reduce the cost to the adjusted construction cost limit.

-  Clause FB-209
-  Clause FB-224
-  Clause FB-229

---

## Part I

# General Instructions for A/E Services

## 2 Regulations

### 2-1 Codes, Regulations, and Permits

---

The Postal Service policy concerning codes, regulations, and permits is based on design and construction of the types of facilities listed below. The A/E must prepare the construction documents accordingly.

- a. **Postal Service-Owned Properties.** The Postal Service owns the land and all improvements.
- b. **Postal Service-Owned Improvements on Leased Land.** In certain locations, the Postal Service may lease land on which it designs, constructs, and owns the building and the site improvements.
- c. **Leased Postal Facilities.** Leased postal facilities that are privately owned must be designed in full compliance with applicable codes and regulations both within and beyond the property lines. The lessor must obtain all necessary permits.

In compliance with Postal Service policy, both leased and owned facilities must be designed and constructed to comply with all state and local building code requirements and national standards, unless otherwise specifically instructed.

The provisions governing codes, regulations, and permits as they apply to construction contractors are set forth in Clause B-49, Building Codes, Fees, and Charges, in Section G, Special Clauses, of the construction contract, which states:

 Clause B-49

- a. State and local building codes and regulations do not apply as a matter of law to work inside the property line of Postal Service-owned properties, but generally do apply to Postal Service-leased properties. In compliance with Postal Service policy, the contractor must comply with all state and local building code requirements unless otherwise specifically provided.
- b. The supplier must pay all fees and charges for connections to outside services and for the use of property outside the site.

For Postal Service-owned properties, clause B-49 must **not** be interpreted to mean that a building permit is required to be obtained or that the plans must be submitted for approval by the local building department. However, permits and fees for connections and outside services, as noted in clause B-49, must be paid by the construction contractor. The A/E must keep the local building officials and other agencies reviewing the project informed of the project's progress and must provide them with courtesy copies of the preconcept, concept, intermediate, final, and solicitation submissions to the Postal Service for review. The A/E must coordinate the design with the agencies to ensure that there is agreement for such items as utility connections, curb cut locations, storm-water disposal, and so forth. The A/E must document all discussions and agreements

---

with the agencies. If review fees are required, the A/E must determine the review fees and advise the Postal Service, who may authorize payment for these services.

For Postal Service-owned properties and Postal Service-owned improvements on leased land, the latest edition of the National Fire Protection Association Life Safety Code (NFPA 101) applies as a minimum design standard, subject to more stringent provisions by state or local codes.

If Postal Service requirements are determined to be in conflict with any codes or regulations, the A/E must notify the Postal Service immediately in writing describing the conflict, defining alternatives, and recommending the code or regulation to be applied.

Depending on the geographical location of the facility, the design must comply, at a minimum, with the seismic provisions of one of the three model building codes. These include the Uniform Building Code (UBC), the Building Officials Code Administration (BOCA), and the Standard Building Code (SBC). The code selected must be the one commonly adopted in the area where the facility is to be located.

## 2-2 Compliance With Federal Policy Requirements

---

The A/E must prepare the construction documents to comply fully with current federal policy requirements, including all changes and amendments. Although it is the policy of the Postal Service to comply with the listed federal standards, Postal Service standards and specifications are usually more stringent. When that is the case, Postal Service standards will govern.

### 2-2.1 National Environmental Policy Act

Requirements of the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, 83 Stat. 852, 42 *United States Code* (U.S.C.) 4321, et seq.) are covered in Handbook RE-6, *Facilities Environmental Guide*.

### 2-2.2 Occupational Safety and Health Act

The requirements of the Occupational Safety and Health Act of 1970 (Public Law 92-596, 86 Stat. 1590, 42 U.S.C. 4321) are covered in Occupational Safety and Health (OSHA) Standards (29 *Code of Federal Regulations* (CFR) 1910) and Management Instruction AS-510-87-3, *Compliance with OSHA Standards — Facility Construction Program*.

### 2-2.3 Equal Employment Opportunity and Affirmative Action Programs

Solicitations for construction contracts and contracts with subcontracts of \$10,000 or more contain Provision 9-2, Certification of Nonsegregated Facilities; Provision 9-5, Notice of Requirement for Equal Opportunity Affirmative Action; Clause 9-7, Equal Opportunity; Clause 9-8, Affirmative Action Compliance Requirements for Construction; Clause 9-9, Equal Opportunity Preadward Compliance of Subcontracts; Clause 9-13, Affirmative Action for Handicapped Workers; and Clause 9-14, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era.

---

Handbook RE-6

---



Clause 9-7



Clause 9-8



Clause 9-9



Clause 9-13



Clause 9-14



Provision 9-2



Provision 9-5

---

## 2-2.4 Energy Conservation

The requirements for energy conservation are set forth in the Energy Policy and Conservation Act of 1975 (Public Law 94-163); Executive Order 12003, issued on July 20, 1977; and the National Energy Conservation Policy Act of 1978 (Public Law 95-215).

## 2-2.5 Historic Preservation

The requirements for historic preservation are set forth in the National Historic Preservation Act of October 15, 1971, and regulations of the Advisory Council on Historic Preservation, "Procedures for the Protection of Historic and Cultural Properties" (36 CFR 800, 39 *Federal Register* (FR) 3366, January 25, 1974).

## 2-2.6 Federal Fire Prevention Control Act of 1974

The requirements of the Federal Fire Prevention Control Act are covered in Facilities Bulletin DC-86-9.

---

Facilities Bulletin  
DC-86-9

---

## 2-2.7 Randolph-Sheppard Act Amendments of 1974

The Randolph-Sheppard Act Amendments of 1974 (Public Law 93-516, Title II, 20 U.S.C. 107a), a regulation of the Department of Health, Education and Welfare, "Vending Facility Program for the Blind on Federal and Other Property," 45 CFR 1369; 42 FR 15810, March 23, 1977, provides priority for visually impaired persons to operate vending facilities in postal facilities. The selection of a suitable site for a vending facility may be subject to approval by the state licensing agency. The location and design of all other food service operations, such as cafeterias or vending machines, within postal work areas are under Postal Service control. Questions by state licensing agencies regarding food service operations and requirements within postal areas must be referred to the Postal Service for reply.

## 2-2.8 Physically Handicapped

The Architectural Barriers Act of 1968, as amended (Public Law 94-541, October 18, 1976; 42 U.S.C. 4151-4157), applies to postal facilities. Requirements of the act are covered in Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*, or by more stringent local codes that apply. A specific statement certifying compliance with these requirements must be submitted by the contractor as part of the final submission (to be included on the drawing's cover sheet).

---

Handbook RE-4

---

## 2-2.9 Preference for Domestic Construction Materials

The design produced by the A/E must allow the construction contractor to comply with the Postal Service policy regarding preference for domestic construction materials.

---

*Purchasing Manual*  
1.7.12

---

 Clause 1-10

## 2-2.10 Labor Standards for Construction

Construction contracts over \$2,000 include Clause 9-2, Contract Work Hours and Safety Standards Act — Overtime Compensation, and Clause 9-3, Davis-Bacon Act.

 Clause 9-2  
 Clause 9-3

---

### 2-2.11 Flood Hazard Protection

---

Handbook RE-6

---

Compliance with Executive Order 11988, Floodplain Management, the National Flood Insurance Act of 1968, and the Flood Disaster Protection Act of 1973 is required. These requirements are covered in Handbook RE-6.

### 2-2.12 Vapor Recovery

---

Handbook AS-551,  
*Clean Air Act  
Compliance Guide*

---

Postal Service policy is to comply with the latest Environmental Protection Agency (EPA), state, and local requirements for gasoline vapor recovery in effect at the time of design.

### 2-2.13 Clean Air Act, Clean Water Act, and Safe Drinking Water Act

The A/E is responsible for the following:

- a. Ensuring that the design furnished under the contract complies with federal, inter-state, state, and local requirements that result from the Clean Air Act, as amended, the Clean Water Act, as amended, and the Safe Drinking Water Act, as amended.
- b. Determining from the appropriate state or local authorities responsible for monitoring conformance to air pollution emission standards and water pollution standards whether or not permits or approvals to construct or operate the facility are required for compliance with the these acts.
- c. Preparing and filing the applications for such permits or approvals if they are required. Any permits or approvals must be included as part of the construction documents submitted for intermediate design review.
- d. If local or state permits and/or approvals cannot be officially obtained during the design period, the A/E must advise the project manager about this and must include a requirement in the solicitation documents making it the contractor's responsibility to obtain such permits and/or approvals.

### 2-2.14 Small, Minority-Owned, and Woman-Owned Business Requirement

The requirements for small, minority-owned, and woman-owned businesses must be met as follows:

- a. Detailed subcontracting goals for these types of business must exist on all construction projects over \$500,000.
- a. The A/E must submit and negotiate a subcontracting plan that separately addresses subcontracting with small, minority-owned, and woman-owned businesses. This plan is to be included in and made a part of the contract. The subcontracting plan must be negotiated within the time specified by the contracting officer. Each solicitation and construction contract must include Provision 3-1, Notice of Small, and Minority-Owned, and Woman-Owned Business Subcontracting Requirements; Clause 3-1, Participation of Small, Minority-Owned, and Woman-Owned Businesses; and Clause 3-2, Small, and Minority-Owned, and Woman-Owned Businesses Subcontracting Requirements.

 Clause 9-8  
 Clause 3-1  
 Clause 3-2  
 Provision 3-1

- 
- b. The A/E must assist the CO in developing goals based on the A/E's investigation of the availability of qualified small, minority-owned, and woman-owned businesses in the general area of the project. (Information is available from a variety of sources, which include the U.S. Department of Commerce's Minority Business Development Agency and Minority Business Opportunity Committees, Small Business Administration, the Association of General Contractors of America, American Consulting Engineers Council Research and Management Foundation, minority clearinghouses, and so forth.) The A/E does not need to check the responsibilities or determine each firm's capabilities in detail, but the A/E must verify that the firm is active. The A/E must prepare a list of businesses, with addresses and specialties, that may be furnished to all prospective offerors for information and guidance.
  - c. A recommendation of less than 5 percent or more than 20 percent of the dollar value of the estimated work to be subcontracted must be thoroughly documented and justified by the A/E.

### 2-2.15 Asbestos

EPA regulations (40 CFR 61) prohibit the use of spray asbestos material and molded asbestos materials that are friable. The use of any other friable asbestos-containing materials is not permitted by the Postal Service. Demolition of existing structures containing asbestos must also follow latest EPA and OSHA regulations and any applicable state asbestos regulations. The A/E is to provide a statement on the drawings that the design does not include asbestos.

---

Handbook RE-6

---

Handbook AS-556,  
*Asbestos Management  
Guide*

---

 Clause FB-273

### 2-2.16 Polychlorinated Biphenyls

Follow the latest EPA regulations (Toxic Substances Control Act) regarding disposal, marking, manufacturing, distribution, and use of polychlorinated biphenyls (PCBs). Inspect existing buildings to be substantially renovated or demolished for PCBs. Disposal of PCBs must be in accordance with existing EPA regulations. The use of PCBs in transformers and capacitors in postal facilities is not permitted.

### 2-2.17 Urea Formaldehyde Foam

The use of urea formaldehyde foam is prohibited in postal buildings.

### 2-2.18 Underground Storage Tanks

The Hazardous and Solid Waste Amendments of 1984 (Public Law 98-616), which amend the Solid Waste Disposal Act of 1965, mandate handling hazardous materials in a way that does not threaten the environment. The final EPA regulations for installation of underground storage tanks to store regulated substances apply to postal facilities. Handbook AS-503, Module 4C, provides guide specifications for new tanks and associated piping. It is Postal Service policy to comply with all state underground storage tank design, installation, operational, and monitoring requirements only if they meet or exceed the requirements detailed in Handbook AS-503.

---

Handbook AS-503

---

---

### 2-2.19 Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations require the reporting and proper remediation of any hazardous substances discovered on the site. Remediations are to be conducted in accordance with the latest EPA and state hazardous waste contingency plans.

### 2-2.20 Resource Conservation and Recovery Act

Follow the latest EPA regulations, as described in the Resource Conservation and Recovery Act (RCRA), regarding the transport, storage, or disposal of hazardous substances. The removal of hazardous substances from the site must also comply with all U.S. Department of Transportation, state, and local hazardous waste regulations.

### 2-2.21 Wetlands

The Postal Service must comply with Executive Order 11990, Protection of Wetlands, as well as the U.S. Army Corps of Engineers Wetlands Regulations. No action can occur in a wetlands area before all permit requirements are completed and a determination by the Postal Service of no practicable alternative is issued. In addition, Postal Service policy is to comply with state and local wetlands regulations. Requirements are covered in Handbook RE-6.

---

Handbook RE-6

---

### 2-2.22 Coastal Zone Management

A consistency determination must be issued by the Postal Service on any project located within a state-established coastal zone management district. No construction can occur before the consistency determination is issued. Requirements are covered in Handbook RE-6.

---

Handbook RE-6

---

### 2-2.23 Lead-Free Materials

The A/E is responsible for providing a design that complies with all applicable environmental and health regulations pertaining to lead-free materials. A certification that the project has been designed to meet lead-free requirements should be included on the drawing's cover sheet.

## 2-3 Compliance With State Regulations

---

 Clause FB-216

The A/E firm must employ a registered architect licensed to practice in the state in which the project is located. The A/E must also ensure that the structural, electrical, mechanical, and other engineering disciplines necessary in the design of the project are under the responsible direction of registered professional engineers who are licensed to practice in the state in which the project is located.

---

# Part I

## General Instructions for A/E Services

### 3 Documentation

#### 3-1 Design Data

---

The project manager provides the A/E with a package of background information and design criteria that the A/E needs to determine the basic design requirements for the proposed facility. The information provided to the A/E is listed in the List of Attachments to the A/E contract.

The A/E is responsible for obtaining and using all current Postal Service design standards, design criteria, guidebooks, handbooks, and other required information that is *not* listed in the List of Attachments to the A/E contract. Part VI of this handbook contains a chapter with attachments and references.

Design data consists of, but is not limited to, these instructions and the material described below.

##### 3-1.1 Postal Service Building Design Standards

The *Building Design Standards* are intended to provide general design guidance. The *Building Design Standards* do not relieve the A/E from the responsibility of producing a complete, coordinated, accurate, and effective design. The *Building Design Standards* consists of four major components and are available on a CD-ROM. The A/E is responsible for obtaining and using the most current *Building Design Standards*. Following are the four major components of the *Building Design Standards*:

- a. **Handbook AS-503, Standard Design Criteria.** Handbook AS-503 acts as an umbrella document to establish the overall performance criteria for all facility types, including site adapted *standard* designs, alternate quarters, and repair and alteration projects. Handbook AS-503 is organized into four modules: General Criteria, Specific Criteria, Special Facility Types, and Special Components. The design criteria in each module may include, but not be limited to, the following:

- (1) Design criteria include:
  - (a) Site environmental assessment.
  - (b) Site development.
  - (c) Building design standards.
  - (d) Energy saving design.
  - (e) Cost reduction and value engineering requirements.
  - (f) Fire protection and safety.

---

Handbook P-2,  
4.4.2.e-21

---

 *Building Design Standards*

---

Handbook AS-503

---

- (2) Space requirements.
- (3) Environmental requirements.
- b. **Standard Designs.** The standard designs provide from 10 percent to 90 percent completed designs of various facility types.
- a. **Standard Detail Library.** The *Standard Detail Library* is a library of postal-specific construction details for use on all facility types.
- a. **Master Specification.** This document provides a single unified source of guideline specifications for small and medium standard design projects as well as for alternate quarters and repair and alteration projects.

 Building Design Standards

 Building Design Standards

 Building Design Standards

### 3-1.2 Functional Design Specifications

The Functional Design Specifications (FDS) provide the functional requirements to be used in designing the facility. The FDS consists of a narrative specification, a functional site plan, a functional floor plan, the operational systems, and special design requirements for the specific facility.

### 3-1.3 Postal Mechanization Standards

For mechanized postal facilities, the postal facility standards include (a) Handbook AS-505, *Mechanization Design Specifications*, for design, (b) *Fixed Mechanization Standard Drawings MD-15 Series* and (c) specification number USPS-M-5000, *Specification Standards for Mechanized Mail Processing Systems*, all of which must be incorporated into the working drawings by reference.

Handbook AS-505
MD-15 Series
USPS-M-5000

## 3-2 Construction Contract Solicitation

### 3-2.1 Contents

The Postal Service prepares the construction contract solicitation, proposal, and award documents in the format using the Design and Construction Contract System (DCCS) as shown below:

Section	Description
<b>Part 1 — Schedule</b>	
A	Items and Prices
B	Specifications or Statement of Work
C	Delivery or Performance
D	Packaging and Marking
E	Inspection and Acceptance
F	Payment and Funding

Section	Description
<b>Part 2 — Clauses and Attachments</b>	
G	Special Clauses
H	General Clauses
I	List of Attachments
<b>Part 3 — Solicitation Provisions</b>	
J	Instruction to Offerors
K	Solicitation Notices and Provisions
L	Representations and Certifications
M	Evaluation and Award Factors

Materials required for inclusion in Sections A to M include, but are not limited to, instructions to offerors, performance bond and payment bond forms, solicitation provisions, general contract clauses, special contract clauses, current wage rate determinations, liquidated damages, and the goals for equal opportunity and affirmative action.

The wage rate schedule must be amended as required during the solicitation period to be current to within 10 days of the opening of proposals.

Section I of the construction contract solicitation contains a list of attachments, as prepared by the A/E, which will be incorporated by the Postal Service into the construction contract by reference. Examples include, but are not limited to, drawings, specifications, subsoil reports, boring logs, and location plans.

### 3-2.2 Postal Clauses and Provisions

*Purchasing Manual*  
Appendixes A and B

The *Purchasing Manual*, Appendix A, provides the required format and content of contract solicitations. It also identifies the postal provisions that must be included in all solicitations. The *Purchasing Manual*, Appendix B, sets forth the general clauses that must be included in solicitations and contracts. It is the A/E's responsibility to be thoroughly knowledgeable about all current postal design- and construction-related provisions and clauses, whether or not they are specifically referenced.

The A/E must review the clauses and provisions mandated by the *Purchasing Manual* and Handbook P-2, *Design and Construction Purchasing Practices*, and advise the contracting officer in writing of the need for any additional solicitation and/or contract clauses or clauses that may require clarification, based on the specific requirements of the project. The A/E is responsible for preparing construction documents that do not contradict any current postal design- or construction-related clauses, provisions, or guidelines.

## 3-3 Construction Contract Specifications

 Clause FB-223

### 3-3.1 General

The A/E is to prepare the construction contract specifications, which consist of supplementary conditions and technical specifications. The construction contract

---

specifications must not repeat or conflict with the supplementary conditions or the postal provisions, general contract clauses, and special contract clauses in Sections A to M of the construction contract solicitation.

The construction contract specifications do not reference postal facility standards, except for mechanization. Use Division 17 for the fixed mechanization specifications when mechanization is included in the construction contract. Show the project number assigned by the Postal Service on the cover of all facility specifications and at the bottom of each page of sections 17.8, 17.9, and 17.10 of the mechanization specifications.

The A/E is to submit all construction contract specifications on 8-1/2" x 11" sheets.

### 3-3.2 Supplementary Conditions

The A/E develops and recommends all supplementary conditions to augment or modify the required clauses and provisions mandated by the *Purchasing Manual* or Handbook P-2. All supplementary conditions developed or recommended by the A/E must not repeat or conflict with the technical specifications or the postal provisions, general contract clauses, and special contract clauses in Sections A to M of the construction contract solicitation.

### 3-3.3 Technical Specifications

#### 3-3.3.1 General

Technical portions of the specifications must not repeat or conflict with the supplementary conditions, general requirements, or the postal provisions, general contract clauses, and special contract clauses in Sections A to M of the construction contract solicitation. A sample construction contract, including contract provisions and clauses in Sections A to M, may be provided to the A/E for reference.

The A/E reviews the *Master Specification*, Introduction and Instructions, before preparing the technical portion of the project manual.

 Building Design Standards

#### 3-3.3.2 Division 1, General Requirements

The A/E must modify Division I, General Requirements, included in the *Master Specification*, as required to address specific nontechnical project conditions. The A/E must review these specifications to ensure that no conflicts exist. The A/E is solely responsible for the accuracy and continuity of the construction contract specifications.

The construction contractor is responsible for preparing and submitting a proposed schedule of submittals to the Postal Service for review and approval in accordance with the *Master Specification*, section 01330. The A/E is responsible for reviewing the proposed schedule of submittals and identifying any specific submittals that may be required due to the nature or complexity of the specific project.

#### 3-3.3.3 Divisions 2 Through 16

 Clause FB-223

The A/E must modify the technical specifications from Division 2, Site Work, through Division 16, Electrical, included in the *Master Specification*, to address specific technical project conditions. The A/E must provide additional original technical specifications as necessary when the required specifications do not exist in the *Master*

---

*Specification.* Do not use exculpatory clauses (i.e., escape clauses); instead, use clearly defined requirements. Some additional technical specifications that may need explanation are as follows:

- a. **Product Descriptions.** Include the following information:
  - (1) When standard or modified commercial products will meet Postal Service requirements, a product description must be used that includes:
    - (a) A common, generic identification of the item.
    - (b) Known, acceptable, brand-name products, identified by model or catalog number, and the commercial catalogs in which they appear.
    - (c) The name and address of the manufacturer, producer, or distributor of each brand-name product referenced.
    - (d) A description of any modification required.
  - (2) If at least three acceptable brand-name products are specified, the solicitation may provide that only proposals for those products are to be considered. It is in the Postal Service's best interests, however, that all acceptable brand-name products be identified.
  - (3) If fewer than three acceptable brand-name products are specified or if proposals for other than those specified are to be considered:
    - (a) The product description must include a description of the item's essential characteristics, such as kind of material, size or capacity, equipment with which the item is to be used, and restrictive operating or environmental conditions.
    - (b) The brand names in the product description must be followed by the words "or equal."
- b. **Postal Service Property.** The Postal Service may provide materials or other property to contractors when it will result in significant economies and/or standardization, will expedite production, or is in the Postal Service's interest. The property to be furnished must be specified in the construction solicitation in sufficient detail to enable offerors to evaluate it accurately. The A/E is responsible for coordinating with the COR and PM to ensure that the construction contract documents clearly define the requirements and extent of Postal Service property.
- b. **Postal Service Direct-Buy Equipment or Supplies.** The A/E is responsible for producing a design that is in conformance with the Postal Service's current policy on incorporating direct-buy equipment and supplies. The A/E must clearly define in the specifications and on the drawings the items and installation requirements for direct-buy equipment and supplies. The A/E is responsible for coordinating the use of direct-buy equipment and supplies with the postal project manager.
- c. **Highway Specifications.** Highway specifications for the state in which the project is located must be referenced for paving, grading, sidewalks, curbs, and gutters.
- d. **Testing.** Testing to establish the contract's compliance with critical items or critical portions of the work must be specified as the contractor's responsibility. Testing must be consistent with that required under standard commercial practices. Any specified testing requirements do not limit the Postal Service from performing additional testing and inspection as deemed necessary.

---

*Purchasing Manual*  
2.2.7

 Provision A-12

 *Building Design Standards, Master Specification* 01116

- 
- e. **Critical Submittals.** Submittals such as shop drawings, samples, and certificates must be specified as necessary to establish compliance of the contract with critical portions of the work. The A/E must not require submittals for minor commercial items or for items of marginal value. The A/E must include in the mechanical and electrical sections the extent of a manufacturer's literature, rating data, performance curves, spare parts lists, and shop drawings that must be furnished for review and approval before purchasing.
  - f. **Heating and Air-Conditioning Testing.** The specifications must require the contractor to make field tests of heating and air-conditioning systems to demonstrate that the equipment will perform as required. The results of the tests are to be submitted before final inspection. Manufacturer's representatives may be required to be present for inspection, start-up, and instructions in the operation and maintenance of equipment.
  - g. **Major Item Submittals.** The specifications must require that the contractor furnish manufacturer's manuals, spare parts lists, diagrams, instructions, data performance curves, and shop drawings as approved for major items of equipment to be installed in the work.

#### 3-3.3.4 Division 17, Mechanization

Division 17 is to be used for the fixed mechanization specifications when mechanization is used in the project.

### 3-4 Contract Drawings

 Clause FB-225

The contract drawings are the graphic representation of the work for the project that indicate the form, quantity, and relationship of the construction materials and products. The A/E should follow the general guidelines provided in the most current edition of the *Building Design Standards* and the requirements of Clause FB-225, Drawings (Architect-Engineer). Contract drawings must be prepared as follows:

- a. All required drawings must be prepared and furnished under the contract in AutoCAD (electronic format) disk format, as directed by the CO. Exceptions must have prior written approval from the CO. The CO defines the submittal requirements for AutoCAD and electronic media (disks) and hard copies.
- b. All final drawings must be 8-1/2" x 11", 11" x 17", 18" x 24", 24" x 36", or 30" x 42", trim-to-trim, with Postal Service title block, graphic scale.
- c. Drawing methods and quality must permit satisfactory, clear, and legible one-half size reproduction.
- d. Lettering on the drawings is not to be smaller in height than 0.10 inch.
- e. All final drawings must be detailed working drawings as necessary for efficient execution of the construction work. They must conform to the general requirements in this section and the requirements previously stated.
- f. All original drawings must be prepared at a scale adequate to properly present the design data development including detailed features. Drawing scales for buildings or structures smaller than 1/8-inch = 1 foot are not permitted without prior approval from the CO.

- 
- g. The electrical design must be separated into the following four plans unless otherwise specifically required by the CO or as provided in the contract:

- (1) Power.
- (2) Lighting and receptacles.
- (3) Security, telephone, and intercommunication systems.
- (4) Fire alarm.

The A/E must provide separate designs for specialty systems, such as lightning protection, depending on the complexity and other requirements for the project.

- h. Similarly, the plumbing, heating, and air-conditioning must be separated when necessary to avoid congestion.
- i. A minimum scale of 1/4-inch = 1 foot must be used for all details of areas of congestion such as mechanical rooms, toilet rooms, and the like, and as may otherwise be designated by the contracting officer. The drawing scale for site, utility, and/or other related work (work outside the 5-foot building line), including details (engineer's), must clearly and adequately reflect the design data developed.
- j. Drawings must be organized and must provide appropriate details of the site work (layout, grading, paving, and drainage) and the utilities (water, sewer, gas, power, and communications) separate from the building and/or structure drawings.

Organize sets and designate sheets according to discipline, such as civil (C), architectural (A), structural (S), mechanical (M), plumbing (P), fire protection (F), electrical (E), and mechanization (ME).

- k. Drafting, lettering, shading, and hatching must allow for legible reproduction to one-half size.
- l. Adapt the postal facility standards for the specific project requirements and do not include them by reference except for mechanization.
- m. Provide a space and area summary on the first architectural plan sheet.
- n. Date all submittals.
- o. Provide details and schedules on the drawings, not in the specifications.
- p. The title block must be vertically aligned with the right margin of the sheet, with the sheet title and number at the bottom of the sheet. Text must be printed horizontally within the title block. Include the following in the title block: agency identification, Postal Service project number, and project title.

### **3-5 Correspondence and Minutes**

---

Direct all correspondence relating to this project to the authorized representative of the CO. The A/E prepares minutes of the orientation meeting, all review meetings, and telephone conversations with authorized postal representatives, and forwards two typed copies within 5 working days to the COR. These minutes must include the names of those attending the meeting or involved in the telephone conversation, the items discussed, and decisions reached. The Postal Service will respond to the minutes only if it takes exception to an item.

---

In addition, the A/E must maintain a log of significant events and decisions with adequate documentation and minutes of all meetings, correspondence, and submissions to local officials, agencies, or jurisdictions that may affect the project.

### **3-6 Schedule of A/E Submissions**

---

Postal Service personnel review the project primarily to monitor compliance with scope, cost, energy, and functional requirements. These reviews do not relieve the A/E of professional or contractual responsibilities. A list of drawings and documents the A/E is required to submit upon completion of each design phase is provided by the Postal Service during the preorientation meeting, and is included in the delivery schedule contained in Section C, Delivery or Performance, of the A/E contract. Specific mailing and distribution instructions are contained in Section D, Packaging and Marking.

Each submission must be delivered on time and be fully complete, containing all deliverable items described for the respective phase of project completion. When submittals are found to be incomplete or lacking substance, the Postal Service may reject the submission without further review until the deficiencies are resolved by the A/E and any additional information or drawings are submitted to the Postal Service. Correction of deficiencies or makeup of time delays are at the A/E's expense and at no cost to the Postal Service.

### **3-7 Identification of Contract Deliverables**

---

 Clause OB-19

All contract deliverables must be identified in accordance with Clause OB-19. Unless otherwise specified, the cover page of each document prepared and submitted by the A/E to the Postal Service under this contract must include the following information:

- a. Name and city of project location.
- b. Name and business address of the contractor.
- c. Contract number.
- d. Facilities Management System for Windows (FMSWIN) project number.
- e. Name, position, and office location of the Postal Service's COR.
- f. Date of report.

---

## Part I

# General Instructions for A/E Services

## 4 Review and Approval

### 4-1 Inspection of Professional Services

---

The contracting officer may, at any time or place, inspect the services performed and the products, along with documents and reports. No matter what type of contract is employed, and in addition to any specific standards of quality set out in this agreement, the contracting officer may reject any service or products that do not meet the highest standards of professionalism. No payment will be due for any services or products rejected under this clause.

Acceptance of any product or service does not relieve the A/E of the duties imposed by the code of professional ethics, and the A/E remains liable, for the period allowed under federal law for claims by the United States, for any errors or omissions occurring during performance. All partners or principals agree that they will be jointly and severably liable for such errors and omissions.

### 4-2 Approval of Design

---

The A/E is responsible for the professional quality, technical accuracy, and coordination of all designs, drawings, specifications, and other services furnished by the A/E under this contract. The A/E must, without additional compensation, correct any errors or deficiencies in the design, drawings, specifications, and other services.

As part of the A/E's responsibility under this contract, the A/E must coordinate with state and local authorities as necessary to ensure that design and construction of the project comply with applicable state and local codes and ordinances.

Any Postal Service review, approval, or acceptance of, or payment for, any services required under this contract must not be construed to waive any rights arising out of the performance of the contract. The A/E remains liable to the Postal Service, in accordance with applicable laws, for all liability or damages to persons or property caused by the A/E's negligent performance of any services furnished under the contract.

The rights and remedies of the Postal Service provided for under the contract are in addition to any other rights and remedies provided by law.

 Clause 4-5

---

*Purchasing Manual*  
4.6.3

---

 Clause FB-213

---

This page intentionally left blank

---

## Part II

# Mail Processing Facilities

## Contents

1	Predesign Phase A/E Services .....	27
1-1	Survey of Existing Facilities.....	27
1-2	Additional Services (Options).....	27
1-2.1	Boundary and Topographic Site Survey .....	27
1-2.2	Subsurface Investigation.....	27
1-2.3	Investigative Services for Existing Facilities .....	27
1-2.4	Environmental Assessment .....	28
1-2.5	Wetlands Impact Study.....	28
1-2.6	Hazardous Waste Site Assessment .....	28
1-2.7	Traffic Impact Studies .....	28
2	Design Phase A/E Services .....	29
2-1	General Design Services .....	29
2-1.1	Table of Design Phases.....	29
2-1.2	Transmitting Submissions.....	30
2-1.3	Records Ownership .....	30
2-1.4	Postal Service-Furnished Property .....	30
2-1.5	Changes.....	30
2-1.6	Meetings.....	31
2-2	Design Phase Services .....	31
2-2.1	Prerenegotiation Orientation and Negotiations .....	31
2-2.1.1	Prerenegotiation Orientation .....	31
2-2.1.2	Professional Services Estimating Sheets .....	31
2-2.1.3	Negotiations .....	32
2-2.1.4	Prerenegotiation Orientation and Negotiation Meetings.....	32
2-2.1.5	Construction Cost Limit.....	32
2-2.2	Preconcept Design Phase .....	32
2-2.2.1	Acceptance Criteria.....	32
2-2.2.2	Submission Requirements .....	33
2-2.2.3	Preconcept Design Review Meeting .....	39
2-2.3	Concept Design Phase .....	40
2-2.3.1	General .....	40
2-2.3.2	Submission Requirements .....	40
2-2.3.3	Concept Design Review Meeting .....	49
2-2.4	Intermediate Design Phase.....	49
2-2.4.1	General .....	49
2-2.4.2	Submission Requirements .....	49
2-2.4.3	Intermediate Design Review Meeting .....	55

---

2-2.5 Final Design Phase .....	55
2-2.5.1 General .....	55
2-2.5.2 Submission Requirements .....	55
2-2.5.3 Final Design Review Meeting.....	58
2-2.6 Solicitation Phase.....	58
2-2.7 Submission Checklist.....	60
2-3 A/E Modifications of Design .....	60
2-4 Additional Design Phase Services (Options) .....	63
2-4.1 Perspective Drawing .....	63
2-4.2 Supplementary Drawings .....	63
2-4.3 Mechanization Systems Description Manual .....	64
2-4.4 Roofing Consultant .....	64
2-4.5 Fire Protection Consultant .....	65
3 Construction Phase A/E Services .....	67
3-1 Design Services During Construction (Options).....	67
3-1.1 General .....	67
3-1.2 A/E Support Services .....	67
3-1.3 Submission Reviews and Approvals.....	68
3-1.3.1 Shop Drawings, Product Data, and Samples.....	68
3-1.3.2 Coordination Drawings.....	70
3-1.3.3 Schedule of Values and Progress Payments.....	70
3-1.3.4 Schedules .....	70
3-1.3.5 Spare Parts Data.....	71
3-1.3.6 Warranties and Guarantees.....	71
3-1.3.7 Operation and Maintenance Manuals .....	71
3-1.3.8 Test Reports .....	71
3-1.3.9 Change Orders and Contract Modifications.....	72
3-1.3.10 As-Built Drawings and Specifications.....	72
3-1.3.11 Electronic Format of As-Built Information .....	72
3-1.3.12 As-Built Photographs .....	73
3-1.3.13 Closeout Certificates.....	73
3-2 Modifications of Design During Construction .....	73
3-3 Field Services During Construction (Options).....	73
3-3.1 Requirement .....	73
3-3.2 General Responsibilities .....	73
3-3.3 Contract Administration.....	74
3-3.4 Field Supervision.....	75
3-3.5 Mechanization Coordination.....	76
3-3.6 Progress Meetings .....	77
3-3.7 Records.....	78
3-3.8 Construction Project File.....	78
3-3.9 Quality Control and Inspection .....	82
3-3.10 Progress Photographs .....	83
3-3.11 Schedule of Values and Payments .....	83
3-3.12 Clarifications .....	84

---

3-3.13 Operating Tests .....	84
3-3.14 Training .....	84
3-3.15 Guarantees and Instructions .....	84
3-3.16 Preoccupancy Safety and Health Inspection .....	85
3-3.17 Accessibility Inspection .....	85
3-3.18 Preliminary Completion Inspection .....	85
3-3.19 Substantial Completion Inspection.....	85
3-3.20 Final Completion Inspection.....	86
3-3.21 Final Payment Review .....	86
4 Postconstruction Phase A/E Services .....	87
4-1 Design Services After Construction (Options) .....	87
4-1.1 Record Drawings and Specifications .....	87
4-1.2 Contract Appeals .....	87
4-2 Field Services After Construction (Option).....	87
4-2.1 Six-Month Postoccupancy Evaluations .....	87
4-2.2 Guarantee Inspection.....	88
4-2.3 One-Year Warranty Inspection .....	88



This page intentionally left blank.



---

## Part II

# Mail Processing Facilities

## 1 Predesign Phase A/E Services

### 1-1 Survey of Existing Facilities

---

The architect and/or engineer (A/E) must perform all investigative research and reviews that are necessary to prepare the design. All new as well as existing facilities must be surveyed. This survey must include, but is not limited to,:

- a. Analysis of the site.
- b. Analysis of availability and capacity of underground and aboveground utilities.

On existing facilities, the A/E's survey must analyze their electrical, mechanical, and structural capabilities as well as review the existing drawings for critical inaccuracies. The survey must include interviewing Operations and Maintenance personnel and measuring existing conditions.

### 1-2 Additional Services (Options)

---

#### 1-2.1 Boundary and Topographic Site Survey

The A/E prepares, reviews, and coordinates the topographic and property line surveys, including easements, setbacks, and utility locations, necessary for completing the solicitation documents as described in the *Boundary and Topographic Site Survey* (RETB, September 1996) found in Handbook AS-503, *Standard Design Criteria*. All available Postal Service survey information must be provided to the A/E. The A/E must coordinate required soil borings, quantity, locations, depth, analysis, etc., with the environmental specialist.

---

Handbook AS-503

 Clause FB-291

#### 1-2.2 Subsurface Investigation

The A/E prepares, reviews, and coordinates the subsurface soil investigation as necessary for preparation of the solicitation documents. If sufficient information is not available at the time of contract negotiation, the A/E must submit a proposal afterward. This must be a technical proposal stating the fixed cost for accomplishing the work, with breakdown of labor, time, materials, and unit costs sufficient to perform field work, test soils, analyze results, and compile the report.

---

Handbook AS-503,  
Module 1, 1-1.2

 Clause FB-291

#### 1-2.3 Investigative Services for Existing Facilities

The A/E must perform all field investigations, measurements, surveys, and testing of existing facilities necessary to generate "as-built" drawings for the areas and systems affected by the proposed work. Investigative tests must be the nondestructive type. The A/E must visit the site, taking supporting personnel representing appropriate disciplines

---

needed to inspect the existing conditions and to take measurements, notes, and pictures, as needed, for preparing as-built drawings for areas and systems affected by the work.

#### **1-2.4 Environmental Assessment**

---

Handbook RE-6

---

The A/E must evaluate the appropriate requirements for environmental monitoring, assessment, and/or statements if this task is included in the contract. The A/E must perform the required ecological studies, including preparation of environmental assessment and impact reports. The A/E must attend public meetings and hearings as required and make presentations as necessary to governing authorities.

#### **1-2.5 Wetlands Impact Study**

---

Handbook RE-6

---

The A/E must evaluate the impact that the proposed project will have on the wetlands at the proposed site if this task is included in the contract. The A/E must provide construction guidelines and procedures required for compliance with all regulations. The A/E must attend public meeting and hearings as required and make presentations as necessary to governing authorities.

#### **1-2.6 Hazardous Waste Site Assessment**

The A/E must perform a comprehensive waste assessment of the designated site if this task is included in the contract. The A/E must procure all tests necessary to complete the assessment. The A/E must prepare a hazardous waste site assessment report substantiating the conclusions reached during the assessment. This report must include a detailed procedure or design for site remediations. The A/E must attend public meetings and hearings as required and make presentations as necessary to governing authorities.

#### **1-2.7 Traffic Impact Studies**

The A/E must perform a comprehensive traffic impact study if this task is included in the contract. The traffic impact study must include analyses and evaluations of the impact that the proposed construction would have on pedestrian and vehicular traffic, including public mass transportation and public parking. The traffic impact study must consider the proposed construction and also all long-term plans for future postal expansion. The traffic impact study must also address all restrictions due to traffic congestion and the cost of all necessary traffic improvements. The A/E must attend public meetings and hearings as required and make presentations as necessary to local and governing authorities.

# Part II

## Mail Processing Facilities

### 2 Design Phase A/E Services

#### 2-1 General Design Services

##### 2-1.1 Table of Design Phases

The following list of design phases is arranged to show the percentage of design effort completed at that phase and the purpose and location of meetings. The "cumulative percentage of total effort" may be used as a basis of payment, but is not necessarily a measurement of the completion of the construction documents (i.e., the final submission is required to be 100 percent complete).

Phase	Cumulative % of Total Effort	Purpose of Meeting or Review	Location of Meeting or Review
Prenegotiation orientation and negotiation	0	Postal Service orientation for A/E and major disciplines. Negotiate contract and establish construction cost limit (CCL).	Office of contracting officer (CO) or as designated by CO
Preconcept	10	Value engineering review. Provide guidance in operational and functional requirements.	Office of contracting officer or as designated by CO
Concept	30	Value engineering review. Accept operational and functional requirements.	Office of contracting officer or as designated by CO
Intermediate	70	Final review for compliance with value engineering comments. Verify progress of construction documents.	Office of contracting officer or as designated by CO
Final	95	Final submission. Verify completion of construction documents.	Office of contracting officer or as designated by CO
Solicitation	100	Support solicitation. Print, distribute, and manage distribution of construction documents, requests for information (RFIs), amendments, and technical evaluation.	Office of contracting officer or as designated by CO
Receive offers		Receive offers submitted to the Postal Service.	Office of contracting officer or as designated by CO

---

The A/E must provide the Postal Service project manager with a written response to all Postal Service comments resulting from design reviews within 7 calendar days after each review meeting.

### 2-1.2 Transmitting Submissions

The minimum quantity of submissions is to be determined at contract negotiations. Each submission must be delivered on time and must be fully complete, containing all deliverable items described for the respective phase of the project completion. When submittals are found to be incomplete or lacking substance, the Postal Service may reject the submission, and all additional information or drawings submitted, without further review until the A/E resolves the deficiencies. Corrections of deficiencies or makeup of time delays is at the A/E's expense and at no additional cost to the Postal Service.

To avoid unnecessary delays during the design process and any subsequent potential for causing the construction cost to escalate, it is normally expedient to use Express Mail when it is available. Use Priority Mail when mailing design submissions for Postal Service review. The A/E must include the costs of mailing items in the design expense as a lump sum price.

### 2-1.3 Records Ownership

The Postal Service may, at its option, demand and take, without additional compensation, all records relating to the services provided under this agreement. The A/E must turn over all such records upon request, but may retain copies of documents produced.

 Clause 4-7

### 2-1.4 Postal Service-Furnished Property

The A/E is responsible for ensuring that the design includes Postal Service-furnished items, equipment, and property, as applicable. The A/E must edit and modify the list of Postal Service-furnished items included in the *Master Specification*, section 01116, published on the *Building Design Standards* CD-ROM. The A/E must verify all the dimensions and must accommodate the structural and the utility (electrical, mechanical, etc.) requirements for all Postal Service-furnished items. The A/E must ensure that the design clearly defines the extents and limits of the items furnished by the Postal Service and clearly identifies all components necessary for a complete installation.

 *Building Design Standards, Master Specification* 01116

---

*Purchasing Manual* 2.2.7

---

 Clause 2-11

 Clause 2-12

 Clause 2-13

 Clause 2-14

 Clause FB-255

 Clause FB-234

### 2-1.5 Changes

Changes must be administered as follows:

- a. The A/E must not undertake work that the firm considers to be a cost or schedule modification to the contract without prior written authorization from the contracting officer.
- b. Changes in the scope of work or in the initial A/E contract are considered contract modifications.
- c. Modifications required before construction contract award are prepared by the A/E only after the contracting officer has accepted the proposed modifications in writing.

- 
- d. The A/E must prepare the necessary design drawings and specification revisions and must fulfill all applicable services related to the modification as though they were contained in the original scope of work.
  - e. The A/E must furnish an estimate of how the modification would affect the project construction cost and scheduling.
  - f. In accordance with the requirements outlined in the Design Approach and Economy in Design and Construction section of this handbook (Part I, 1-3), the A/E must incorporate into the design, without additional design fee, value engineering items that the Postal Service determines will achieve the maximum life-cycle cost benefit.

## **2-1.6 Meetings**

The A/E must deliver the required submittals to the Postal Service offices designated by the project manager in sufficient time to allow for review before the design review meetings. A minimum of 21 calendar days should be allowed for the Postal Service to review and schedule the review meeting.

An A/E representative is to attend all local field review meetings.

---

## **2-2 Design Phase Services**

### **2-2.1 Prenegotiation Orientation and Negotiations**

#### **2-2.1.1 Prenegotiation Orientation**

Before the negotiations start, the contracting officer and Postal Service personnel must review the project with the A/E and answer questions that the A/E may have concerning the project requirements. The prenegotiation orientation must also provide the A/E with an understanding of the organization of the Postal Service and the name of the project manager who is the Postal Service contact during the design phase. The project manager should provide copies of the completed and approved Form 919, *Facility Planning Data*, or Form 929, *Major Facility Planning Data*; Decision Analysis Report (DAR); Facilities Planning Concept (FPC); and all other pertinent data needed to describe the nature and scope of the project.

#### **2-2.1.2 Professional Services Estimating Sheets**

At least 5 days before negotiations, the A/E must submit a fee proposal. Sample professional service estimating sheets are provided with the A/E contract solicitation. The A/E must thoroughly review and complete all parts of the estimating sheets. All questions about the intent of the scope of work or the required services that have not been clarified during the prenegotiation orientation must be directed to the contracting officer or designated representative in writing before the A/E submits the fee proposal and before negotiations start. The A/E must submit all written questions, clarifications, and agreements with the fee proposal.

If the contracting officer's review indicates major differences in the fee amount, the CO must advise the A/E of the differences, and the A/E must clarify all misunderstandings.

---

### **2-2.1.3 Negotiations**

Fee negotiations are based on the extent of work, not on a percentage of construction costs. The Postal Service must negotiate the fee on the basis of the costs per discipline for the production of drawings, calculations, specifications, estimates, and other services.

Negotiations may be terminated whenever the contracting officer determines that further discussions are not warranted.

### **2-2.1.4 Prenegotiation Orientation and Negotiation Meetings**

The contracting officer determines, based on the size and complexity of the specific project, whether the prenegotiation orientation meeting and the negotiation meeting will be held as separate meetings or combined into one single meeting at the A/E's expense which is not to be included in the fee proposal.

The prenegotiation orientation and negotiation meetings are held at the office of the contracting officer or at a location designated by the CO. All expenses associated with prenegotiation, orientation, and negotiation, such as the preparation of negotiation forms, travel, lodging, and meals, are paid by the A/E. The amount of time necessary for prenegotiation orientation and negotiations can vary, depending on the extent of discussions.

### **2-2.1.5 Construction Cost Limit**

The established maximum construction cost agreed upon must be contractually binding and is not a cost budget target. The contract maximum must be based on the costs as though the project proposals were solicited at the time of A/E contract award. This cost may be adjusted during the life of the design contract in accordance with a building cost index that is mutually agreed upon during negotiations. The A/E is expected to provide a facility that is economical in design, construction, operation, and maintenance; satisfies postal functions; and is not to exceed the maximum construction cost limit permitted by the contract.

## **2-2.2 Preconcept Design Phase**

### **2-2.2.1 Acceptance Criteria**

When the A/E's preconcept designs as submitted do not meet Postal Service functional requirements, or where additional sketches or revised development plans are required to clarify and ensure a mutual understanding of the proposed design, additional submittals or sketches may be required. Such submittals, sketches, or resubmittals necessary to continue the design development of the project are to be supplied at no cost to the Postal Service provided the scope of work remains unchanged.

The Postal Service bases its acceptance on satisfactory adherence to Postal Service programmed space allocations, the functional relationship of major building plan elements, efficient and functional site utilization, and indications of economical design, which the concept design submission must fully develop. The concept design submission requirements must be reviewed, and questions about the format will be solved at that time.

---

### 2-2.2.2 Submission Requirements

The A/E must submit the preconcept design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the preconcept design review meeting. The preconcept design consists of the following minimum components:

- a. **Site Utilization Plan.** The site utilization plan must be prepared as a single overall plan on one sheet and must include, at a minimum, the following:
  - (1) Building.
  - (2) Property lines.
  - (3) Parking locations (by dimensions).
  - (4) Topography.
  - (5) Traffic flow.
  - (6) Entrances.
  - (7) Prevailing wind direction.
  - (8) Availability of utilities.
  - (9) Proposed utilities.
  - (10) Building expansion capability.
  - (11) Stormwater drainage.
  - (12) Anticipated off-site or on-site easements and construction.
  - (13) Potential problems associated with site utilization.
  - (14) Wetland delineation.
  - (15) Other pertinent information.
  
- b. **Site Restrictions and Improvements.** The A/E must investigate and identify all site restrictions and limitations, local ordinances, and legal building requirements pertaining to the proposed facility. The A/E must identify all site restrictions and improvements necessary to ensure a complete and comprehensive design for the construction and operation of the facility. The A/E must include the time and cost of all items for which the permit process or construction process requires a long-lead time. The A/E must be prepared to discuss this information at the preconcept design review meeting. The A/E's investigative effort must include, but not be limited to, the following:
  - (1) Utilities.
  - (2) Easements.
  - (3) Rights-of-way.
  - (4) Street improvements.
  - (5) Bonds.
  - (6) Fees.

---

c. **Architectural Floor Plans.** Building floor plans are to be drawn at a scale of 1/16 inch = 1 foot. Lobby plan layouts, cafeteria seating plan layouts, or other areas requiring larger detail to fully explain plan concepts may be drawn at a larger scale. When a 1/16 inch = 1 foot scale building plan does not fit on a single drawing sheet, provide an additional overall building plan at a smaller scale. The floor plans provided at the preconcept design phase are single-line sketches or assemblies of modules that must, at a minimum, include the following:

- (1) Location and relationship of all building spaces.
- (2) Lookout galleries (LOGs) and closed-circuit television (CCTV) camera locations (if applicable).
- (3) Breakouts (if applicable).
- (4) Fixed mechanization (if applicable).
- (5) Major nonfixed mechanization (such as letter sorting machines; cull, face, cancel machines; and the like) (if applicable).
- (6) Registry and key cages.
- (7) Locations for future equipment that will require power, etc.

d. **Elevations and Perspective Sketches.** Perspective sketches must be single-line drawings, either hard-line ruled or controlled freehand delineations in color, using watercolor marker or colored pencil (renderings generated on computer-aided design (CAD) equipment and three-dimensional (3D) modeling are acceptable). Sketches must indicate materials, finishes, fenestration, and site landscaping. The A/E must prepare a minimum of three alternate perspective sketches to show the overall site development, building massing, and design concept. In addition, the A/E must provide supplementary sketches showing interior and exterior features, such as customer entrances, employee entrances, and interior views, necessary to explain the design concepts.

The A/E must furnish black-and-white copies of the alternate perspective sketches with the preconcept design submission and submit the color sketches during the preconcept design review meeting. The A/E must present the sketches, discuss alternates, and recommend designs, with supporting justifications, to the Postal Service during the preconcept design review meeting. All items of discussion and design direction must be noted by the A/E and incorporated into the further design submission required at the concept design phase.

e. **Mechanization.** As part of the preconcept design on projects involving mechanization, the A/E must submit the following:

- (1) A single-line diagram of the conveyor system showing control elements.
- (2) A detailed outline of Specification Section 17-7.
- (3) A single-line plan layout to scale of the fixed mechanization showing critical building elements such as columns, aisles, and lookout galleries.
- (4) Elevation drawings to scale of the mechanization demonstrating proper clearances between conveyors and between mechanization and building elements.

- 
- f. **Code Analysis.** The A/E must submit a complete code analysis with the pre-concept design. The A/E must investigate and identify all applicable governing codes, ordinances, and legal building requirements pertaining to the proposed facility. The code analysis must include the time and cost of all items for which the permit process or construction process requires a long-lead time. The code analysis must include:
- (1) **Code Listing.** The code analysis must include a complete listing of all applicable codes, ordinances, and regulations, including but not limited to:
    - (a) All applicable Occupational Safety and Health Administration (OSHA) codes.
    - (b) All applicable National Fire Protection Association (NFPA) codes.
    - (c) All applicable state codes.
    - (d) All applicable local codes.
    - (e) Zoning regulations.
    - (f) Ordinances.
  - (2) **Small-Scale Floor Plan.** The code analysis must include a small-scale floor plan of the total building that shows the following:
    - (a) Locations of all required fire exits.
    - (b) Exit units.
    - (c) Rated walls and structures.
    - (d) Smoke vents.
    - (e) Smoke curtains.
    - (f) Paths of travel indicating actual distances. (Workrooms with long travel distances are often a problem and must be carefully considered.)
  - (3) **Alternatives.** The code analysis must identify conflicts with applicable codes and provide alternative solutions. For codes for which the Postal Service is the "authority having jurisdiction," which is often the case with the NFPA, the A/E must submit a written request with a full justification when recommending a special ruling, equivalent or superior to the intent of the codes, the A/E believes is required to provide a safe and economical design.
- g. **Building Area Tabulations.** The A/E must include the following items with the building area tabulations submitted with the preconcept design:
- (1) **Single-Line Floor Plan.** The A/E must submit a single-line small-scale floor plan (1/16-inch scale preferred) of the entire building for both a general mail facility (GMF) and vehicle maintenance facility (VMF). The single-line floor plan must clearly designate the number and name of each functional space and the overall building dimensions and must include the building area tabulation lists.
  - (2) **Building Area Tabulation Lists.** Building area tabulation lists must be included on the single-line floor plan and also must be submitted separately. The building area tabulation lists must include the following information:

- (a) The location for each functional area by number and name in the order in which it appears in Form 919 or 929.
  - (b) The net area for each functional area shown on the Form 919 or 929.
  - (c) The net area provided for each functional area.
  - (d) The percentage of deviation from Form 919 or 929 for each area.
  - (e) Subtotals for each group of related functional areas.
- (3) **Building Areas and Calculations.** The building areas are calculated as discussed below:

- (a) **Gross Area.** The gross area of a building is defined as the building footprint measured to the outside of exterior walls and adding mezzanine and LOG splines, calculated as 100 percent. Loading dock platform is calculated as 100 percent for both closed and open loading. Carrier loading is not included unless the loading area is completely covered. Covered carrier loading when the entire loading area, including driveways, is completely covered is calculated as 50 percent of the area under roof. Enclosed covered carrier loading is calculated as 100 percent.

The following guidelines are used to determine gross areas:

Location or Space	Included in Gross Area	Not Included in Gross Area
Full area of lookout gallery system	X	
Mezzanines	X	
Platforms enclosed by exterior walls	X	
Necessary circulation aisles	X	
Door recesses	X	
Coat closets	X	
Fuel dispensing booths	X	
Open wash bays		X

The gross area of the facility must be kept to a minimum and must not exceed the estimated gross area agreed upon at the negotiation meeting.

- (b) **Net Area.** The net area of a building is defined as the area within each room or space calculated from finished wall surface to finished wall surface, exclusive of canopied area and open wash bays. The following spaces must be designed no smaller than the area specified in the Form 919 or 929 and, if necessary for plan conformity, may be increased up to a maximum of 5 percent of the area specified in the Form 919 or 929:

- 
- i. Office spaces of 120 square feet or less.
  - ii. Postmasters' offices.
  - iii. Station or branch managers' offices.

Except for the three areas identified above, each large office space must be designed within plus or minus 5 percent of the area specified in Form 919 or 929. The total net area of all office space provided must be within plus or minus 5 percent of the total net area specified in the Form 919 or 929.

The workroom net area must be within plus or minus 1 percent of the area specified in the Form 919 or 929.

- (c) **Calculations.** The building area calculations must comply with those shown on the Form 919 or 929. The A/E must summarize the area calculations on all submissions, including the solicitation proposal documents. The building area calculations must show the ratios of the gross areas over the net floor areas for each major building space (i.e., office, workroom, lobby, platform, support, mechanical, and electrical spaces) and for the total building.

If the layout or the orientation of the facility changes the site and floor plan contained in the design data, the A/E must submit a detailed description of the effect of the changes on the gross area limitations and the total estimated cost of the facility. The A/E must explain all changes to the program requirements with footnotes that reference the source and date of the document that authorized the change.

- h. **Building System Comparisons.** A schedule of various building systems being investigated for recommendation must be submitted during the preconcept design phase. The building system comparisons must include, at a minimum, the following:
  - (1) At least three exterior wall systems with a minimum thermal mass of 70 pounds per square foot and a 0.07 maximum "U" value. (Exterior wall systems with a mass less than 70 pounds per square foot may be considered if justified by the A/E, e.g., when a facility is to be located in a geographic location where the weather is extremely mild or the building may be subjected to strong earthquake forces.)
  - (2) At least three roof membrane and insulation systems with a 0.05 maximum "U" value.
  - (3) Alternate viable foundation systems.
  - (4) Alternate roof heights (including a multiple-level versus single-level roof comparison).
  - (5) The types of fuel available.
  - (6) A written description of the type of analyses and calculations, including cost-effectiveness, that will accompany the concept design phase submission.
  - (7) A list of building systems, including interior and exterior finishes, tentatively proposed that is the basis for the cost estimate.

---

The building system comparisons must show clear ceiling heights; foundations; pavements; heating, ventilation, and air-conditioning (HVAC); electrical; plumbing; and so forth.

- i. **Energy Conservation Analysis.** The A/E must submit a written report identifying the active and passive features that are being considered as potentially cost-effective for the project. Handbook AS-503 and the *Building Design Standards* identify energy conservation features and systems to be considered in a building design. The active and passive features and systems identified in the preconcept design submission are to be analyzed on a life-cycle cost basis in the concept design submission. The A/E must substantiate the items selected on the basis of a site-specific climatic analysis and a preliminary energy consumption analysis. The facility design must comply with the prescribed design energy budget established in the Functional Design Specifications (FDS). The A/E must ensure that the design complies with the energy budget by performing an energy analysis appropriate to each stage of the design.
- a. **Postal Service Environmental Policy and Guiding Principals.** The A/E must submit a report identifying the environmentally conscious products and procedures that are being considered for use on the project. The *Green Addendum* to the *Master Specification* identifies environmentally conscious products and procedures that are to be considered in a building design. The A/E must ensure that the environmentally conscious products and procedures used are cost-effective and provide maximum energy conservation. The life-cycle costs of the environmentally conscious products and procedures identified in the preconcept design submission are to be analyzed and compared to conventional products and procedures in the concept design submission. The A/E is to develop a list of recycling sources for Section 01150, Environmental Procedures, of the *Master Specification*.
- b. **Cost Estimate.** The A/E must submit a preliminary cost estimate with the preconcept design. This and all subsequent cost estimates must be formatted identically to allow direct comparison of the estimates as the design phases progress. This estimate should be accurate and realistic, not a "safe" (high) estimate. The cost estimate is used to monitor compliance with the budget and to evaluate pricing proposals from construction contracts. All cost estimates are confidential material for official Postal Service use only. The A/E must not divulge cost estimates or working papers used to prepare them to any individual who does not have a need to have them for performance of services under this A/E contract.

The cost estimate must include information sufficient to provide evidence that the design is within the construction cost limit. Lump sum amounts for major items that cannot be readily analyzed will not be accepted. The cost estimate must reflect the construction cost that the A/E anticipates on the date the proposal opens. The A/E must ensure that the cost estimate reflects prices for work and materials, taking into account possible labor shortages that may occur because of other known proposed projects in the area, local construction conditions, complexity of the project, degree of risk, and size of the job. The cost estimate is to be categorized to show material and labor.

All estimates must use hourly labor rates not less than the rates as determined by the Secretary of Labor. The Postal Service will supply the A/E with a list of wage rate determinations.

---

The A/E must provide an overall cost estimate that summarizes all costs in a table as well as provide separate cost estimates for each mail facility building, vehicle maintenance building, other building as provided, and site work.

The cost estimates provided by the A/E must be categorized into the following building systems:

---

<b>CSI Divisions</b>	<b>Building System</b>
1	General requirements
2	Site work
3	Concrete
4	Masonry
5	Metals
6	Wood and plastics
7	Thermal and moisture protection
8	Doors and windows
9	Finishes
10	Specialties
11	Equipment
12	Furnishings
13	Special construction
15	Mechanical
16	Electrical
17	Mechanization

---

### 2-2.2.3 Preconcept Design Review Meeting

The preconcept design review meeting will be held at the office of the contracting officer or a location as designated by the CO. If the facility has fixed mechanization, representatives of the mechanization disciplines must also attend. At the preconcept design review meeting, the A/E must be prepared to discuss the following:

- a. The control and operational concepts to be implemented in the mechanization design.
- b. The rationale to be followed in specifying and locating structural supports for mechanization.
- c. The special requirements of the project's mechanization specifications, including the requirement of the mechanization maintenance manual and considerations relating to interfacing the mechanization and building specifications.

Along with the lead project architect, the A/E is to have the lead designers from each of the following disciplines present to answer any questions that may arise: civil, structural, mechanical, electrical, CCTV and communications, plumbing, fire protection, cost estimating, and others as appropriate.

---

## 2-2.3 Concept Design Phase

### 2-2.3.1 General

The concept design consists of the architectural and engineering plans, elevations, sketches, diagrams, analyses, estimates, cost benefit justifications, and other data needed to clearly describe the recommended design. The concept design phase data must be developed into a comprehensive design development presentation of the basic design for all disciplines.

All disciplines must justify using the type of building system they recommend (i.e., HVAC systems, electrical systems, lighting, fuel, structural, framing, bay spacing, mechanization, walls, roofing membrane, and insulations). The recommendations must be substantiated by detailed cost and supporting analyses. The building area tabulations, cost estimates, cost-effective energy conservation analyses, and environmental products and procedures analyses that were presented in the preconcept design must be updated and further developed in the concept design submission.

Postal Service acceptance of the concept design submission establishes the final building and site layout. Postal Service acceptance of this submission gives the A/E functional and operational authorization to proceed with the design toward the final solicitation proposal documents.

When concept designs as submitted do not meet Postal Service functional requirements, or when additional sketches or revised development plans are required to clarify and ensure mutual understanding of the proposed design, additional submittals or sketches may be required. The A/E provides such submittals, sketches, or resubmittals necessary to continue the design development of the project at no cost to the Postal Service if the scope of work remains unchanged.

### 2-2.3.2 Submission Requirements

The A/E must submit the concept design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the concept design review meeting. The concept design submission must be complete and contain all of the required material.

Building plans must be drawn at a scale of 1/16 inch = 1 foot. If a larger plan detail is necessary to fully explain the development of the design, the drawing may be drawn at a larger scale. The A/E must not anticipate the preparation of working drawings by using larger than needed drawing scales (thereby increasing the number of drawings and work effort), because the design development as represented by the concept submission may need to be further changed and refined to complete the design. Drawings must show Postal Service Data Systems (PSDS) equipment where required.

The concept design consists of the following minimum components:

- a. **Site Utilization Plan.** The A/E must update and refine the site utilization plan submitted at the preconcept design.
- b. **Site Restrictions and Improvements.** The A/E must update and refine the site restrictions and improvements information submitted at the preconcept design.
- c. **Civil Design.** The A/E must provide a comprehensive civil design. The civil design must include design data and drawings identifying the following:

- 
- (1) **Stormwater.** Include the site's stormwater drainage design criteria, such as design storm frequency and duration curves, storm frequency adopted by the local jurisdiction, and all other considerations to substantiate the proposed design. Submit the site survey and subsurface investigation reports, if required, no later than the concept design submission.
  - (2) **Streets.** Show street names, directions of traffic, width and number of traffic lanes, dimensions of pavement, rights-of-way, easements, traffic lights, and traffic survey data. Provide the names of jurisdictions controlling street rights-of-way.
  - (3) **Driveways and Parkways.** Indicate the direction of traffic, dimensions of driveways, parking spaces, concrete aprons, and the number of each type of vehicle space. Identify the locations of truck, employee, official, and customer parking. Indicate buildings and other features on adjacent property that are within 10 feet of property lines. Show area requirements for future building expansion by dotted lines.
  - (4) **Pavement Design.** Justify the pavement design by design analysis and economic rationales.
  - (5) **Grades.** Establish a clear understanding of the existing and proposed site grading and surface drainage requirements.
  - (6) **Site Utilities.** Show the layout, size, and invert elevations of all sanitary and storm sewers, water and gas mains, and telephone and electrical lines available or required to serve the site.
  - (7) **Miscellaneous Features.** Show the locations and extent of site security fencing, gates, guardhouses, and lighting poles. Indicate areas to be landscaped.
  - (8) **Vicinity Map.** Provide a small inset vicinity and site location plan showing the site location with respect to major highways, airport, the business district, and the like.
  - (9) **Easements.** Show the location and extent of all required off-site and on-site easements or rights-of-way. Note fees required by local ordinances or utilities to be paid by the Postal Service before construction.
  - (10) **Legal Description.** All easements, rights-of-way, and the like must be identified at this stage by a legal description and a metes and bounds survey tied to a corner description of the Postal Service site. If an easement or permit must be acquired, the A/E must notify the Postal Service no later than the concept design review meeting.
  - (11) **Off-Site Construction.** Show the location and extent of all off-site construction that is required and all easements that must be obtained.
  - (12) **Subsurface Soils Investigation Report.** If the A/E is required to provide a subsurface soils investigation report as an additional predesign phase service, the A/E must submit the report, including the boring logs, along with the concept design.
- d. **Site Plan.** The A/E must provide an overall site plan on one sheet showing streets, building locations, landscaping, parking, and so forth. This plan may be combined with the civil design plan if all of the required features can be clearly

---

shown. The site plan must present a table with the number and types of parking spaces. The site plan must also include the gross area tabulations for:

- (1) Building coverage.
- (2) Platform coverage.
- (3) Landscaping.
- (4) Driveways.
- (5) Parking and maneuvering areas.
- (6) Sidewalks.

e. **Architectural Floor Plans.** The A/E must further develop and refine the architectural floor plans submitted at the preconcept design. Floor plans must be provided for all levels of all buildings including mezzanines and LOG locations. The level of detail provided in the architectural floor plans must include:

- (1) Show overall dimensions.
- (2) Label all rooms and spaces with name and number.
- (3) Show fixed mechanization (if applicable).
- (4) Show major nonfixed mechanization (such as letter sorting machines; cull, face, cancel machines; etc.) (if applicable).
- (5) Show registry and key cages.
- (6) Show location for future equipment requiring power, etc.

The A/E must also provide an overall small-scale (1/16-inch preferred) comprehensive floor plan on one sheet.

f. **Additional Architectural Plans and Designs.** In addition to the architectural floor plans, the A/E must provide the following:

- (1) **LOG Plan (if applicable).** Provide a separate composite LOG plan showing architectural, structural, and mechanical interfaces and floor elevations. Include typical details showing view points, breakouts, and ladder arrangements.
- (2) **CCTV Camera and Surveillance Plan (if applicable).** Provide a separate composite CCTV camera plan showing camera locations. The CCTV camera plan must include major structural, architectural, mechanical, and electrical elements affecting camera views. Each proposed CCTV camera location must indicate the camera's field of view.
- (3) **Lobby Plan.** Provide a separate plan showing post office box, self-service, and service lobby functional arrangements and equipment locations. Include a complete list of equipment provided by the Postal Service that is to be installed by the contractor.
- (4) **Roof Drainage Plan.** Provide a small-scale roof plan for all buildings showing roof slopes, drain locations, overflow protection, and roof-mounted equipment.

- 
- (5) **Finish Schedule.** Provide an interior finish schedule for principle types of spaces (i.e., workroom, office, lobby, support, platform, toilet, and locker rooms) and include a proposed color schedule.
- (6) **Color and Material Panel.** Provide a preliminary color and material panel showing chips of paint colors and samples of material and colors for carpets, paneling, and floor coverings proposed for interior finishes. The color and material panel must also include samples or chips of colors of exterior building finishes and materials and samples or chips of colors for fixed mechanization equipment by system, except for tray conveyors which may be the manufacturer's standard color.
- (7) **Fire Exit Plan With Code Summary.** Provide a fire exit plan that includes a code summary. The fire exit plan must conform to all national, state, and local requirements.
- (8) **List of Postal Service-Furnished Equipment.** Coordinate and confer with the Postal Service to develop a list of equipment and items that the Postal Service will furnish to the construction contractor. Provide a list of all Postal Service-furnished equipment with the concept design submittal.
- g. **Elevations and Perspective Sketches.** The A/E must provide two-dimensional drawings of all proposed building elevations for the recommended final design. In addition, the A/E must provide two alternate perspective sketches showing overall site development, building massing, and design concepts. The A/E must also provide supplemental sketches showing interior and exterior features, such as customer and employee entrances and interior concepts, to explain the building design. Sketches must incorporate the design concepts and revisions discussed during the preconcept design review meeting.

Perspective sketches must be single-line drawings, either hard-line ruled or controlled freehand delineations in color, using watercolor, marker, or colored pencil; CAD-prepared renderings; or 3-D models. Sketches must indicate materials, finishes, fenestration, and site landscaping. The A/E must furnish black-and-white copies of the alternative perspective sketches with the concept design submission and submit the color sketches during the concept design review meeting.

The A/E must present the sketches, discuss alternatives, and recommend the most appropriate final design for the project to Postal Service senior design staff. The A/E's recommendations for the final design must be justified on the bases of postal image, economics, and environmental and local design considerations.

The Postal Service intends to establish the design upon completion of the concept design review. However, if further drawings are required to consolidate items of discussion resulting from the concept design review submission, then the A/E must provide additional drawings or necessary revisions within 2 weeks at no cost to the Postal Service.

- h. **Sections and Details.** The A/E must provide overall cross sections through typical parts of the building, along with typical wall sections, showing the intended construction. Sections must clearly show the proposed roof system as well as ceiling heights of all major spaces. The A/E must coordinate with the mechanization designer to show floor and wall openings. Details for these openings must be provided at the intermediate design phase.

- 
- i. **Structural.** The A/E must provide structural data defining the applicable building code, the occupancy and “use-group” classification, fire resistive ratings, design loads, and the design strength of materials. The A/E must include a layout of a typical workroom bay for the proposed foundation and structural framing system. The A/E must also evaluate the functional and economic merits of each proposed foundation system and at least three structural framing systems.
- j. **Space Conditioning.** The A/E must describe the proposed heating and air-conditioning systems, including the detailed functional and economic rationale for selecting those systems. The proposed space conditioning systems must be based upon a 20-year life-cycle functional and economic evaluation. The A/E must provide the following:
- (1) Layouts of all heating and air-conditioning systems. The layout drawings must show:
    - (a) Equipment and proposed zoning and control for the entire building.
    - (b) Room identification, including room name and room number.
    - (c) Location and arrangement of all major equipment along with the space allotted for servicing and maintaining the equipment.
    - (d) Ductwork using double lines.
  - (2) In addition to the layout drawings:
    - (a) Drawings and a narrative description of the method of control for all major equipment and systems.
    - (b) A schematic flow diagram for each major system.
    - (c) A tabulation with capacity of each major piece of equipment.
    - (a) An analysis of the utility systems containing calculations and economic studies on Form 2215, *Energy and Equipment Life Cycle Cost Analysis*, and Form 2238, *Thermal Load Estimate Calculations*.
- k. **Plumbing.** The A/E must provide plumbing drawings showing the locations and general arrangements of all plumbing fixtures and major plumbing equipment. The A/E must also submit narrative descriptions of the types of plumbing fixtures and equipment proposed for use. The A/E must base the proposed plumbing system on functional and economic considerations.
- l. **Fire Protection.** The A/E must summarize applicable code requirements, including fire zone, fire resistance requirements for major components, area and height limitations, standpipe and sprinkler coverage, and hazard classification. The A/E must indicate the method of operation and alarm signaling features and describe special protection features and the extent of the fire protection system. The A/E must obtain and include data such as hydrant flow tests, including static pressure, flow available in gallons per minute, associated residual pressure at the point of supply, and the size of the supply main. The A/E must provide basic information and calculations on the water supply, including its source. The A/E must take advantage of provisions in applicable building codes that permit increases in building heights and area limits when sprinkler systems are installed.
- m. **Electrical.** The A/E must provide all of the following for the proposed electrical system:

---

(1) The A/E must provide a narrative description of the following:

- (a) Operation of the proposed electrical distribution system.
- (b) Wiring methods and materials.
- (c) Details of the proposed typical lighting fixtures for:
  - i. Offices.
  - ii. Workrooms.
  - iii. Platforms.
  - iv. Lobbies.
  - v. Exterior.

Selection of the proposed system must be based on the results of preliminary calculations and economic studies, using representative areas based as block area loads.

(2) In addition to the narrative description, the A/E must provide:

- (a) Single-line diagrams of the electrical distribution system.
- (b) Single-line diagrams of the fire alarm system.
- (c) Single-line diagrams of the telephone system.
- (d) Single-line diagrams of the sound system.
- (e) Single-line diagrams showing how the electrical and telephone systems tie in with local utilities.
- (f) Drawings showing proposed locations of major items of electrical equipment and LOGs.
- (g) Partial layouts of typical lighting in major areas showing proposed fixtures, spacing, and illumination levels (in foot-candles).
- (h) Drawings showing power locations and details for Postal Service specialized equipment.

(3) The A/E must furnish written confirmation of the availability of service and the rates from the local utilities.

(4) The workroom and platform illumination levels must be calculated and compared with and without at least two levels of daylight.

(5) The A/E must perform a life-cycle cost evaluation for lighting areas by using natural light instead of man-made light.

**Note:** The electrical design (narrative and drawings) must include structured wiring information.

n. **Other Utility Systems.** The A/E must provide descriptions, locations, tables, and calculations for all miscellaneous building and VMF equipment such as compressed air systems, lifts, mechanical door operators, dock ramps, scales, and the like.

- 
- o. **Mechanization.** The A/E must update and further develop the mechanization design submittal that was included as part of the preconcept design. As part of the concept design, on projects involving mechanization the A/E must provide the following:
- (1) Plan views and elevations of the mail handling system, with all mail processing equipment located dimensionally to the nearest column centerline.
  - (2) Complete drawings of building mechanization requirements, including floor openings and wall openings. Coordinate opening requirements with architectural plans. In establishing openings, indicate conveyor slopes to the nearest minute; on final elevation drawings, however, indicate conveyor slopes to the nearest degree.
  - (3) Layouts, calculations, and design studies required for the preparation of items (1) and (2) above.
  - (4) List of power panels, with the following data for each panel:
    - (a) The panel designation in the format MP-XXX, where X equals the panel number.
    - (b) The location by floor and column coordinates.
    - (c) The total connected load (horsepower and amperes).
    - (d) Total amperes and horsepower of largest motor connected to this panel.
    - (e) The number of circuit breakers required, including spares.
    - (f) A tabulation, by circuit breaker, of the conveyors and other equipment connected to each circuit breaker.
  - (5) Conveyor schedules, including conveyor numbers, conveyor width, types of mail handled, live load, approximate true conveyor length, conveyor speed, rise or drop in elevation, horsepower, diameter of pulleys, special equipment in conveyors, and information as required for the sorting machines and deflectors.
  - (6) Electrical control drawings.
  - (7) Copies in rough draft, double-spaced, of Specification Sections 17.8, 17.9, and 17.10. Section 17.8 must include all special requirements of the mechanization, including requirements for the mechanization maintenance manual. On the basis of the complexity of the mechanization, determine the applicability of USPS-STD-101B, *Preparation of Advanced Maintenance Series Handbooks (For Fielded Production Run Postal Systems and Equipment)*, or USPS-M-378B, *Preparing Maintenance Series Handbooks (For Fielded Production Run Postal Systems and Equipment)*, or portions of these standards and determine the applicability of any other special maintenance manual requirements. Include these requirements in Section 8 of the project specifications.
  - (8) When applicable, include a copy of USPS-STD-101B and USPS-M-378B in the project solicitation set. Coordinate with the contracting officer to ensure that sufficient copies will be on hand at all times to meet purchasing needs.

- 
- p. **Environmental Studies.** The Postal Service provides the A/E with copies of the required environmental studies (i.e., environmental impact statement, environmental assessment, wetland impact study, floodplain impact study, hazardous waste site assessment, etc.). The A/E must assess all mitigation measures identified in the environmental studies and ensure that all items identified in these studies as having an adverse environmental effect are mitigated by the concept design. The A/E must ensure that all permits listed in the environmental studies as being required for the project are obtained.

The A/E may be required to provide environmental studies. Environmental studies are additional services (optional) to the base A/E scope of services and are further defined in section 1-2 of this part.

- q. **Code Analysis.** The A/E must update the code analysis submitted during the pre-concept design to justify solutions selected as being economical and meeting code requirements. The A/E must provide a drawing showing the code analysis, defining the basis for design.

The A/E must update the fire protection plans, providing a summary of the code provision used on the drawings.

- r. **Building Area Tabulations.** The A/E must update the building area tabulations and the small-scale plans included in the preconcept design submission to reflect all changes and refinements.

- s. **Building System Comparisons.** The A/E must provide comparisons of various building systems being investigated for recommendation. The building system comparisons must include:

- (1) At least three exterior wall systems with a minimum thermal mass of 70 pounds per square foot and a 0.07 maximum "U" value.
- (2) At least three roof membrane and insulation systems with a 0.05 maximum "U" value.
- (3) At least three structural framing systems.
- (4) Structural bay spacing alternatives.
- (5) Alternative viable foundation systems.
- (6) Alternative viable roof heights (including a multiple-level versus single-level roof comparison).
- (7) Typical sections and details of each alternative, showing clear ceiling heights, foundations, pavements, HVAC, electrical, plumbing, and so forth.
- (8) Analyses and calculations of the functional use and cost for each building system.

The building system comparisons must also substantiate the selection of window types, roof colors, exterior building colors, and the like, taking into account energy savings.

- t. **Energy Conservation Analysis.** The A/E must update the energy conservation analysis provided in the preconcept design submission. For each system or feature recommended, provide a life-cycle cost (LCC) analysis together with climatic and building energy consumption analyses to substantiate the recommendations.

---

(Provide analyses for a minimum of three different systems.) The A/E must also then provide an overall energy analysis, which may be accomplished with a recognized microcomputer analysis program. The report developed as a result of the analyses must be coordinated with the deliverables, including Forms 2215 and 2238, as required by Postal Service criteria.

- u. **LCC Analysis.** The A/E must submit a 20-year LCC analysis to justify the selection of the exterior wall system, roof membrane and insulation system, multiple- or single-level roof height, and energy-conserving features or systems. The A/E must follow the National Institute of Building Sciences (NIBS) Handbook 135, *Life Cycle Cost Manual for the Federal Energy Management Program*, including its appendices. The A/E must fully describe each system studied and submit all supporting calculations with the completed LCC analysis work sheets. The A/E must supplement cost figures with a comparison of the system analyzed.
- a. **Specifications.** The A/E must modify and edit the *Master Specification* on the *Building Design Standards* CD-ROM with the specific requirements of each project. For the concept design phase submission, the A/E must provide the following:
  - (1) A detailed table of contents of all the specifications (by title and number) that are to be included in the complete specifications.
  - (2) A draft of all Division I, General Requirements (edited and customized from the *Master Specification, Building Design Standards*).
  - (3) A complete list of Postal Service-furnished equipment.
  - (4) A list and draft of all proposed supplementary conditions.
  - (5) A working draft of the technical specifications, Divisions 2 through 17, in outline form, that demonstrates that the A/E is in the process of editing and customizing the *Master Specification* for specific project requirements.

The A/E is responsible for coordinating the contract specifications so that they do not repeat or conflict with supplemental conditions, postal provisions, or contract clauses.
- w. **Cost Estimate.** The A/E must update and refine the cost estimate submitted at the preconcept design review meeting. All data necessary to fully support the cost estimate must be provided. Cost estimates must be provided for alternative systems in order to justify the economy of the selected systems such as exterior walls, structural framing, foundations, roofing, pavements, mechanical and electrical systems, and so forth. The cost estimate must clearly indicate the date on which the estimate was prepared. The cost estimates must be prepared in a Construction Specifications Institute (CSI) format in a form acceptable to the Postal Service.
- x. **Project Scheduling.** The A/E must comment on the construction schedule as well as the overall project schedule by reviewing the specific project requirements including materials, time of year of construction, and potential delays. In addition to the narrative schedule comments, the A/E must provide a bar chart project schedule that is shown in weeks.

---

### 2-2.3.3 Concept Design Review Meeting

The concept design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The A/E must have in attendance the same disciplines that attended the preconcept design review meeting.

The A/E must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the concept design review meeting.

## 2-2.4 Intermediate Design Phase

### 2-2.4.1 General

The intermediate design consists of at least 70-percent completed working drawings and other documents, including a detailed cost estimate, complete updated design analyses and calculations, and updated energy analysis indicating compliance with the design energy budget. The intent of the intermediate design phase is to ensure that the working drawings and specifications are proceeding in a timely manner and that the requirements set forth in the A/E contract documents and previous review comments are being correctly interpreted.

As stated in Part I, section 1-3.2, the Postal Service may review the design for value engineering, if deemed necessary, and will advise the A/E of findings to be incorporated into the intermediate and/or final designs.

### 2-2.4.2 Submission Requirements

The A/E must submit the intermediate design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the intermediate design review meeting. The intermediate design submission must be complete and contain all of the required material. The A/E must continue with the development of the final documents during the Postal Service review period.

The intermediate design consists of the following minimum components:

- a. **Site Utilization Plan.** The A/E must update and refine the site utilization plan submitted at the concept design phase.
- b. **Site Restrictions and Improvements.** The A/E must finalize the site restrictions and improvements information submitted at the concept design phase. All site restrictions and improvements necessary for the project, including all necessary off-site improvements, rights-of-way, easements, permits, and the like, must have been identified by the intermediate design and must be filed with the appropriate state, city, or local authority.

The A/E must furnish information concerning the status of all easements, permits, and so forth, at the intermediate design review. The A/E must state the cost of permits (and the lead time for obtaining permits and action taken to obtain them to avoid delays during project construction).

- c. **Civil Design.** The A/E must update and finalize the civil design submitted at the concept design phase, as follows:

- 
- (1) The civil design must contain, as a minimum, all components and features from the concept design submission including:
    - (a) Stormwater.
    - (b) Streets.
    - (c) Driveways and parkways.
    - (d) Pavement design.
    - (e) Grades.
    - (f) Site utilities.
    - (g) Miscellaneous features.
    - (h) Vicinity map.
    - (i) Easements.
    - (j) Legal descriptions.
    - (k) Off-site conditions.
    - (l) Subsurface soils investigation report, including boring logs.
  - (2) The A/E must submit a written statement at the completion of the intermediate design review and before the final design submission stating that:
    - (a) The scope and quality of the topographic, site data, and subsurface investigations are adequate, accurate, and up to date.
    - (b) All changed conditions are reflected in order to ensure that the latest and current information is included in the solicitation proposal document.
- d. **Site Plan.** The A/E must update and finalize the topographical site plan submitted at the concept design phase.
  - e. **Architectural Floor Plans.** The A/E must update and fully develop the floor plans submitted at the concept design phase.
  - f. **Additional Architectural Plans and Designs.** In addition to the architectural floor plans, the A/E must update and fully develop the following information submitted at the concept design phase:
    - (1) **LOG Plan (if applicable).** The A/E must obtain Postal Service approval before designing any penetrations or depressions (mechanical, electrical, plumbing, structural, mechanization, and the like) through the LOGs that would limit clear headroom to less than 6 feet, 6 inches inside. The A/E must show the location of all penetrations or depressions on the LOG plan and provide adequate details. The A/E must note on the drawings that no other penetrations are permitted without prior approval from the contracting officer.
    - (2) **CCTV Camera and Surveillance Plan (if applicable).** The A/E must update and fully develop the CCTV camera and surveillance plan submitted at the concept design phase.

- 
- (3) **Lobby Plan.** The A/E must update and fully develop the lobby plan submitted at the concept design phase.
  - (4) **Roof Drainage Plan.** The A/E must update and fully develop the roof drainage plan submitted at the concept design phase, including detailing all roofing systems, roof drainage, roof penetrations, and roof-mounted equipment.
  - (5) **Finish Schedule.** The A/E must update and fully develop the finish schedule submitted at the concept design phase. The finish schedule must show finishes and colors in all areas.
  - (6) **Color and Material Panel.** The A/E must update and fully develop the color and material panel submitted at the concept design phase.
  - (7) **Fire Exit Plan With Code Summary.** The A/E must update and fully develop the fire exit plan, including the code summary, that was submitted at the concept design phase. The A/E is responsible for submitting the fire exit plan to and obtaining approval from any governing organization.
  - (8) **Casework Drawings.** The A/E must prepare casework drawings and details necessary to fully define and describe the casework requirements.
  - (9) **List of Postal Service-Furnished Equipment.** The A/E must update and fully develop the list of Postal Service-furnished equipment that was submitted with the concept design.
- g. **Elevations and Perspective Sketches.** The A/E must provide fully developed building elevations of all views showing vertical dimensions, exterior materials, window and door openings, and the massing of the buildings.
  - h. **Sections and Details.** The A/E must update and fully develop wall sections for all walls and their details to the degree that the full intent of the design is obvious.
  - i. **Structural.** The A/E must fully develop all structural systems and substantiate them with appropriate calculations and economic analyses. Foundation, structural floor, and roofing framing plans and all subsurface features, such as pilings, must be developed to the extent that the full intent of the design is apparent.
  - j. **Space Conditioning.** The A/E must provide a fully developed space conditioning system design including descriptions, diagrams, and sequence of operation to the following minimum extent:
    - (1) Provide a complete schedule of all equipment shown on the drawings.
    - (2) Provide equipment room layouts indicating all equipment, piping, duct work, and access space required for maintenance.
    - (3) Indicate zoning controls, duct sizes, and air quantities.
    - (4) Show the final version of the automated building control systems, including fire detection and alarm systems.
    - (5) Provide written confirmation from a fuel supplier of fuel availability and rates.

The A/E must substantiate the designs with up-to-date calculations for all rooms, zones, and building blocks.

The A/E must prepare a psychometric chart describing the thermodynamic properties of each air-handling unit.

- 
- k. **Plumbing.** The A/E must provide plumbing and fuel system drawings showing the locations and arrangements of all fixtures and equipment of the complete system. Plan and riser diagrams must show the location and size of hot and cold water piping and the waste and vent system. The A/E must provide a plumbing fixture schedule which also lists the location and type of fixtures and pipe sizes.

The fuel system drawing must identify the location and arrangements of the complete system.

- l. **Fire Protection.** Generally, complete automatic sprinkler drawings need not be developed. The fire protection drawings must show the automatic sprinkler risers and fire zones and must be designated to comply with applicable codes. The fire protection drawings must also show all spaces that require fire protection. The specifications must require the contractor to meet all applicable codes.
- m. **Electrical.** The A/E must update and fully develop the electrical design submitted during the concept design phase, as follows:
- (1) The electrical design must include descriptions and updated supportive calculations for all power, lighting, grounding, communications, and alarm systems.
  - (2) The A/E must provide site plans, elevations, schedules, and detail drawings sufficient to reflect the overall facility design and to locate all equipment.
  - (3) The A/E must provide final single-line diagrams of the electrical distribution and communications systems showing tie-ins with local utilities.
  - (4) The electrical design must include elevations of switchboards, motor control centers, and other major equipment showing the arrangement of equipment.
  - (5) The A/E must provide a short-circuit and fully coordinated circuit-interrupting device summary that includes all analyses and calculations.
- n. **Other Utility Systems.** The A/E must update and fully develop the following items:
- (1) The A/E must provide fully developed drawings and supporting calculations for all miscellaneous building and VMF equipment such as scales, automatic door operators, dock ramps, and compressed air.
  - (2) The A/E must provide complete plans, riser diagrams, schedules, sizes, and locations for VMF equipment and systems.
  - (3) The A/E must provide fully developed plans and elevations of LOG utility systems as applicable.
  - (4) The A/E must identify and take action to obtain power, sewer, gas, or water services requiring long lead times for design or construction by others (i.e., utility companies). If permits or fees are required, the A/E must identify them and obtain fees for them from the Postal Service.
- o. **Mechanization.** The A/E must accomplish the following items related to the mechanization design:
- (1) The A/E must revise, correct, and complete the mechanization design submitted during the concept design phase, as follows:

- 
- (a) Conveyor schedules.
  - (b) Conveyor plans.
  - (c) Conveyor elevations.
  - (d) Dust pan location.
  - (e) Mechanization equipment layout.
  - (f) Central drawing details.
- (2) The A/E must advise the project manager in writing of all changes made to previously submitted or accepted drawings or specifications.
  - (3) The A/E must provide fully developed mechanization load drawings and maintenance walkway, loader, and motor platform drawings. Mechanization load drawings must indicate both static and dynamic loads. The A/E must ensure that this information is provided to the structural designer for consideration.
  - (4) On projects requiring the optional A/E services for mechanization system descriptions, at the intermediate design phase the A/E must provide the following:
    - (a) A detailed, complete outline of the mechanization systems' description.
    - (b) A rough draft of the first two sections of the text (General Facilities Information and Description of Systems).
    - (c) A description of the operation of one subsystem with full-size supporting drawings and illustrations.
- p. **Code Analysis.** The A/E must update the fire protection and code analysis summary submitted during the concept design phase. The code analysis summary must include all components and features from the concept design submission including, but not limited to,:
- (1) Code listing.
  - (2) Small-scale floor plan.
  - (3) Alternatives.
- q. **Building Area Tabulations.** The A/E must update the small-scale floor plans for the building and area tabulations that were submitted during the concept design phase to reflect all changes and refinements. The building area tabulations must include all components and features from the concept design submission including, but not limited to,:
- (1) Single-line floor plan.
  - (2) Building area tabulation lists.
  - (3) Building areas and calculations.
- r. **Energy Conservation Analysis.** The A/E must update and fully develop the energy conservation analysis submitted during the concept design phase. The updated energy conservation analysis must demonstrate that it complies with the design energy budget.

- a. **Specifications.** The A/E must modify and edit the *Master Specification* on the *Building Design Standards* CD-ROM for the specific requirements of each project. The intermediate design phase submission of the specifications must be developed to a degree comparable to the drawings and must reveal the full intent of the A/E's design in relation to all proposed systems, materials, and special design considerations. For the intermediate design phase submission, the A/E must provide the following:
- (1) A detailed table of contents of all the specifications (by title and number) that are to be included in the project specification manual.
  - (2) A final, fully developed draft of all Division I, General Requirements (edited and customized from the *Building Design Standards, Master Specification*).
  - (3) A complete list of Postal Service-furnished equipment.
  - (4) A fully developed section identifying all proposed supplemental conditions.
  - (5) A substantially complete draft of Divisions 2 through 16, Technical Specifications, developed to a degree comparable to the drawings.
  - (6) Fully developed Division 17, Mechanization Specifications, in final form.

The A/E is responsible for coordinating the contract specifications so that they do not repeat or conflict with supplemental conditions or postal provisions or contract clauses.

The Postal Service is not required to obtain building inspection or occupancy permits. The A/E must determine the cost of all other fees and permits (connection fees, tap fees, off-site inspection fees, special community development fees, and so forth) and include a list of all such fees and charges to be paid by the contractor in *Master Specification* section 01115, Leased Building [Design-Build] Requirements, or section 01116, General Construction.

The specification must state that the contractor is to pay all costs for utilities (gas, water, and electricity) used during final Postal Service tests of completely installed systems and while training Postal Service personnel.

For facilities equipped with a card access system, the submission must specify that the quantity of access cards supplied by the contractor is to be 1.5 times the number of the initial complement of postal employees scheduled to work at the facility.

- t. **Cost Estimate.** The A/E must update and refine the cost estimate submitted during the concept design phase. All data necessary to fully support the cost estimate must be provided. The cost estimate must be formatted the same as the estimates submitted in the preconcept and concept design submissions to permit direct comparison.

The cost estimate must be a "material and labor quantity takeoff" type. The estimate must include separate prices for labor and material, and summary sheets listing the estimated costs for the major building systems for each building and separate costs for major systems in site work. The cost estimate must be as detailed as possible based on the design information available.

- u. **Project Scheduling.** The A/E must update the project schedule provided at the concept design submission and submit all recommendations necessary for scheduling long-lead time construction or procurement items.

- 
- v. **Small, Minority-Owned, and Woman-Owned Business Contracting Goals and Source List.** Provide recommended small, minority-owned, and woman-owned business contracting goals and the names, addresses, and specialties of such businesses located in the general area of the project.

### 2-2.4.3 Intermediate Design Review Meeting

The intermediate design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The A/E must have in attendance the same disciplines that attended the concept design review meeting.

The A/E must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the intermediate design review meeting.

## 2-2.5 Final Design Phase

### 2-2.5.1 General

The final design phase submission must consist of a 100-percent completed set of drawings, specifications, analyses, and calculations that are signed, sealed, and ready for solicitation of proposals. The final design is to complete, compile, and coordinate the overall design that has progressed through the previous design phases. The final design includes completing the requirements outlined in all previous design phases for each element whether or not it is specifically mentioned in this phase.

The A/E is responsible for coordinating all design documents and ensuring the accuracy of the entire overall design.

### 2-2.5.2 Submission Requirements

 Clause FB-220

The A/E must submit the final design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the final design review meeting.

The Postal Service does not sign the completed documents. The A/E must submit a final design package that is complete for soliciting proposals without further review and which is expected to result in a construction contract without claims or changes. The A/E is to sign and seal all documents, which certifies that the A/E has fully complied with all federal legislative as well as applicable state and local code requirements.

The final design consists at a minimum of the following completed components:

- a. Site utilization plan.
- b. Site restrictions and improvements.
- c. Civil design, as follows:
  - (1) Stormwater.
  - (2) Streets.
  - (3) Driveways and parkways.
  - (4) Pavement design.

- 
- (5) Grades.
  - (6) Site utilities.
  - (7) Miscellaneous features.
  - (8) Vicinity map.
  - (9) Easements.
  - (10) Legal descriptions.
  - (11) Off-site conditions.
  - (12) Subsurface soils investigation report, including boring logs.
- d. Site plan.
  - e. Architectural floor plans.
  - f. Additional architectural plans and designs, as follows:
    - (1) LOG plan and designs.
    - (2) CCTV camera and surveillance plan (if applicable).
    - (3) Lobby plan.
    - (4) Roof drainage plan.
    - (5) Finish schedule.
    - (1) Display panel showing chips of paint colors, samples of materials, and colors for carpets, paneling, and resilient flooring tile proposed for interior finishes of the project. See 2-2.3.2f(6).  Clause FB-220
    - (1) Display panel with samples of exterior face brick, trim, and metal wall colors. See 2-2.3.2f(6).  Clause FB-220
    - (2) Fire exit plan with code summary.
    - (3) Casework drawings.
    - (4) Completed list of Postal Service-furnished equipment.
- The A/E must furnish a separate signed statement on the firm's letterhead certifying that the facility has been designated to be in compliance with Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*.
- g. Elevations and perspective sketches.
  - h. Sections and details.
  - i. Structural design.
  - j. Space conditioning design.
  - k. Plumbing design.
  - l. Fire protection design.
  - m. Electrical design, including short-circuit and fully coordinated circuit-interrupting devices study.

- 
- n. Designs for other utility systems.
- o. Mechanization design, including all Postal Service-furnished drawings. When the optional A/E service for a mechanization system description manual is required, a draft in final format is required with the final design phase submittal. Within 30 days after approval of the final draft or as outlined in the A/E contract scope of work, the A/E must provide the completed manuals and prints of all plans of the workroom floor in accordance with the scope of work.
- p. Code analysis, as follows:
- (1) Code listing.
  - (2) Small-scale floor plan.
  - (3) Alternatives.
- q. **Building Area Tabulations.** The A/E must submit the final building and site area tabulations. The A/E must correct the small-scale floor plan and space summary tabulations provided with the intermediate design submission to accurately reflect the final solicitation documents. The A/E must include a site summary showing the area of building coverage, paving for parking and maneuvering, ramps, landscaping, total site area, and separate site areas allocated for the GMF and the VMF. The areas are calculated and listed as follows:
- (1) The area of the site allocated to the VMF is the sum of the following areas:
    - (a) Footprint of the VMF structure.
    - (b) Paved areas specifically allocated to the VMF, such as parking, fueling island, and maneuvering areas.
    - (c) VMF employee parking spaces located within the main employee parking lot (allocated at 300 square feet per car).
    - (d) The area of drives provided solely for the VMF and one-half of the area of drives designated for the common use of the GMF and VMF.
    - (e) A proportion of the total landscaped areas, based on the ratio of the sum of the areas from the four items above to the total used site area (excluding landscaped areas).
  - (2) The area of the site allocated to the GMF is the remainder of the entire site after the site allocated to the VMF is subtracted.
  - (3) On the site plan, include updated site area tabulations that reflect changes in Postal Service-owned land, such as land to be given to municipalities for street access, rights-of-way, easements, and so forth. Place a note on this drawing stating that all site and building area tabulations shown are for Postal Service reference only and that the contractor is responsible for calculating the quantity and area.
- r. Specifications.
- a. **Cost Estimate.** The final cost estimate must be developed as a “detailed quantity survey” type with breakdown of material and labor prices — not a readjustment of preliminary cost estimates. The A/E must:

- 
- (1) Include separate prices for labor and material, and summary sheets listing the estimated costs of the major building systems for each building and separate costs for major systems in the site work.
  - (2) Revise the final cost estimate as required based on Postal Service final review changes and comments.
  - (3) Submit the revised final estimate for Postal Service approval at least 10 days before the planned solicitation distribution date.
  - (4) Provide a construction cost estimate that is within 10 percent of the probable lowest qualified proposal.
- t. Project schedules.
  - u. Small, minority-owned, and woman-owned business contracting goals and source list.
  - v. List of referenced publications.
  - a. Complete unabridged design computations actually used by the designers. All calculations must be legible, self-explanatory, and indexed.

 Clause FB-220

The cover sheets of the design documents must contain the signature and registration stamps or seals of the engineer responsible for the work.

The A/E must advise the project manager in writing of all changes to previously accepted design phase submittals.

The A/E must retain the original tracings, specifications, and/or electronic media for printing the contract documents unless otherwise directed by the contracting officer.

### 2-2.5.3 Final Design Review Meeting

The final design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The A/E must have in attendance the same disciplines that attended the intermediate design review meeting.

The A/E must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the final design review meeting.

## 2-2.6 Solicitation Phase

The A/E is responsible for the following activities, if they are included in the contract, during the solicitation period:

- a. **Solicitation Documents.** The A/E arranges to have sets of the total solicitation package reproduced, collated, bound, and packaged for mailing. The A/E must receive and fill requests for solicitation documents from qualified offerors. The cost and distribution are detailed below:

- 
- (1) **Reproduction Costs.** Before the solicitation period, the A/E obtains and forwards to the Postal Service project manager three price quotations from local printers for printing solicitation sets and a price quotation for additional sets to be ordered. The quotations must include the cost for full-size sets of prints and an itemized cost for sets of half-size prints required by the Postal Service. The A/E must also include the cost of reproducing an estimated three addenda.

The A/E is reimbursed for the cost of reproducing and mailing solicitation sets and addenda. For mailing to Postal Service addresses, use Express Mail (if available); otherwise, use Priority Mail.

The A/E recommends the number of sets to be printed and the price to be charged per set to offerors for the Postal Service to approve. Only full sets of drawings and specifications will be sold. The fee an offeror pays for solicitation sets is nonrefundable. The purpose of the fee is to ensure that firms requesting documents have a positive interest in submitting a proposal for the project. The fee is not intended to recover all costs of reproducing and distributing the solicitation documents.

- (2) **Accounting.** Checks and money orders for payment of solicitation sets are to be made payable to the Postal Service disbursing officer. These instruments and cash payments received will be held in a secure place by the A/E until delivered to the Postal Service at the final accounting at the end of the solicitation period.

The A/E must keep a daily log of all remittances (nonrefundable) received that shows the name and address of the requesting firm, the amount, the check or money order number, and the date the request was filled (mailed). A duplicate of the solicitation list must be kept to facilitate the mailing of addenda and the solicitation list to interested subcontractors.

At the end of the solicitation period, the A/E delivers to the project manager a copy of the daily log; a Form 1940, *Remittance Register*, with only the itemized portion completed (sheet heading and totals are to be blank); and all checks. Undistributed sets must be disposed of as directed by the project manager.

- (3) **Complimentary Distribution.** As approved by the project manager, the A/E sends one copy of the solicitation at no charge to information organizations such as Blue Reports, Dodge Reports, local contractor organizations, and local trade organizations. Delivery must be recorded in the daily log by the A/E.

- b. **Requests for Information (RFIs) and Questions.** The A/E must respond to questions from offerors as follows:

 Clause FB-220

- (1) All telephone and written questions from offerors received by the A/E are to be recorded. The A/E must advise the requesting party that the questions will be replied to within a reasonable time and that the reply will be one of the following:
  - (a) An interpretation of the solicitation documents that can be rendered without requiring an addendum.
  - (b) No change to the solicitation; therefore the proposal should be based on the documents as prepared.

- 
- (c) An addendum to the solicitation that will be issued to clarify the items in question.
  - (2) All questions must be reviewed by telephone with the Postal Service project manager. Backup information and the A/E's recommended answer must be provided.
  - (3) A reply to the offeror making the request must be prepared, to be signed by the contracting officer, in accordance with the project manager's instructions.
- c. **Addendum.** The A/E is responsible for preparing any required addendum as follows:
- (1) When an addendum is required, the A/E must prepare the addendum, obtain the contracting officer's approval of it, and issue it to all plan holders. Under no circumstances may an addendum be issued without prior approval of the contracting officer.
  - (2) Amendments (addenda) to solicitation documents must be sent (post-marked) to offerors no later than 2 weeks (14 days) before the proposal-opening date. This is necessary in order to provide prospective offerors with sufficient time to incorporate the amendments in their proposals.
- d. **Preproposal Meetings.** The A/E must attend all preproposal meetings as may be required by the contracting officer.
- e. **Technical Proposal Evaluations.** The Postal Service must open and evaluate all proposals. The A/E must render such assistance in the proposal evaluation and preaward period as may be required by the contracting officer. The A/E is not to be present when proposals are opened.

 Clause FB-220

## 2-2.7 Submission Checklist

The checklist in Exhibit 2-2.7 identifies the minimum design components that the A/E is required to submit at each of the design phases.

## 2-3 A/E Modifications of Design

---

Changes in the scope of work or Postal Service requirements not covered in the initial A/E contract are considered to be contract modifications in accordance with Clause B-2, Changes, in the A/E contract.

 Clause B-2

Modifications required before the award of the construction contract are prepared by the A/E when the contracting officer accepts the proposed modification in writing. The A/E must prepare the necessary design drawing and specification revisions and must perform all applicable services related to the modification as though they were contained in the original scope of work.

The A/E must furnish an estimate of the effect the modification may have on the project construction cost and scheduling.

Fees for these services will be based on the rates negotiated and included in Clause FB-290, Design Services, at the time of A/E contract award. Rates include all costs, direct and indirect, and overhead and profit.

 Clause FB-290

**Submission Checklist**

**Design Phase Submission Checklist  
Mandatory A/E Services**

<b>Design Submittal Required</b>	<b>Prenegotiation Orientation &amp; Negotiations Phase</b>	<b>Preconcept Phase (10%)</b>	<b>Concept Phase (30%)</b>	<b>Intermediate Phase (70%)</b>	<b>Final Phase (100% Design)</b>
<b>PLANS/DRAWINGS</b>					
<b>Site Plans</b>					
Site Utilization		X	X	X	X
Site Restrictions and Improvements		X	X	X	X
Civil Design			X	X	X
Site Plan			X	X	X
<b>Architectural</b>					
Floor Plans		X	X	X	X
Elevations and Perspectives		X	X	X	X
Sections and Details			X	X	X
Lookout Gallery Plan			X	X	X
CCTV Camera and Surveillance			X	X	X
Lobby Plan			X	X	X
Roof Drainage Plan			X	X	X
Finish Schedule			X	X	X
Color and Material Panels			X	X	X
Fire Exit Plan With Code Summary			X	X	X
Casework Drawings				X	X
Certification Letter for Compliance With RE-4				X	X
Complete List of Postal Service-Furnished Equipment			X	X	X
<b>Structural</b>			X	X	X
<b>Space Conditioning (HVAC)</b>			X	X	X
<b>Plumbing</b>			X	X	X
<b>Fire Protection</b>			X	X	X
<b>Electrical</b>			X	X	X
<b>Other Utility Systems</b>			X	X	X
<b>Mechanization</b>		X	X	X	X

**Submission Checklist**

Design Submittal Required	Prenegotiation Orientation & Negotiations Phase	Preconcept Phase (10%)	Concept Phase (30%)	Intermediate Phase (70%)	Final Phase (100% Design)
<b>ANALYSIS/TABULATIONS/ CALCULATIONS</b>					
Professional Services Estimating Sheets	X				
Environmental Studies			X		
Code Analysis Report		X	X	X	X
Building Area Tabulations		X	X	X	X
Building System Comparisons		X	X		
Energy Conservation Analysis		X	X	X	
Environmental Policy		X			
Life-Cycle Cost Analysis			X		
<b>SPECIFICATIONS</b>			X	X	X
<b>COST ESTIMATES</b>		X	X	X	X
<b>SCHEDULES</b>			X	X	X
<b>SMALL, MINORITY-OWNED, &amp; WOMAN-OWNED BUSINESS CONTRACTING GOALS AND SOURCE LIST</b>				X	X
<b>LIST OF REFERENCE PUBLICATIONS</b>					X
<b>COMPLETE DESIGN COMPUTATIONS</b>					X

---

## 2-4 Additional Design Phase Services (Options)

A separate cost proposal must be prepared for each service described in sections 2-4.1, 2-4.2, 2-4.3, 2-4.4, and 2-4.5, and when these additional services (options) are included in Section A, Items and Prices, of the A/E contract. Each item includes all overhead, profit, and costs (direct and indirect), including A/E administration and technical support costs, necessary to complete the services described. The A/E will not be compensated for optional design phase services unless they are included in the A/E's contract.

The optional services described in this section only apply when specific project requirements are more demanding than those covered in all the sections of 2-2, Design Phase Services. Some of the optional A/E design phase services are required under the base scope of A/E services to a more limited extent.

### 2-4.1 Perspective Drawing

The A/E must provide a 20-inch x 30-inch perspective drawing in color showing the building to its best advantage. The drawing must be capable of being used for producing photographic prints of sufficient contrast to ensure good newsprint reproduction. Also provide a negative and six 8-inch x 10-inch glossy black-and-white prints and two 35-millimeter color slides of the A/E rendering. The A/E must provide the original perspective drawing and two copies that are to be matted, glazed with clear nonglare glass, framed, and prepared for hanging. The original and one copy must be forwarded to the appropriate facilities service office (FSO) or major facilities office (MFO). One copy is to be forwarded to the plant manager.

### 2-4.2 Supplementary Drawings

The A/E must provide the following drawings:

- a. **Postal Service-Furnished Property.** Prepare a drawing of box and service lobbies and an elevation of the post office boxes. Show the location and number of under-counter items and self-service items, and a plan and elevation indicating the location of post office box modules. Provide a table of all property that is furnished by the Postal Service and installed by the contractor, giving the following information:

Name and Description	No.	Quantity	Misc.	*Date Required
----------------------	-----	----------	-------	----------------

\*This column is to be left blank and filled in by the Postal Service with dates furnished by the construction contractor.

A checklist of Postal Service-furnished property is provided by the Postal Service as required.

- b. **Outline Floor Plan (Grid).** Provide an outline floor plan at 1/8 inch = 1 foot square with a 1/4-inch background grid. This drawing is for Postal Service operational planning. Number all rooms and spaces on this plan and show all mechanization located less than 7 feet 6 inches above the finished floor.

- 
- c. **Major Milestone Flowchart.** Provide a major milestone flowchart for construction unless directed otherwise by the contracting officer during negotiations. Show the sequence, starting and completion dates, and duration of each major activity, including the mechanization. Scheduling must be in days, with the date of the notice to proceed as the starting date for the chart. This flowchart is intended only as a guide to the successful offeror and an aid for Postal Service program planning.

### 2-4.3 Mechanization Systems Description Manual

The A/E must provide a systems description manual in accordance with the scope of work for fixed mechanization, "Systems Description." This service is required as determined by the Postal Service for certain projects having fixed mechanization.

### 2-4.4 Roofing Consultant

Provide the services of a roofing consultant who is thoroughly qualified in the design, construction, observation, and testing of all types of roofing systems and materials. The responsibilities of this consultant include:

- a. Reviewing specifications, drawings, and other contract documents related to roofing.
- b. Critiquing and commenting on the design, including sketches and alternative details for consideration by the A/E and the Postal Service.
- c. Working with the A/E in developing alternative roof system comparisons and contract documents.
- d. Assisting in conducting preconstruction roofing conferences with the contracting officer's representative and construction contractor.
- e. Reviewing the construction contractor's submittals and providing comments to the contracting officer.
- f. Providing full-time, on-site observation of the construction to verify that it complies with the contract documents. Subject to the approval of the contracting officer, the full-time, on-site construction observation may be carried out by an assistant to the principal consultant. Primary reviews, attendance at meetings, and periodic supervisory visits are to be carried out by the principal consultant. Specific services include, but are not limited to, the following:
  - (1) Provide daily, weekly, and final observation reports to include photographs and other data substantiating the findings.
  - (2) Assist the contracting officer to conduct all progress meetings.
  - (3) Review roofing-related quality control reports submitted by the contractor.
  - (4) For built-up roofing, supervise the contractor when samples are cut. Review and analyze the laboratory reports and submit a report evaluating the findings to the contracting officer.
  - (5) For elasto-plastic roofing work, test the materials and workmanship as appropriate to verify that they meet the requirements of the specifications.

- 
- (6) When the contractor sends notice of completion of the roofing work, conduct a final on-site inspection and advise the contracting officer in writing when the work can be accepted.
  - (7) Charge construction observation fees on an as-needed, man-day basis. The consultant must submit, as a part of this proposal, an estimated length of time for roof installation.
- g. Completing a field evaluation of the existing roof system if a project involves an addition or substantial renovation to an existing building. This evaluation includes a visual examination, limited cut samplings for visual examination, and laboratory analyses of the cut samples. The consultant must provide a separate optional price for a nondestructive evaluation of moisture in the roofing system. The consultant must submit a written report with a summary of findings, list of recommendations, cost estimates, and all background data.

#### **2-4.5 Fire Protection Consultant**

The A/E must provide the consulting services of a fire protection engineer. This person must be a full member of the Society of Fire Protection Engineers and must demonstrate equivalent qualifying experience or have an applicable state registration as a fire protection engineer.

---

This page intentionally left blank

---

## Part II

# Mail Processing Facilities

### 3 Construction Phase A/E Services

#### 3-1 Design Services During Construction (Options)

---

##### 3-1.1 General

The requirements of this section apply if the A/E's contract includes in Section A, Items and Prices, an option for the A/E to provide support services during the construction phase. A/E services during construction include reviewing contractor submissions, participating in meetings, interpreting contract documents, and inspecting the site a minimal number of times during the construction period. These services include time and effort both in the office and at the work site. Rates for all services must include both direct and indirect costs and overhead and profit.

 Clause FB-205  
 Clause FB-292

##### 3-1.2 A/E Support Services

---

Handbook P-2, 6-1.2

---

The A/E is to provide the following support services:

- a. **Support Services.** Support services supplied by the A/E are services that are necessary to assist the field office and that require a trip to the field. These include, but are not limited to, the following:
  - (1) Participating in preconstruction and progress meetings, including preparation and distribution of meeting minutes.
  - (2) Interpreting and clarifying contract documents.
  - (3) Assisting the field office in maintaining quality control.
  - (4) Observing field installation conditions and materials in support of the resident engineer.
  - (5) Providing administrative support to the field office.
  - (6) Providing technical support to the field office during construction for preparing punch lists and accepting the facility.
  - (7) Participating in prefinal, safety, final, and warranty inspections.
  - (8) Supporting small, minority-owned, and woman-owned business subcontracting program services, including, but not limited to, the following:
    - (a) Monitoring the program, giving special attention to the contractor's efforts at attaining goals, the contractor's plan for developing minority-owned business participation, the completeness and accuracy of the

---

contractor's minority-owned business subcontracting reports, and so forth.

- (b) Assisting the contractor in locating and developing potential minority-owned business subcontractors.
- (c) At the preconstruction conference, reviewing the contractor's initial minority-owned business reports and giving timely recommendations or assistance as required to attain the best possible program start.
- (d) Reviewing the status of the contractor's minority-owned business program at each monthly construction meeting and reporting about it.
- (e) Maintaining an on-site minority-owned business subcontracting file containing copies of all contractor's reports, minutes of meetings, and other pertinent information.
- (f) Administering the contractor's submittals of quarterly reports.

- b. **Home Office Support Services.** Home office support includes field support services identified in 3-1.2a above that the A/E can accomplish in the office without the need for a trip to the field.

### 3-1.3 Submission Reviews and Approvals

The A/E must review all contractor submittals for compliance with contract documents with respect to field dimensions and clearances, relation to available space, and relation to work by the Postal Service or separate contracts. The A/E must review all submittals promptly so as not to delay the construction progress. The duration of all reviews must not exceed the time frames required in the construction contracts.

The A/E must inspect contractor and subcontractor manufacturing, assembling, and warehousing facilities when required by the Postal Service. The A/E must also accomplish factory acceptance tests and accept those items of equipment that require such acceptance in the mechanization specification. The dates of such visits and inspections must be approved by the Postal Service at least 1 week in advance in order to permit the Postal Service to participate. The cost is reimbursed in accordance with the terms contained in Section F, Payment and Funding, of the A/E's contract.

The contractor submittals that the A/E is required to review include, but are not limited to, those discussed in the following sections.

#### 3-1.3.1 Shop Drawings, Product Data, and Samples

The A/E must review and approve or reject, on the basis of contract documents, all contractor submittals of shop drawings, product data, catalog cuts, samples, manufacturer's installation instructions, color schedules, and similar information. In addition to the normal building shop drawings, the following mechanization shop drawings and samples require approval and submittal to the Postal Service:

- a. Building loads.
- b. Computer hardware and software reports.
- c. Belting and its certification.
- d. Equipment arrangement drawings.

 *Building Design Standards, Master Specification 01310*

 *Building Design Standards, Master Specification 01330*

 *Clause B-56*

- 
- e. Elevation drawings.
  - f. Plan views.
  - g. Electrical elementary drawings of the mechanization systems.
  - h. Control panel elementary drawings.
  - i. Master electrical interconnection drawings.
  - j. Distribution riser diagrams.
  - k. Electrical, mechanical operations, and maintenance manuals.
  - l. Spare parts list.
  - m. Mechanization load drawings.

The A/E must inform the contracting officer of all loads for specific equipment selection that exceed the loads on the contract documents before the CO grants approval for that equipment.

The A/E must review formwork and falsework drawings and schedules for their construction submitted by the contractor. The A/E must require the construction contractor to submit for review all the design drawings associated with formwork and erection of falsework. These submissions must be reviewed to ensure that the A/E's design, per contract documents, is properly executed aesthetically and structurally, including the layout of forms, ties, embedded items, expansion joints, and water stops. These submissions must contain or be supplemented by a schedule for erecting and removing falsework, placing construction loads, and doing required testing. The A/E and contractor must coordinate their efforts so that the integrity of the A/E's design is maintained while the contractor remains responsible for the design and erection of falsework and safe construction.

Shop drawings must be submitted to the A/E for review only after they have been checked and approved by the contractor. Failure to show that the submittal has been thoroughly checked may result in the submittal being returned without being reviewed. When shop drawings reach the A/E's office, they must be stamped with the date and assigned the A/E's file number and an appropriate identifying number. The process of receiving, examining, approving, and distributing shop drawings is critical. The A/E must keep a record of the handling of these drawings during review to ensure the orderly processing of this work.

The A/E must approve the shop drawings only for conformance with the design concept of the project and with the information given in the contract documents. The approval does not extend to the shop drawing information related to shop fabrication process, field construction techniques, or coordination of trades and their work. The language recommended to stamp shop drawings is as follows:

- a. **Approved.** If "approved" is checked, fabrication, manufacture, or construction may proceed, provided the work complies with the contract documents. This action does not authorize changes to the contract sum unless they are stated in a separate letter or change order.
- b. **Approved as Noted.** If "approved as noted" is checked, fabrication, manufacture, or construction may proceed, provided the work complies with the A/E's notations and the contract documents. This action does not authorize changes to the contract sum unless they are stated in a separate letter or change order.

- 
- c. **Rejected; Resubmit.** If “rejected; resubmit” is checked, fabrication, manufacture, or construction may *not* proceed. The contractor must submit to the A/E a new shop drawing that has been corrected as marked (no additional changes are allowed). Any submission marked “rejected; resubmit” is not permitted on the site.

The A/E’s review of samples is only to ensure their conformance with the design concept of the project and compliance with the information given in the contract documents. The construction contractor is responsible for dimensions that are to be confirmed and correlated at the site; for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences, and procedures of construction; and for coordination of the work of all the trades. The language the A/E uses in any stamp or letter pertaining to the approval of samples must parallel the language used in shop drawing approval procedures as described in this section.

### 3-1.3.2 Coordination Drawings

The A/E must provide a general review of contractor-submitted coordination drawings for their conformance to contract documents; however, the A/E must make it clearly known to the contractor that coordination is his or her responsibility.

### 3-1.3.3 Schedule of Values and Progress Payments

The A/E must review the contract value breakdown on the initial schedule of values submitted by the contractor. The A/E must notify the contracting officer of construction activities that are not included on the schedule of values as well as the reasonableness of the costs assigned to each scheduled item. The A/E must ensure that the schedule of values is not “front-end loaded.”

The A/E is responsible for the following:

- a. Approving the selection and number of activities.
- b. Reviewing, evaluating, and analyzing the proposed network diagrams, including activity durations, costs, and workforce loading, when applicable.
- c. Revising and analyzing the monthly update of network diagrams, when applicable.

The A/E is responsible for certifying Form 4211-B, *Invoice and Payment Authorization (Facility and Fixed Mechanization Contract)*, which is submitted monthly by the contractor, after reviewing the schedule of values and substantiating the data submitted by the contractor. This form, which certifies the accuracy of the progress payments, must be signed by a designated representative of the A/E firm and forwarded to the contracting officer for signature.

### 3-1.3.4 Schedules

The A/E must review the contractor’s initial progress schedule as well as the monthly schedule updates that this contractor submits with the partial payment requests. The A/E must verify that this contractor’s schedules, at a minimum:

- a. Show the complete sequence of construction by activity, with dates for beginning and completing each element of construction.
- b. Identify each item by specification section number.
- c. Identify work of separate stages and other logically grouped activities.

 Building Design Standards, Master Specification 01310

 Clause 1-3

---

Handbook P-2, 6.4.5

---

 Clause FB-246

 Clause B-59

---

Handbook P-2, 6.2.3

---

- d. Provide subschedules to define critical portions of the entire schedule.
- e. Include conferences and meetings in the schedule.
- f. Show the accumulated percentage of completion of each item and total percentage of work completed as of the first day of each month.
- g. Provide a separate schedule of submittal dates for shop drawings, product data, and samples, including Postal Service-furnished products, and the dates that reviewed submittals will be required from the contracting officer as specified in Section 01330, Submittal Procedures.
- a. Coordinate the content with the schedule of values.

 Clause B-40

### 3-1.3.5 Spare Parts Data

The A/E must review the spare parts data to ensure that it complies with the contract documents and to ensure that the contractor provides all necessary spare parts.

 Clause B-58  
 *Building Design Standards, Master Specification 07180*

### 3-1.3.6 Warranties and Guarantees

The A/E must review all warranties and guarantees to ensure their compliance with the contract documents and to ensure that the contractor provides all special warranties and guarantees that are required by the contract.

 Clause B-61  
 *Building Design Standards, Master Specification 07180*

Handbook P-2, 6.3

### 3-1.3.7 Operation and Maintenance Manuals

The contractor must assemble, coordinate, and index operation and maintenance (O&M) manuals for each utility system and major component of building equipment and maintenance manuals for the mechanization system. The A/E must ensure that the contractor submits this material in sufficient time for review and approval, not less than 90 days prior to occupancy for the building manuals and as specified by USPS-M-5000 for the mechanization manuals. When it is determined during design that the facility is to be incrementally or partially occupied, the A/E must specify that the contractor must supply O&M manuals for training and spare parts on-site in a timely manner for the affected areas. Training cannot begin until O&M manuals have been approved.

 *Building Design Standards, Master Specification 07180*

Handbook P-2, 6.3

The A/E must review the manuals for completeness and accuracy and recommend to the contracting officer whether or not to approve them. After Postal Service approval, the A/E must prepare and deliver eight copies of all building manuals to the postmaster before the start of training. After Postal Service approval, the contractor must deliver 20 copies of the mechanization maintenance manuals to the A/E, who delivers them to the postmaster.

### 3-1.3.8 Test Reports

The A/E must review all test reports to ensure that they comply with the contract documents.

 *Building Design Standards, Master Specification 01450*

Handbook P-2, 6.3.1

The A/E must ensure that all required tests are completed at the proper time. The scheduling of the mechanization operational tests must be coordinated with the Postal Service at least 3 weeks in advance. The resident engineer or the mechanization resident engineer must be present for all tests.

---

### 3-1.3.9 Change Orders and Contract Modifications

The A/E prepares, assembles, reviews, negotiates, and issues all construction contract modifications directed by the contracting officer. Modification proposals initiated by the construction contractor, the Postal Service, or the A/E must be processed by the A/E as follows:

- a. Obtain approval to proceed with the proposal change from the construction manager. Assign a serialized control number to the proposal change and notify the contractor that the proposal change is in progress.
- b. Review field conditions and prepare the necessary design drawings, specifications and revisions, A/E cost estimate, justification, and recommendations for the proposal change.
- c. Issue a copy of the proposal change drawings to the contractor, requesting a proposal and specifying a time for response. Do not include the A/E independent cost estimate. Simultaneously, provide the Postal Service with a copy of the request for proposal, including the proposal change and all documents required.
- d. Review the contractor's proposal with the Postal Service and the contractor to resolve cost differences. The construction manager must negotiate any conditions that cannot be resolved between the A/E and the contractor.
- e. Upon Postal Service acceptance of the contractor's proposal, prepare a contract modification on the Postal Service-provided form, obtain the contractor's signature, and submit it to the construction manager complete with all backup material and Form 4211, *Facility and Fixed Mechanization Project Contract*.
- f. Upon receipt of a signed copy of modifications, ensure that the contractor's work is in accordance with the changed scope of work.

Fees for these services are based on the rates negotiated and included in Clause FB-294, Architect-Engineer Modifications of Design. Rates include all costs, both direct and indirect, and overhead and profit.

### 3-1.3.10 As-Built Drawings and Specifications

The construction contract documents require the contractor to provide the A/E with drawings and specifications incorporating the revisions and changes made during construction up to acceptance of the project. The A/E must review the contractor's as-built drawings monthly to ascertain this contractor's compliance before processing payment requests. The A/E must revise the original contract documents to indicate as-built conditions, including revisions in site and building area tabulations.

The A/E must furnish the Postal Service with a set of reproducible record drawings (as-built drawings) showing significant changes made during the construction process, based on the marked-up prints, drawings, and other data furnished to the A/E by the contractor.

### 3-1.3.11 Electronic Format of As-Built Information

The A/E must provide all record drawings (as-built drawings) to the Postal Service in electronic format that is compatible with design documents.

 Clause B-10  
 Clause B-21  
 Clause B-37

---

Handbook P-2, 6.5

 Clause FB-294

 Clause B-57

---

### 3-1.3.12 As-Built Photographs

When construction is completed, the A/E must provide two color 8-inch x 10-inch photographs, six exterior views, and 20 exterior and interior views, including views that show the accessibility features of the building, to be submitted in digital format as directed by the CO. Coordinate the selection and location of these views with the contracting officer.

### 3-1.3.13 Closeout Certificates

The A/E must provide the following certificates to the Postal Service:

- a. Handicapped accessibility.
- b. Lead-based paint.
- c. Asbestos-containing materials.

---

## 3-2 Modifications of Design During Construction

Changes in the scope of work or Postal Service requirements not covered in the initial A/E contract are considered to be contract modifications in accordance with Clause B-2, Changes, in the A/E's contract.

Modifications of design during construction not due to design errors or omissions will be compensated for in accordance with the fee schedule in Clause FB-294.

 Clause B-2  
 Clause FB-294

---

## 3-3 Field Services During Construction (Options)

### 3-3.1 Requirement

The requirements of this section apply if the contract includes in Section A, Items and Prices, an option for the A/E to provide field support services, which include a construction administrator, resident engineer, assistant resident engineers, and a clerk/stenographer. Rates for all services must include both direct and indirect costs and overhead and profit. In addition to the previous, a mechanization assistant resident engineer is required on projects with fixed mechanization. The scope of services for each position is defined in this section.

 Clause FB-293  
 Clause FB-206

### 3-3.2 General Responsibilities

The Postal Service must forward letters of current authorities and limitations to the Postal Service representatives who are involved in administering the contract to the A/E and general contractor. A Postal Service decision and signature are required for all contractual actions and must be accompanied by a written detailed justification and a specific recommendation by the construction administrator. The A/E or authorized representative (i.e., the construction administrator) is not authorized to revoke, alter, enlarge, relax, or release any requirements of the project drawings or specifications; to approve or accept any portion of the work; or to issue instructions (oral or written) that would be contrary to the contract documents. All dealings in terms of the contract must be made with the contractor's superintendent and not with a subcontractor.

---

Handbook P-2, 6-1

---

### 3-3.3 Contract Administration

Contract administration responsibilities are as follows:

- a. The A/E is responsible for administering the contract between the Postal Service and the contractor. The A/E's duties, responsibilities, and limits of authority are shown below and in Sections G and H, Clauses, of the A/E's contract. The A/E or A/E's representatives, as agents of the Postal Service, must discharge this responsibility by:
  - (1) Interpreting the contract documents and all changes made to them.
  - (2) Establishing the standards of workmanship.
  - (3) Judging the performance of the contractor (i.e., progress of the project as constructed) compared with that of the project as planned.
  - (4) Certifying payments to the contractor on the basis of the schedule of values of the work-in-place and stored materials.
  - (5) Inspecting the work to determine the date of substantial completion.
  - (6) Informing the Postal Service about the status of the project relative to the above points.
  - (7) Conducting monthly progress meetings with the contractor and Postal Service representatives to evaluate progress of the work and to resolve problems related to contract compliance.
  - (8) Submitting the following reports to the construction manager:
    - (a) The daily log each week.
    - (b) A weekly summary of progress of the work, problems noted, and actions taken.
    - (c) Minutes of the monthly progress meetings.
    - (d) A monthly status of modifications, along with the contractor's monthly payment requests, with the construction administrator's recommendation to the contracting officer.
    - (e) Quarterly minority-owned business reports.
    - (f) Monthly progress reports.
    - (g) Updated submittal log.
    - (h) Updated RFI logs.
    - (i) Updated request for proposal (RFP) logs.
  - (9) Negotiating and processing construction modifications for the contracting officer's signature.
- b. As the Postal Service's agent, the A/E is responsible for guarding the Postal Service against defects and deficiencies in the work of the contractor. The A/E may reject work as failing to conform to the contract documents, a failure that will keep the building or any portion of it from having the intended appearance or being capable of full use in the manner and for the purpose for which it was

---

intended. The right to reject work does not extend to the areas of safety precautions and programs in connection with the work or to the adequacy of construction means, methods, techniques, sequences, or procedures, all of which are solely the responsibility of the contractor.

- c. The A/E's construction administrator, who is assigned full-time to projects with a construction cost greater than \$8 million, must be responsible for directing the overall technical and managerial efforts of the A/E that are required for field services during construction.
- d. The A/E's resident engineer, who is normally assigned full-time to the project, must observe the progress of the work performed by the contractor.
- e. The A/E must use due care and exercise reasonable skill and competence in observing the progress of the work and endeavoring to determine if it is proceeding in accordance with the requirements of the contract documents.
- f. The resident engineer must randomly interview contractor and subcontractor employees monthly. Their responses regarding their classification and rate of pay must be checked against payrolls and applicable wage rates. Use DOD Form 1567, *Defense Department Labor Standards*, for this purpose.
- g. The construction administrator, resident engineer, and resident engineer's staff must accomplish other activities as may be required by the construction manager.
- h. A Postal Service decision or signature is required for all actions that could result in a modification or change to the contract, and must be accompanied with a written detailed justification and a specific recommendation by the construction administrator.

### 3-3.4 Field Supervision

Field supervision responsibilities are as follows:

- a. **Field Office Staff.** The field staff must consist of personnel capable of observing the contractor's effort with a minimum of support from the A/E's office. The field staff located at the construction site may consist of the construction administrator, resident engineer, assistant resident engineers as authorized, and a clerk/stenographer. The construction administrator, resident engineer, and clerk/stenographer are generally full-time staff. The assistant resident engineers are generally part-time staff who are experienced in observing the construction of a particular discipline (e.g., structural, mechanical, electrical, or mechanization material handling). The number of field personnel, therefore, may vary according to the status of the construction and is subject to Postal Service approval.

Resumes of at least three qualified construction administrators (when applicable) and resident engineers must be submitted by the A/E, with the A/E's recommendation, to the contracting officer no later than 10 days after approval of the intermediate design submittal. The selection of the resident engineer is subject to the approval of the contracting officer. The above personnel must be replaced at the discretion of the contracting officer if their performance is unacceptable.

- b. **Field Office.** The physical space, furniture, utilities, and telephones that the A/E field staff will use are provided by the contractor as noted in Division 1 of the specifications. The A/E must provide all other equipment and materials.

- 
- c. **Contractor Superintendence.** The A/E must be aware that the contractor is responsible for the supervision required to assemble materials and accomplish the labor to complete the project. The contractor is responsible for delivering to the Postal Service a project constructed in full conformance with the contract documents. The contractor's duty is to manage the construction progress so that contract requirements are met efficiently, expeditiously, and accurately.
  - d. **Safety and Security.** The A/E must review and monitor the contractor's safety plan and security program. Safety precautions, programs, and requirements are specified in various safety codes or regulations. Although the resident engineer must be concerned generally with their observances, compliance with them is solely the contractor's responsibility.

### 3-3.5 Mechanization Coordination

On projects with fixed mechanization, the A/E must provide the services of a mechanization resident engineer to provide specialized coordination, as follows:

- a. The A/E must submit the resume of a fully qualified mechanization resident engineer to the contracting officer for approval, along with the resident engineer resumes, at the completion of the intermediate design review. It is anticipated that the following workdays will be required of the mechanization resident engineer:
  - (1) Projects with fixed mechanization valued up to \$500,000 should have a mechanization resident engineer on board a total of 6 days a month during the installation period.
  - (2) Projects with fixed mechanization valued between \$500,000 and \$1 million should have a mechanization resident engineer on board 12 days a month during the installation period.
  - (3) Projects with fixed mechanization valued in excess of \$1 million should have a mechanization resident engineer on board on a full-time basis during the installation period.
- b. The mechanization resident engineer must perform the following tasks:
  - (1) Continually monitor, observe, and evaluate the construction to ensure compliance with the specifications.
  - (2) Maintain, at the site, a copy of all shop drawings submitted for the record only and all approved shop drawings.
  - (3) Examine equipment as it arrives at the site. If it does not conform to specifications, inform the contractor that the equipment must not be installed until nonconformance is corrected.
  - (4) Maintain a list of equipment and systems that have been installed, e.g., conveyors, A-1, A-2, and so forth, or G series.
  - (5) Provide the construction manager with a copy of the monthly estimate of the completed mechanization, shown as a percentage of the total mechanization.
  - (6) When an item that does not conform (i.e., a defect) is discovered, record it on a punch list. When the same defect is repeated on more than one item of equipment, make only one notation that is referenced to all applicable equipment on the punch list.

---

The punch list must contain all construction defects noted by the mechanization resident engineer. Use a consistent format that includes at least the item number, defect description, date, and initials of the mechanization resident engineer or representative who certifies that the equipment has been corrected. Group the mechanization punch list items by discipline (e.g., mechanical and electrical controls).

Provide a copy of the current punch list to the construction manager at the time the contractor is notified to take corrective action. If a punch list item has already been corrected when the punch list is transmitted, the punch list must bear an appropriate notation or correction. The mechanization resident engineer must also keep a current copy of the punch list at the construction site for Postal Service inspection.

- (7) During construction, advise the contractor about questionable items being installed. In addition, when necessary coordinate with the construction manager to obtain technical support relating to questions that arise during construction.
- (8) Evaluate all contractor-originated change requests, proposals, requests for substitutions, and so forth. The mechanization resident engineer must transmit these with a recommendation to the construction manager as quickly as possible. The relative urgency of resolving items must also be noted on these documents.
- (9) Notify the construction manager in advance when construction milestones will be achieved (when subsystems are installed and operational). Also notify the construction manager of all changes in test and construction milestones.
- (10) Arrange for participation in and report on all operational tests concerning the mechanization. Coordinate all observation and operational test dates with the construction manager.
- (11) Develop a final list of equipment defects during the final acceptance inspection.
- (12) As required, continue to monitor and evaluate the contractor's work through correction of all equipment defects.

### 3-3.6 Progress Meetings

The construction administrator schedules and chairs all monthly progress meetings and other required project meetings (attendance by his or her staff is at the discretion of the construction administrator). The construction administrator forwards the minutes of all meetings to the construction manager within 5 working days after each meeting.

Before the monthly progress meeting, the construction administrator must spend at least 1 hour reviewing with the contractor the contractor's compliance with contract requirements for labor standards, equal employment opportunity (EEO) policies, minority-owned business participation, payrolls, and safety. The findings must be reviewed at the progress meeting and included in the minutes of the meeting.

 *Building Design Standards, Master Specification 01310*

---

### 3-3.7 Records

A daily log must be maintained by the construction administrator. This log must be neatly and accurately recorded, since it may subsequently be used in legal proceedings. Enter the following items every day from the start to the completion of the project:

- a. **Progress Work.** Status for work in progress, new work started, and current and anticipated problems of scheduling and coordination.
- b. **Workforce.** The number of foremen and mechanics for each trade at the site.
- c. **Weather.** The high and low temperatures, precipitation, and a general description of the 24-hour weather conditions.
- d. **Telephone Calls.** All pertinent conversations.
- e. **Site Inspections.** The names, titles, and official capacity of all persons, with times and purposes of inspections noted. For Postal Service payment to be approved, A/E personnel making authorized site inspections must sign in at the site.
- f. **Miscellaneous Items.** The A/E must note all work or material in place that does not correspond with drawings or specifications, as well as all other problems or abnormal occurrences that have arisen during each day. Include notations of any particular lack of activity. Note corrective actions taken.
- g. **Accidents.** For all accidents involving bodily injury, lost time, or property damage, the A/E must record the names of the injured and witnesses, conditions, extent of injury or damage, and time lost.

### 3-3.8 Construction Project File

The A/E must maintain a construction project file, at the project site, that contains all appropriate and necessary records that document the execution of the construction contract. The field construction project file must consist of copies of the original documents, not the original documents. The field file must include, but is not limited to, the following categories (when applicable):

- a. **Initial submittals for approval:**
  - Schedule of values.
  - Construction schedule.
  - System construction estimate breakdown.
  - List of subcontractors.
  - Qualifications of testing agencies and project personnel.
  - Shop drawings submittal log.
- b. **Correspondence:**
  - Correspondence.
- c. **Meeting minutes:**
  - Preconstruction conference.
  - Monthly progress meetings.
  - Coordination meetings.

---

d. **Job Drawings:**

- Contract drawings.
- Supplemental clarification drawings.
- Drawings containing changes.
- Coordination drawings.

e. **Shop Drawings:**

- Shop drawings (those that have been reviewed and approved as final).
- Shop drawings log.
- Samples.

f. **Test reports:**

- Testing log.
- Tests.

g. **Substitution request:**

- Justification and determination, including:
  - Contracting officer's decision.

h. **RFI log:**

- RFI log.
- General contractor-initiated requests.

i. **Schedules:**

- Construction progress schedule.
- Equipment and procurement schedules.
- Submittal schedule.
- O&M training schedule.
- Occupancy schedule.

j. **Requisitions:**

- Approved requisitions for payment.

k. **Certified payrolls:**

- Certified payrolls.

l. **Monthly and quarterly submittals:**

- General contractor progress synopsis.
- Labor standards interview.
- Employee utilization report.
- Stored material log and invoices.
- Updated submittal log.
- Subcontractor minority business enterprise (MBE) form.
- Schedule of values.

- 
- m. **Daily construction log:**
- Inspector's daily construction log.
  - Contractor's daily construction log.
- n. **Photos:**
- Photographs.
- o. **Modifications and/or change orders:**
- Form 4909, *Findings of Fact for Contract Modifications*.
  - Scope of modification.
  - Request for proposal, including:
    - Contractor's cost proposal.
    - Subcontractor's cost breakdown.
  - Independent estimate (A/E or Postal Service).
  - Reconciliation of estimates and proposal.
  - Analysis of schedules.
  - Negotiation record.
  - A/E's recommendation (if applicable).
- p. **Claims:**
- Claims log.
  - Claims:
    - Independent estimate (A/E or Postal Service) of claim.
    - Reconciliation of estimates and claim.
    - Analysis of schedules.
    - Negotiation record.
    - A/E's recommendation (if applicable).
    - Contracting officer's final decision.
- q. **Small, minority, and woman-owned business subcontracting:**
- Initial subcontracting plan.
  - Reports.
  - Meeting minutes.
- r. **Construction reports:**
- Employee wages.
  - Progress.
  - Prefinal.
  - Final.
- s. **Closeout documents and documentation:**
- Punch lists:
    - Prefinal punch list.
    - Final punch list.

- 
- Final inspection and acceptance:
    - Contractor's request for inspection.
    - Prefinal inspection.
    - Final inspection report.
  - Certificates:
    - Certification of Asbestos and Lead Paint Usage.
    - Certificate of lead-free water.
    - Certificate of Accessibility and Architectural Barriers Survey.
  - Closeout:
    - Form 1233, *Project Financial Change/Completion Report*.
    - Inventory sheet.
    - Form 1233-A, *Project Completion Report (Mechanization Identification and Cost Allocation)*.
    - Form 1233-B, *Project Completion Report (Personal Property Identification and Cost Allocation)*.
    - Form 4209, *Project Authorization*.
    - Form 7307, *Contractor's Release*.
    - Notification to surety, project acceptance, and total contract amount.
  - t. **Project acceptance letter:**
    - Project acceptance letter.
  - u. **O&M manuals:**
    - List of required operations and maintenance manuals.
    - One copy of each manual.
    - List of attendees at operations and maintenance training.
  - v. **Warranties and guarantees:**
    - Warranty and guarantee log.
    - Warranties and guarantees.
  - w. **Performance evaluation:**
    - Form 5002, *Construction Contractor Performance Evaluation*.
  - x. **As-built drawings:**
    - Final contract drawings.
    - Final shop drawings.
  - y. **One-year warranty inspection:**
    - Inspection report.
  - z. **Postoccupancy evaluation and review:**
    - List of warranty items.
    - Resolution of inspection items.
    - Notification letter.

---

aa. **Administration miscellaneous:**

- Cure notice (issue at any time performance is jeopardized except within 10 days of completion).
- Show cause letter.
- Termination for default.

### 3-3.9 Quality Control and Inspection

 Clause B-33

---

Handbook P-2, 6.3.1

The A/E must observe the construction, materials, and workmanship daily to ensure that they comply with plans, specifications, and other contract documents. The following must be observed at suitable times during the progress of the work. Items requiring observation and/or inspection include, but are not limited to,:

- a. Benchmarks and building layout.
- b. Dimensions and grades.
- c. Excavations.
- d. Soil under footings.
- e. Public utility connections.
- f. Foundation sizes and reinforcing.
- g. Pile driving.
- h. Caisson work.
- i. Concrete forms.
- j. Concrete tests.
- k. Concrete reinforcing.
- l. Structural frames.
- m. Floor openings, sleeves, and hangers.
- n. Quality and placing of concrete.
- o. Weather precautions.
- p. Masonry layout, materials, bonding, anchorage, and flashings.
- q. Setting of frames and prefabricated elements.
- r. Partition layout.
- s. Temporary enclosures, heat, and light.
- t. Protection of finished work and roofing.
- u. Setting of doorframes.
- v. Partition construction.
- w. Plaster work.
- x. Tile work.

- 
- y. Electrical work.
  - z. Mechanical work.
  - aa. Special equipment.
  - bb. Elevators.
  - cc. Furring and lathing.
  - dd. Plumbing work.
  - ee. Cabinet work.
  - ff. Finishes.
  - gg. Painting and papering.
  - hh. Hardware.
  - ii. Inspection and tests.

### 3-3.10 Progress Photographs

The A/E must provide photographs during construction in the manner indicated below:

- a. Twelve pictures are to be taken at each site inspection during construction. If there is a VMF or other ancillary building on the site, four additional pictures must be taken of that building at each site inspection. In all cases, the location of the pictures must be approved by the contracting officer.
- b. Two 8-inch x 10-inch color prints are to be made of each picture. Include the name of the project, city, state, date taken, photographer's name, and the negative number on the back of each photograph. Photographs are to be delivered to the contracting officer.
- c. In addition, at the discretion of the contracting officer, up to six aerial photographic flights may be conducted before and during construction. Approximately four pictures will be taken during each flight. Provide two mounted color prints, preferably 20-inch x 24-inch, of each picture.

### 3-3.11 Schedule of Values and Payments

The A/E must review the contract value breakdown on the initial schedule of values submitted by the contractor. The A/E must notify the contracting officer of construction activities that are not included on the schedule of values as well as the reasonableness of the costs assigned to each scheduled item. The A/E must ensure that the schedule of values is not "front-end loaded."

The contractor is required to submit to the contracting officer for approval a schedule of values of the various costs of the work, by trade, aggregating to the total sum of the contract. This cost breakdown must be realistic because it will be used as a basis for progress payments to the contractor. The A/E is responsible for the following:

- a. Approving the selection and number of activities.
- b. Reviewing, evaluating, and analyzing proposed network diagrams, including activity durations, cost, and workforce loading, when applicable.



Clause 1-3

Handbook P-2, 6.4.5

- 
- c. Revising and analyzing the monthly update of network diagrams, when applicable.

The A/E is responsible for certifying Form 4211-B, *Invoice and Payment Authorization (Facility and Fixed Mechanization Contract)*, which is submitted monthly by the contractor, after reviewing the schedule of values and substantiating data submitted by the contractor. This form, which certifies the accuracy of the progress payments, must be signed by a designated representative of the A/E firm and forwarded to the contracting officer for signature.

### 3-3.12 Clarifications

The A/E must furnish written interpretations and drawings necessary for the proper execution of the work with reasonable promptness so that the contractor can execute the work without delay. All interpretations and decisions must be consistent with the intent of the contract documents. These interpretations must not cause changes in the time or money required to execute the construction contract.

### 3-3.13 Operating Tests

The A/E must ensure that all required tests are executed at the proper time. The scheduling of the mechanization operational tests must be coordinated with the Postal Service at least 3 weeks in advance. The resident engineer or the mechanization resident engineer must be present for all tests.

 *Building Design  
Standards, Master  
Specification 01450*

---

Handbook P-2, 6.3.1

---

### 3-3.14 Training

Training furnished by the contractor must be coordinated with the A/E and the Postal Service. The A/E must ensure that all maintenance and operational training is scheduled and provided to Postal Service personnel as required by the solicitation documents, and that the operation of the systems is in accordance with the intent of the design, particularly with regard to energy conservation operation procedures.

Training must not be scheduled or conducted until after all testing has been satisfactorily completed and until after the Postal Service trainees have had ample time to review the approved operation and maintenance manuals.

### 3-3.15 Guarantees and Instructions

As the contractor completes the work, he or she must submit the following items to the A/E for approval:

- a. All required operating instructions.
- b. The schedule of training on the operation and maintenance of the various systems and equipment.
- c. Complete keying schedule with master, submaster, room, and special keys. All keys must be properly marked or tagged.
- d. All required guarantees, certificates of inspection, and bonds.
- e. Certified air balance reports, with a cover letter from the A/E stating that HVAC systems satisfy the contract requirements.

---

The A/E forwards all of the above to the occupying postmaster with copies transmitted to the construction manager.

### **3-3.16 Preoccupancy Safety and Health Inspection**

Handbook P-2, 6.3.1-15

When construction is between 90 percent and 100 percent complete, an on-site Postal Service team, which includes the A/E, must inspect the construction work and report to the CO any deficiencies noted during the inspection. The inspection must be conducted in accordance with Management Instruction AS-510-87-3, *Compliance With OSHA Standards — Facility Construction Program*.

### **3-3.17 Accessibility Inspection**

Handbook P-2, 6.3.1-16

Before the Postal Service accepts the facility, the COR, the A/E, and the CM (if any) must inspect the facility, and the designer of record or the construction monitor must furnish a signed statement certifying that the facility has been constructed to be in compliance with Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*.

The A/E must provide a Certificate of Accessibility prior to contract closeout.

Handbook P-2, 6.3.2-30

### **3-3.18 Preliminary Completion Inspection**

Handbook P-2, 6.3.2-13

To expedite closeout procedures, a preliminary completion inspection may be conducted jointly with the preoccupancy safety and health inspection. The COR, A/E, or CM conducts the inspection and assembles a list of work items remaining to be completed or corrected. This is a “preliminary punch list” that is provided to the contractor to assist the contractor in expeditiously completing the work.

The contractor should have available at the preliminary inspection all O&M manuals, instructions, and equipment warranties and guarantees required by the contract specifications. O&M manuals, instructions, and equipment warranties and guarantees not available at the preliminary inspection should be identified on the preliminary punch list and must be submitted by the contractor prior to the substantial completion inspection.

### **3-3.19 Substantial Completion Inspection**

Handbook P-2,  
6.3.2-14 thru 6.3.2-152

A substantial completion inspection must be conducted on every construction project to accomplish all the following purposes:

- a. Determine whether or not the work is substantially complete.
- b. Prepare a punch list of work items that must be completed and corrected in order to conform to the requirements of the construction contract and achieve final completion.
- c. Receive final approval submittals from the contractor.

The substantial completion inspection should be conducted by the COR and the A/E and/or CM accompanied by the contractor and representatives of the occupying organization. This inspection team should include the same persons who participated in the preliminary inspection and environmental professionals as appropriate.

---

The inspection team must review the facility for compliance with the contract documents, surveying the facility room by room and ensuring that all equipment is in good working order. All items listed on the preliminary punch list must be reinspected, and all tests originally listed as unacceptable must be executed again. The inspection team must proceed with the inspection in order to prepare a substantial completion punch list of all remaining defects and omissions. The list must be precise, giving all information necessary to locate and correct deficient items. By the time the inspection is completed, the COR must recommend whether or not the project is substantially complete.

The A/E must make it clear to the contractor that the Postal Service will not conduct special inspections to determine substantial completion until there is sufficient evidence to indicate that this condition may have been attained.

The A/E must ensure that if the following items have not been previously submitted, they must be submitted by the contractor at the substantial completion inspection for transfer to appropriate parties, as the contract may require:

- a. A complete set of as-built drawings annotated to show all authorized changes and variations from the original contract drawings.
- b. All outstanding operation and maintenance manuals and instructions for equipment items.
- c. All environmental operating permits, manifests, etc.
- d. All outstanding equipment warranties and guarantees.
- e. Keys.
- f. Spare parts.
- g. Occupancy permit (for leased facilities) and inspection certificates.

### **3-3.20 Final Completion Inspection**

Handbook P-2, 6.3.2-16

Upon receipt of notice from the contractor that the substantial completion inspection punch list items have been completed or corrected, the A/E and the designated postal representatives must inspect these items by comparing them to the punch list and must confirm their completion in writing when appropriate. This may be done by sending a confirming letter to the contractor or by checking off, annotating, and initialing a copy of the substantial completion inspection punch list for each party. When it has been confirmed that the contractor has completed all the items on the substantial completion inspection punch list, final completion of the contract has been achieved.

### **3-3.21 Final Payment Review**

The contractor must apply for final payment on Form 4211-B, as in the case of the progress payments, and must attach a completed Form 7307.

The A/E must review the contractor's request for final payment and recommend to the Postal Service whether or not it is to be paid.

---

## Part II

# Mail Processing Facilities

## 4 Postconstruction Phase A/E Services

### 4-1 Design Services After Construction (Options)

---

#### 4-1.1 Record Drawings and Specifications

The construction contract documents require the contractor to provide the A/E with drawings and specifications incorporating the revisions and changes made during construction up to acceptance of the project. The contractor must, during the progress of the work, keep a master set of prints at the job site, on which is kept a careful and neat record of all deviations from the contract drawings prepared by the architect/engineer that have been made during the course of the work. The A/E must review the contractor's as-built drawings monthly to ascertain the contractor's compliance with this task before processing payment requests.

Upon completion of the project, these as-built prints must be certified as to their correctness by the signature of the contractor and turned over to the A/E for use in preparing a permanent set of as-built record drawings. The A/E must revise the original contract documents to indicate as-built conditions, including revisions in site and building area tabulations.

#### 4-1.2 Contract Appeals

Appeals made by the contractor may be heard by the Postal Service Board of Contract Appeals or the Claims Court. The resident engineer or other professionals having knowledge of the dispute may be required to support the Postal Service during appeal hearings. Reimbursement for these services will be at the same daily rates specified for services included in Clause B-293, Architect/Engineer Field Duties During Construction (Option), Section A, Items and Prices, of the A/E's contract. In addition, travel expenses are reimbursed to the extent that they would be allowable for Postal Service employees under travel regulations in effect at the time of travel.

### 4-2 Field Services After Construction (Option)

---

#### 4-2.1 Six-Month Postoccupancy Evaluations

The purpose of the postoccupancy evaluations is to provide feedback to the Postal Service that is necessary for improving the design standards. The A/E, at the direction of the CO, may be required to participate in and/or review and provide an analysis of postoccupancy evaluations. There are two different levels of postoccupancy evaluations:

 Clause B-57

 *Building Design Standards, Master Specification 01780*

---

*Purchasing Manual 6.8.3*

---

 Clause B-293

 *Building Design Standards*

- 
- a. **Level One Postoccupancy Evaluation.** A level one postoccupancy evaluation is to be conducted on all types of newly completed facilities, as follows:
- (1) The level one postoccupancy evaluation is accomplished by completing the Postoccupancy Evaluation Questionnaire. This is completed by the postmaster or facility manager and the manager of the Administrative Support unit.
  - (2) The Postoccupancy Evaluation Questionnaire is to be completed between 4 and 6 months after the facility has been occupied.
  - (3) The manager of Design and Construction at the FSO must send one copy of the Postoccupancy Evaluation Questionnaire to the postmaster or facility manager and another copy to the manager of the Administrative Support unit.
  - (4) The completed questionnaire is to be returned to the manager of Design and Construction for review and comments.
- b. **Level Two Postoccupancy Evaluation.** Headquarters, with a specialized consultant, will conduct a site visit and a more extensive evaluation for selected facilities using the following tools:
- (1) **Employee Questionnaire.** The consultant conducts these questionnaire interviews during the site visit.
  - (2) **Customer Interview.** The consultant conducts interviews with customers during the site visit.

The consultant prepares a narrative report with engineering studies of the findings from the employee and customer interviews.

#### 4-2.2 Guarantee Inspection

If defects become evident during the guarantee period, the Postal Service may authorize the A/E to investigate and report on them.

#### 4-2.3 One-Year Warranty Inspection

The purpose of the one-year warranty inspection is to identify construction warranty and/or guarantee defects before the end of the 1-year warranty period for new construction and major repairs.

At least 4 weeks before expiration of the warranty date, the project manager or COR will schedule and conduct the final one-year warranty inspection. Participants in the inspection will be the CO, the contractor, the local postal official, the COR or designee, and the A/E. Before the one-year warranty inspection is conducted, all earlier noted deficiencies not corrected should be listed.

The warranty log prepared at final acceptance is to be used as a checklist for each warranted item to be inspected to ensure that it is performing satisfactorily. All warranty deficiencies noted during the inspection must be listed, and a “draft” copy of the deficiency list must be given to the contractor at the end of the inspection. The CO will formally transmit the deficiency list to the contractor via a letter.

---

The local postal official will monitor the correction of warranty defects until such time as all defects are corrected. The local postal official will also inform the COR as to the status of uncorrected warranty deficiencies. The CO will notify the contractor's surety company if the contractor does not respond in a timely manner.



This page intentionally left blank.

---

**Part III**  
**Customer Service Facilities**

**Contents**

1 Predesign Phase A/E Services ..... 95

    1-1 Survey of New or Existing Facilities ..... 95

    1-2 Additional Services (Options) ..... 95

        1-2.1 Boundary and Topographic Site Survey ..... 95

        1-2.2 Subsurface Investigation ..... 95

        1-2.3 Investigative Services for Existing Facilities ..... 95

        1-2.4 Environmental Assessment ..... 96

        1-2.5 Hazardous Waste Site Assessment ..... 96

        1-2.6 Traffic Impact Studies ..... 96

2 Design Phase A/E Services ..... 97

    2-1 General Design Services ..... 97

        2-1.1 Table of Design Phases ..... 97

        2-1.2 Transmitting Submissions ..... 98

        2-1.3 Records Ownership ..... 99

        2-1.4 Postal Service-Furnished Property ..... 99

        2-1.5 Changes ..... 99

        2-1.6 Meetings ..... 99

    2-2 Design Phase Services ..... 100

        2-2.1 Prenegotiation Orientation and Negotiations ..... 100

            2-2.1.1 Prenegotiation Orientation ..... 100

            2-2.1.2 Professional Services Estimating Sheets ..... 100

            2-2.1.3 Negotiations ..... 100

            2-2.1.4 Prenegotiation Orientation and Negotiation Meetings ..... 100

            2-2.1.5 Construction Cost Limit ..... 101

        2-2.2 Preconcept Design Phase ..... 101

            2-2.2.1 Acceptance Criteria ..... 101

            2-2.2.2 Submission Requirements ..... 101

            2-2.2.3 Preconcept Design Review Meeting ..... 107

        2-2.3 Concept Design Phase ..... 108

            2-2.3.1 General ..... 108

            2-2.3.2 Submission Requirements ..... 108

            2-2.3.3 Concept Design Review Meeting ..... 116

        2-2.4 Final Design Phase ..... 116

            2-2.4.1 General ..... 116

            2-2.4.2 Submission Requirements ..... 116

            2-2.4.3 Final Design Review Meeting ..... 121

        2-2.5 Solicitation Phase ..... 122

2-2.6 Submission Checklist.....	123
2-3 A/E Modifications of Design .....	126
2-4 Additional Design Phase Services (Options) .....	126
2-4.1 Perspective Drawing .....	126
2-4.2 Supplementary Drawing.....	126
2-4.3 Roofing Consultant .....	127
2-4.4 Fire Protection Consultant .....	128
3 Construction Phase Services .....	129
3-1 Design Services During Construction (Options).....	129
3-1.1 General .....	129
3-1.2 A/E Support Services .....	129
3-1.3 Submission Review and Approvals.....	130
3-1.3.1 Shop Drawings and Samples.....	130
3-1.3.2 Coordination Drawings.....	131
3-1.3.3 Schedule of Values and Progress Payments.....	131
3-1.3.4 Schedules .....	132
3-1.3.5 Spare Parts Data.....	132
3-1.3.6 Warranties and Guarantees.....	132
3-1.3.7 Operation and Maintenance Manuals .....	132
3-1.3.8 Test Reports .....	132
3-1.3.9 Change Orders and Contract Modifications.....	133
3-1.3.10 As-Built Drawings and Specifications.....	133
3-1.3.11 Electronic Format (As-Built Information) .....	133
3-1.3.12 As-Built Photographs .....	134
3-1.3.13 Closeout Certificates .....	134
3-2 Modifications of Design During Construction .....	134
3-3 Field Services During Construction (Options).....	134
3-3.1 Requirement .....	134
3-3.2 General Responsibility .....	134
3-3.3 Contract Administration.....	135
3-3.4 Construction Observation and Field Supervision.....	136
3-3.5 Progress Meetings .....	136
3-3.6 Records.....	137
3-3.7 Construction Project File.....	137
3-3.8 Quality Control and Inspection .....	141
3-3.9 Progress Photographs .....	142
3-3.10 Schedule of Values and Payments .....	142
3-3.11 Clarifications .....	143
3-3.12 Operating Tests .....	143
3-3.13 Training .....	143
3-3.14 Guarantees and Instructions.....	143
3-3.15 Preoccupancy Safety and Health Inspection .....	144
3-3.16 Accessibility Inspection .....	144
3-3.17 Preliminary Completion Inspection .....	144
3-3.18 Substantial Completion Inspection.....	144

---

3-3.19 Final Completion Inspection.....	145
3-3.20 Final Payment Review .....	145
4 Postconstruction Phase A/E Services .....	147
4-1 Design Services After Construction (Options) .....	147
4-1.1 Record Drawings and Specifications .....	147
4-1.2 Contract Appeals .....	147
4-2 Field Services After Construction (Option).....	147
4-2.1 Six-Month Postoccupancy Evaluations .....	147
4-2.2 Guarantee Inspection.....	148
4-2.3 One-Year Warranty Inspection .....	148



This page intentionally left blank.



---

## Part III

# Customer Service Facilities

## 1 Predesign Phase A/E Services

### 1-1 Survey of New or Existing Facilities

---

The architect and/or engineer (A/E) must perform all investigative research and reviews that are necessary to prepare the design. All new as well as existing facilities must be surveyed. This survey must include, but is not limited to,:

- a. Analysis of the site.
- b. Analysis of availability and capacity of underground and aboveground utilities.

On existing facilities, the A/E's survey must analyze their electrical, mechanical, and structural capabilities as well as review the existing drawings for critical inaccuracies. The survey must include interviewing Operations and Maintenance personnel and measuring field conditions.

### 1-2 Additional Services (Options)

---

#### 1-2.1 Boundary and Topographic Site Survey

The A/E prepares, reviews, and coordinates the topographic and property line surveys, including easements, setbacks, and utility locations, necessary for completing the solicitation documents as described in the *Boundary and Topographic Site Survey* (RETB, September 1996) found in Handbook AS-503, *Standard Design Criteria*. All available Postal Service survey information must be provided to the A/E. The A/E must coordinate required soil borings, quantity, locations, depth, analysis, etc., with the environmental specialist.

---

Handbook AS-503

 Clause FB-291

#### 1-2.2 Subsurface Investigation

The A/E prepares, reviews, and coordinates the subsurface soil investigation as necessary for preparation of the solicitation documents. If sufficient information is not available at the time of contract negotiation, the A/E must submit a proposal afterward. This must be a technical proposal stating the fixed cost for accomplishing the work, with breakdown of labor, time, materials, and unit costs sufficient to perform field work, test soils, analyze results, and compile the report.

---

Handbook AS-503,  
Module 1, 1-1.2

 Clause FB-291

#### 1-2.3 Investigative Services for Existing Facilities

The A/E must perform all field investigations, measurements, surveys, and testing of existing facilities necessary to generate "as-built" drawings for the areas and systems affected by the proposed work. Investigative tests must be the nondestructive type. The A/E must visit the site, taking supporting personnel representing appropriate disciplines

---

needed to inspect the existing conditions and to take measurements, notes, and pictures, as needed, for preparing "as-built" drawings for areas and systems affected by the work.

#### **1-2.4 Environmental Assessment**

---

Handbook RE-6

---

The A/E must evaluate the appropriate requirements for environmental monitoring, assessment, and/or statements if this task is included in the contract. The A/E must perform the required ecological studies, including preparation of environmental assessment and impact reports. The A/E must attend public meetings and hearings as required and make presentations as necessary to governing authorities.

#### **1-2.5 Hazardous Waste Site Assessment**

The A/E must perform a comprehensive waste assessment of the designated site if this task is included in the contract. The A/E must procure all tests necessary to complete the assessment. The A/E must prepare a hazardous waste site assessment report substantiating the conclusions reached during the assessment. This report must include a detailed procedure or design for site remediations. The A/E must attend public meetings and hearings as required and make presentations as necessary to governing authorities.

#### **1-2.6 Traffic Impact Studies**

The A/E must perform a comprehensive traffic impact study if this task is included in the contract. The traffic impact study must include analyses and evaluations of the impact that the proposed construction would have on pedestrian and vehicular traffic, including public mass transportation and public parking. The traffic impact study must consider the proposed construction and also all long-term plans for future postal expansion. The traffic impact study must also address all restrictions due to traffic congestion and the cost of all necessary traffic improvements. The A/E must attend public meetings and hearings as required and make presentations as necessary to local and governing authorities.

---

## Part III

# Customer Service Facilities

## 2 Design Phase A/E Services

This chapter is intended to identify the A/E requirements when designing a customer service facility for the United States Postal Service. To simplify this work effort, the Postal Service has developed a series of electronic files within the medium standard building design (MSBD) program. These files provide the A/E with the information necessary to develop construction documents for medium-size post offices.

The project manager may provide the A/E firm with an electronic sketch of an architectural floor plan using the Module Assembly Program (MAP), which is used as a basis for the construction documents. Although MAP facilitates assembly, layouts can also be accomplished manually. The project manager may also elect to have the A/E firm use the MAP system. The information provided within these programs will meet some of the preconcept and/or concept design requirements, which must be verified by the A/E.

Some of the A/E requirements listed in this part may be a duplication of effort or may not apply when using the electronic files and MAP system. The postal project manager determines and agrees on how the design will be created and the actual tasks to be accomplished by the A/E prior to the prenegotiation orientation meeting. All concerns relating to the A/E project requirements must be clarified at this time.

### 2-1 General Design Services

---

#### 2-1.1 Table of Design Phases

The following list of design phases is arranged to show the percentage of design effort completed at that phase and the purpose and location of meetings. The "cumulative percentage of total effort" may be used as a basis of payment, but is not necessarily a measurement of the completion of the construction documents (i.e., the final submission is required to be 100 percent complete).

The A/E must provide the Postal Service project manager with a written response to all Postal Service comments resulting from design reviews within 7 calendar days after each review meeting.

<b>Phase</b>	<b>Cumulative % of Total Effort</b>	<b>Purpose of Meeting or Review</b>	<b>Location of Meeting or Review</b>
Prenegotiation orientation and negotiation	0	Postal Service orientation for A/E and major disciplines. Negotiate contract and establish construction cost limit (CCL).	Office of contracting officer (CO) or as designated by CO
Preconcept	10	Value engineering review. Provide guidance in operational and functional requirements.	Office of contracting officer or as designated by CO
Concept	30	Value engineering review. Accept operational and functional requirements.	Office of contracting officer or as designated by CO
Final	95	Final submission. Verify completion of construction documents.	Office of contracting officer or as designated by CO
Solicitation	100	Support solicitation. Print, distribute, and manage distribution of construction documents, requests for information (RFIs), amendments, and technical evaluation.	Office of contracting officer or as designated by CO
Receive offers		Receive offers submitted to the Postal Service.	Office of contracting officer or as designated by CO

## 2-1.2 Transmitting Submissions

The minimum quantity of submissions is to be determined at contract negotiations. Each submission must be delivered on time and must be fully complete, containing all deliverable items described for the respective phase of the project completion. When submittals are found to be incomplete or lacking substance, the Postal Service may reject the submission, and all additional information or drawings submitted, without further review until the the A/E resolves the deficiencies. Corrections of deficiencies or makeup of time delays is at the A/E's expense and at no additional cost to the Postal Service.

To avoid unnecessary delays during the design process and any subsequent potential for causing the construction cost to escalate, it is normally expedient to use Express Mail when it is available. Use Priority Mail when mailing design submissions for Postal Service review. The A/E must include the costs of mailing items in the design expense as a lump sum price.

---

### 2-1.3 Records Ownership

 Clause 4-7

The Postal Service may, at its option, demand and take, without additional compensation, all records relating to the services provided under this agreement. The A/E must turn over all such records upon request, but may retain copies of documents produced.

### 2-1.4 Postal Service-Furnished Property

 *Building Design Standards, Master Specification 01116*

The A/E is responsible for ensuring that the design includes Postal Service-furnished items, equipment, and property, as applicable. The A/E must edit and modify the list of Postal Service-furnished items included in the *Master Specification*, section 01116, published on the *Building Design Standards* CD-ROM. The A/E must verify all the dimensions and must accommodate the structural and the utility (electrical, mechanical, etc.) requirements for all Postal Service-furnished items. The A/E must ensure that the design clearly defines the extents and limits of the items furnished by the Postal Service and clearly identifies all components necessary for a complete installation.

---

*Purchasing Manual 2.2.7*

 Clause 2-11  
 Clause 2-12  
 Clause 2-13  
 Clause 2-14  
 Clause FB-255  
 Clause FB-234

### 2-1.5 Changes

Changes must be administered as follows:

- a. The A/E must not undertake work that the firm considers to be a cost or schedule modification to the contract without prior written authorization from the contracting officer.
- b. Changes in the scope of work or in the initial A/E contract are considered contract modifications.
- c. Modifications required before construction contract award are prepared by the A/E only after the contracting officer has accepted the proposed modifications in writing.
- d. The A/E must prepare the necessary design drawings and specification revisions and must fulfill all applicable services related to the modification as though they were contained in the original scope of work.
- e. The A/E must furnish an estimate of how the modification would affect the project construction cost and scheduling.
- f. In accordance with the requirements outlined in the Design Approach and Economy in Design and Construction section of this handbook (Part I, 1-3), the A/E must incorporate into the design, without additional design fee, value engineering items that the Postal Service determines will achieve the maximum life-cycle cost benefit.

### 2-1.6 Meetings

The A/E must deliver the required submittals to the Postal Service offices designated by the project manager in sufficient time to allow for review before the design review meetings. A minimum of 21 calendar days should be allowed for the Postal Service to review and schedule the review meeting.

An A/E representative is to attend all local field review meetings.

---

## 2-2 Design Phase Services

---

### 2-2.1 Prenegotiation Orientation and Negotiations

#### 2-2.1.1 Prenegotiation Orientation

Before the negotiations start, the contracting officer and Postal Service personnel must review the project with the A/E and answer questions that the A/E may have concerning the project requirements. The prenegotiation orientation must also provide the A/E with an understanding of the organization of the Postal Service and the name of the project manager who is the Postal Service contact during the design phase. The project manager should provide copies of Form 919, *Facility Planning Data*, or Form 929, *Major Facilities Planning Data*; Decision Analysis Report (DAR); Facilities Planning Concept (FPC); and all other pertinent data needed to describe the nature and scope of the project.

#### 2-2.1.2 Professional Services Estimating Sheets

At least 5 days before negotiations, the A/E must submit a fee proposal. Sample professional service estimating sheets are provided with the A/E contract solicitation. The A/E must thoroughly review and complete all parts of the estimating sheets. All questions about the intent of the scope of work or the required services that have not been clarified during the prenegotiation orientation must be directed to the contracting officer or designated representative in writing before the A/E submits the fee proposal and before negotiations start. The A/E must submit all written questions, clarifications, and agreements with the fee proposal.

If the contracting officer's review indicates major differences in the fee amount, the CO must advise the A/E of the differences, and the A/E must clarify all misunderstandings.

#### 2-2.1.3 Negotiations

Fee negotiations are based on the extent of work, not on a percentage of construction costs. The Postal Service must negotiate the fee on the basis of the costs per discipline for the production of drawings, calculations, specifications, estimates, and other services.

Negotiations may be terminated whenever the contracting officer determines that further discussions are not warranted.

#### 2-2.1.4 Prenegotiation Orientation and Negotiation Meetings

The contracting officer determines, based on the size and complexity of the specific project, whether the prenegotiation orientation meeting and the negotiation meeting will be held as separate meetings or combined into one single meeting at the A/E's expense which is not to be included in the fee proposal.

The prenegotiation orientation and negotiation meetings are held at the office of the contracting officer or at a location designated by the CO. All expenses associated with prenegotiation, orientation, and negotiation, such as the preparation of negotiation forms, travel, lodging, and meals, are paid by the A/E. The amount of time necessary for prenegotiation orientation and negotiations can vary, depending on the extent of discussions.

---

### 2-2.1.5 Construction Cost Limit

The established maximum construction cost agreed upon must be contractually binding and is not a cost budget target. The contract maximum must be based on the costs as though the project proposals were solicited at the time of A/E contract award. This cost may be adjusted during the life of the design contract in accordance with a building cost index that is mutually agreed upon during negotiations. The A/E is expected to provide a facility that is economical in design, construction, operation, and maintenance; satisfies postal functions; and is not to exceed the maximum construction cost limit permitted by the contract.

## 2-2.2 Preconcept Design Phase

### 2-2.2.1 Acceptance Criteria

When the A/E's preconcept designs as submitted do not meet Postal Service functional requirements, or where additional sketches or revised development plans are required to clarify and ensure a mutual understanding of the proposed design, additional submittals or sketches may be required. Such submittals, sketches, or resubmittals necessary to continue the design development of the project are to be supplied at no cost to the Postal Service provided the scope of work remains unchanged.

The Postal Service bases its acceptance on satisfactory adherence to Postal Service programmed space allocations, the functional relationship of major building plan elements, efficient and functional site utilization, and indications of economical design, which the concept design submission must fully develop. The concept design submission requirements must be reviewed, and questions about the format will be solved at that time.

### 2-2.2.2 Submission Requirements

The A/E must submit the preconcept design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the preconcept design review meeting. The preconcept design consists of the following minimum components:

- a. **Site Utilization Plan.** The site utilization plan must be prepared as a single overall plan on one sheet and must include, at a minimum, the following:
  - (1) Building.
  - (2) Property lines.
  - (3) Parking locations (by dimensions).
  - (4) Topography.
  - (5) Traffic flow.
  - (6) Entrances.
  - (7) Prevailing wind direction.
  - (8) Availability of utilities.
  - (9) Proposed utilities.

- 
- (10) Building expansion capability.
  - (11) Stormwater drainage.
  - (12) Anticipated off-site or on-site easements and construction.
  - (13) Potential problems associated with site utilization.
  - (14) Wetland delineation.
  - (15) Other pertinent information.
- b. **Site Restrictions and Improvements.** The A/E must investigate and identify all site restrictions and limitations, local ordinances, and legal building requirements pertaining to the proposed facility. The A/E must identify all site restrictions and improvements necessary to ensure a complete and comprehensive design for the construction and operation of the facility. The A/E must include the time and cost of all items for which the permit process or construction process requires a long-lead time. The A/E must be prepared to discuss this information at the preconcept design review meeting. The A/E's investigative effort must include, but not be limited to, the following:
- (1) Utilities.
  - (2) Easements.
  - (3) Rights-of-way.
  - (4) Street improvements.
  - (5) Bonds.
  - (6) Fees.
- c. **Architectural Floor Plans.** The floor plan scales for MSBD drawings must be as specified and provided on the *Building Design Standards* CD-ROM. Building floor plans are to be drawn at a scale of 1/8 inch = 1 foot. Lobby plan layouts and other areas requiring larger detail to fully explain plan concepts may be drawn at a scale of 1/4 inch = 1 foot. When a 1/8 inch = 1 foot scale building plan does not fit on a single drawing sheet, provide an additional overall building plan at a smaller scale. The floor plans at the preconcept design phase are single-line sketches or assemblies of MSBD modules that must, at a minimum, include the following:
- (1) Location and relationship of all building spaces.
  - (2) Lookout galleries (LOGs) and closed-circuit television (CCTV) camera locations) (if applicable).
  - (3) Breakouts (if applicable).
  - (4) Major nonfixed mechanization (such as letter sorting machines; cull, face, cancel machines; and the like) (if applicable).
  - (5) Registry and key cages.
  - (6) Locations for future equipment that will require power, etc.
- d. **Elevations and Perspective Sketches.** Perspective sketches must be single-line drawings, either hard-line ruled or controlled freehand delineations in color, using watercolor marker or colored pencil (renderings generated on computer-aided

---

design (CAD) equipment and three-dimensional (3D) modeling are acceptable). Sketches must indicate materials, finishes, fenestration, and site landscaping. The A/E must prepare a minimum of three alternate perspective sketches to show the overall site development, building massing, and design concept. In addition, the A/E must provide supplementary sketches showing interior and exterior features, such as customer entrances, employee entrances, and interior views, necessary to explain the design concepts.

The A/E must furnish black-and-white copies of the alternate perspective sketches with the preconcept design submission and submit the color sketches during the preconcept review meeting. The A/E must present the sketches, discuss alternatives, and recommend designs, with supporting justifications, to the Postal Service during the preconcept design review meeting. All items of discussion and design direction must be noted by the A/E and incorporated into further design submission required at the concept design phase.

- e. **Code Analysis.** The A/E must submit a complete code analysis with the preconcept design. The A/E must investigate and identify all applicable governing codes, ordinances, and legal building requirements pertaining to the proposed facility. The code analysis must include the time and cost of all items for which the permit process or construction process requires a long-lead time. The code analysis must include:
- (1) **Code Listing.** The code analysis must include a complete listing of all applicable codes, ordinances, and regulations, including but not limited to:
    - (a) All applicable Occupational Safety and Health Administration (OSHA) codes.
    - (b) All applicable National Fire Protection Association (NFPA) codes.
    - (c) All applicable state codes.
    - (d) All applicable local codes.
    - (e) Zoning regulations.
    - (f) Ordinances.
  - (2) **Small-Scale Floor Plan.** The code analysis must include a small-scale floor plan of the total building that shows the following:
    - (a) Locations of all required fire exits.
    - (b) Exit units.
    - (c) Rated walls and structures.
    - (d) Smoke vents.
    - (e) Smoke curtains.
    - (f) Paths of travel indicating actual distances. (Workrooms with long travel distances are often a problem and must be carefully considered.)
  - (3) **Alternatives.** The code analysis must identify conflicts with applicable codes and provide alternative solutions. For codes for which the Postal Service is the "authority having jurisdiction," which is often the case with the NFPA; the A/E must submit a written request with a full justification when

---

recommending a special ruling, equivalent or superior to the intent of the codes, the A/E believes is required to provide a safe and economical design.

f. **Building Area Tabulations.** The A/E must include the following items with the building area tabulations submitted with the preconcept design:

(1) **Single-Line Floor Plan.** The A/E must submit a single-line small-scale floor plan (1/8 inch = 1 foot scale preferred) of the entire customer service facility and related areas. The single-line floor plan must clearly designate the number and name of each functional space and the overall building dimensions and must include the building tabulation lists as they relate to the customer service areas.

(2) **Building Area Tabulation Lists.** Building area tabulation lists must be included on the single-line floor plan and also must be submitted separately. The MSBD program calculations are acceptable when applicable. The building area tabulation lists must include the following information:

- (a) The location for each functional area by number and name in the order in which it appears in Form 919 or 929.
- (b) The net area for each functional area shown on the Form 919 or 929.
- (c) The net area provided for each functional area.
- (d) The percentage of deviation from Form 919 or 929 for each area.
- (e) Subtotals for each group of related functional areas.

(3) **Building Areas and Calculations.** The building or facility areas are calculated as discussed below:

(a) **Gross Area.** The gross area of a building is defined as the building footprint measured to the outside of exterior walls and adding mezzanine and LOG splines, calculated as 100 percent. Loading dock platform is calculated as 100 percent for both closed and open loading. Carrier loading is not included unless the loading area is completely covered. Covered carrier loading when the entire loading area, including driveways, is completely covered is calculated as 50 percent of the area under roof. Enclosed covered carrier loading is calculated as 100 percent.

The gross area of the facility must be kept to a minimum and must not exceed the estimated gross area agreed upon at the negotiation meeting.

The following guidelines are used to determine gross areas:

Location or Space	Included in Gross Area	Not Included in Gross Area
Full area of lookout gallery system	X	
Mezzanines	X	
Platforms enclosed by exterior walls	X	
Covered platforms outside exterior walls	X	
Necessary circulation aisles	X	
Door recesses	X	
Coat closets	X	
Canopied areas		X

(b) **Net Area.** The net area of a building is defined as the area within each room or space calculated from finished wall surface to finished wall surface, exclusive of canopied area. The following spaces must be designed no smaller than the area specified in the Form 919 or 929 and, if necessary for plan conformity, may be increased up to a maximum of 5 percent of the area specified in the Form 919 or 929:

- i. Office spaces of 120 square feet or less.
- ii. Postmasters' offices.
- iii. Station or branch managers' offices.

Except for the three areas identified above, each large office space must be designed within plus or minus 5 percent of the area specified in Form 919 or 929. The total net area of all office space provided must be within plus or minus 5 percent of the total net area specified in the Form 919 or 929.

The workroom net area must be within plus or minus 1 percent of the area specified in the Form 919 or 929.

(c) **Calculations.** The building area calculations must comply with those shown on the Form 919 or 929. The A/E must summarize the area calculations on all submissions, including the solicitation proposal documents. The building area calculations must show the ratios of the gross areas over the net floor areas for each major building space (i.e., office, workroom, lobby, platform, support, mechanical, and electrical spaces) and for the total building.

If the layout or the orientation of the facility changes the site and floor plan contained in the design data, the A/E must submit a detailed description of the effect of the changes on the gross area limitations and the total estimated cost of the facility. The A/E must explain all changes to the program requirements with footnotes that reference the source and date of the document that authorized the change.

g. **Building System Comparisons.** A schedule of various building systems being investigated for recommendation within the *Master Specification* guidelines must

---

be submitted during the preconcept design phase. The building system comparisons must include, at a minimum, the following:

- (1) At least three exterior wall systems with a minimum thermal mass of 70 pounds per square foot and a 0.07 maximum "U" value. (Exterior wall systems with a mass less than 70 pounds per square foot may be considered if justified by the A/E, e.g., when a facility is to be located in a geographic location where the weather is extremely mild or the building may be subjected to strong earthquake forces.)
- (2) At least three roof membrane and insulation systems with a 0.05 maximum "U" value.
- (3) Alternate viable foundation systems.
- (4) A written description of the type of analyses and calculations, including cost-effectiveness, that will accompany the concept design phase submission.
- (5) A list of building systems, including interior and exterior finishes, tentatively proposed that is the basis for the cost estimate.

The building system comparisons must show clear ceiling heights; foundations; pavements; heating, ventilation, and air-conditioning (HVAC); electrical; plumbing; and so forth.

- h. **Energy Conservation Analysis.** The A/E must submit a written report identifying the active and passive features that are being considered as potentially cost-effective for the project. Handbook AS-503 and the *Building Design Standards* identify energy conservation features and systems to be considered in a building design. The active and passive features and systems identified in the preconcept design submission are to be analyzed on a life-cycle cost basis in the concept design submission. The A/E must substantiate the items selected on the basis of a site-specific climatic analysis and a preliminary energy consumption analysis. The facility design must comply with the prescribed design energy budget established in the Functional Design Specifications (FDS). The A/E must ensure that the design complies with the energy budget by performing an energy analysis appropriate to each stage of the design.
- a. **Postal Service Environmental Policy and Guiding Principals.** The A/E must submit a report identifying the environmentally conscious products and procedures that are being considered for use on the project. The *Green Addendum* to the *Master Specification* identifies environmentally conscious products and procedures that are to be considered in the building design. The A/E must ensure that the environmentally conscious products and procedures used are cost-effective and provide maximum energy conservation. The life-cycle costs of the environmentally conscious products and procedures identified in the preconcept design submission are to be analyzed and compared to conventional products and procedures in the concept design submission.
- b. **Cost Estimate.** The A/E must submit a preliminary cost estimate with the preconcept design. This and all subsequent cost estimates must be formatted identically to allow direct comparison of the estimates as the design phases progress. This estimate should be accurate and realistic, not a "safe" (high) estimate. The cost estimate is used to monitor compliance with the budget and to evaluate pricing proposals from construction contracts. All cost estimates are confidential material for official Postal Service use only. The A/E must not divulge cost estimates or

---

Handbook AS-503

---

 *Building Design Standards*

---

working papers used to prepare them to any individual who does not have a need to have them for performance of services under this A/E contract.

The cost estimate must include information sufficient to provide evidence that the design is within the construction cost limit. Lump sum amounts for major items that cannot be readily analyzed will not be accepted. The cost estimate must reflect the construction cost that the A/E anticipates on the date the proposal opens. The A/E must ensure that the cost estimate reflects prices for work and materials, taking into account possible labor shortages that may occur because of other known proposed projects in the area, local construction conditions, complexity of the project, degree of risk, and size of the job. The cost estimate is to be categorized to show material and labor.

All estimates must use hourly labor rates not less than the rates as determined by the Secretary of Labor. The Postal Service will supply the A/E with a list of wage rate determinations.

The A/E must provide an overall cost estimate that summarizes all costs in a table as well as provide separate cost estimates for each facility and building as provided and site work.

The cost estimates provided by the A/E must be categorized into the following building systems:

<b>CSI Divisions</b>	<b>Building System</b>
1	General requirements
2	Site work
3	Concrete
4	Masonry
5	Metals
6	Wood and plastics
7	Thermal and moisture protection
8	Doors and windows
9	Finishes
10	Specialties
11	Equipment
12	Furnishings
13	Special construction
15	Mechanical
16	Electrical

### **2-2.2.3 Preconcept Design Review Meeting**

The preconcept design review meeting will be held at the office of the contracting officer or a location as designated by the CO. At the preconcept design review meeting, the A/E must attend and must be prepared to discuss the following:

- a. All items or concerns that may affect or delay the design process.
- b. Any specific areas that could cause the project budget to increase.

- 
- c. Utility concerns.
  - d. Environmental concerns.
  - e. Potential delays or major concerns with long-lead deliverables.

Along with the lead project architect, the A/E is to have the lead designers from each of the following disciplines present to answer any questions that may arise: civil, structural, mechanical, electrical, CCTV and communications, plumbing, fire protection, cost estimating, and others as appropriate.

## **2-2.3 Concept Design Phase**

### **2-2.3.1 General**

The concept design consists of the architectural and engineering plans, elevations, sketches, diagrams, analyses, estimates, cost benefit justifications, and other data needed to clearly describe the recommended design. The concept design phase data must be developed into a comprehensive design development presentation of the basic design for all disciplines.

All disciplines must justify using the type of building system they recommend (i.e., HVAC systems, electrical systems, lighting, fuel, structural, framing, bay spacing, walls, roofing membrane, and insulations). The recommendations must be substantiated by detailed cost and supporting analyses. The building area tabulations, cost estimates, cost-effective energy conservation analyses, and environmental products and procedures analyses that were presented in the preconcept design must be updated and further developed in the concept design submission.

Postal Service acceptance of the concept design submission establishes the final building and site layout. Postal Service acceptance of this submission gives the A/E functional and operational authorization to proceed with the design toward the final solicitation proposal documents.

When concept designs as submitted do not meet Postal Service functional requirements, or when additional sketches or revised development plans are required to clarify and ensure mutual understanding of the proposed design, additional submittals or sketches may be required. The A/E provides such submittals, sketches, or resubmittals necessary to continue the design development of the project at no cost to the Postal Service if the scope of work remains unchanged.

### **2-2.3.2 Submission Requirements**

The A/E must submit the concept design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the concept design review meeting. The concept design submission must be complete and contain all of the required material.

Building plans must be at a scale of 1/8 inch = 1 foot as required for MSBD drawings. If a larger plan detail is necessary to fully explain the development of the design, the drawing may be drawn at 1/4 inch = 1 foot. The A/E must not anticipate the preparation of working drawings by using larger than needed drawing scales (thereby increasing the number of drawings and work effort), because the design development as represented by the concept submission may need to be further changed and refined to

---

complete the design. Drawings must show Postal Service Data Systems (PSDS) equipment where required.

The concept design consists of the following minimum components:

- a. **Site Utilization Plan.** The A/E must update and refine the site utilization plan submitted at the preconcept design.
- b. **Site Restrictions and Improvements.** The A/E must update and refine the site restrictions and improvements information submitted at the preconcept design.
- c. **Civil Design.** The A/E must provide a comprehensive civil design. The civil design must include design data and drawings identifying the following:
  - (1) **Stormwater.** Include the site's stormwater drainage design criteria, such as design storm frequency and duration curves, storm frequency adopted by the local jurisdiction, and all other considerations to substantiate the proposed design. Submit the site survey and subsurface investigation reports, if required, no later than the concept design submission.
  - (2) **Streets.** Show street names, directions of traffic, width and number of traffic lanes, dimensions of pavement, rights-of-way, easements, traffic lights, and traffic survey data, as required. Provide the names of jurisdictions controlling street rights-of way.
  - (3) **Driveways and Parkways.** Indicate the direction of traffic, dimensions of driveways, parking spaces, concrete aprons, and the number of each type of vehicle space. Identify the locations of truck, employee, official, and customer parking. Indicate buildings and other features on adjacent property that are within 10 feet of property lines. Show area requirements for future building expansion by dotted lines.
  - (4) **Pavement Design.** Justify the pavement design by design analysis and economic rationales.
  - (5) **Grades.** Establish a clear understanding of the existing and proposed site grading and surface drainage requirements.
  - (6) **Site Utilities.** Show the layout, size, and invert elevations of all sanitary and storm sewers, water and gas mains, and telephone and electrical lines available or required to serve the site.
  - (7) **Miscellaneous Features.** Show the locations and extent of site security fencing, gates, guardhouses, and lighting poles. Indicate areas to be landscaped.
  - (8) **Vicinity Map.** Provide a small inset vicinity and site location plan showing the site location with respect to major highways, airport, the business district, and the like.
  - (9) **Easements.** Show the location and extent of all required off-site and on-site easements or rights-of-way. Note fees required by local ordinances or utilities to be paid by the Postal Service before construction.
  - (10) **Legal Description.** All easements, rights-of-way, and the like must be identified at this stage by a legal description and a metes and bounds survey tied to a corner description of the Postal Service site. If an easement or permit

---

must be acquired, the A/E must notify the Postal Service no later than the concept design review meeting.

- (11) **Off-Site Construction.** Show the location and extent of all off-site construction that is required and all easements that must be obtained.
  - (12) **Subsurface Soils Investigation Report.** If the A/E is required to provide a subsurface soils investigation report as an additional predesign phase service, the A/E must submit the report, including the boring logs, along with the concept design.
- d. **Site Plan.** The A/E must provide an overall site plan on one sheet showing streets, building locations, landscaping, parking, and so forth. This plan may be combined with the civil design plan if all of the required features can be clearly shown. The site plan must present a table with the number and types of parking spaces. The site plan must also include the gross area tabulations for:
- (1) Building coverage.
  - (2) Platform coverage.
  - (3) Landscaping.
  - (4) Driveways.
  - (5) Parking and maneuvering areas.
  - (6) Sidewalks.
- e. **Architectural Floor Plans.** The A/E must further develop and refine the architectural floor plans submitted at the preconcept design. Floor plans must be provided for all levels of all buildings including mezzanines and LOG locations, if applicable. The level of detail provided on the architectural floor plans must include:
- (1) Show overall dimensions.
  - (2) Label all rooms and spaces with name and number.
  - (3) Show major nonfixed mechanization (such as letter sorting machines; cull, face, cancel machines; etc.) (if applicable).
  - (4) Show registry and key cages.
  - (5) Show location for future equipment requiring power, etc.

The A/E must also provide an overall small-scale (1/16-inch preferred) comprehensive floor plan on one sheet.

- f. **Additional Architectural Plans and Designs.** In addition to the architectural floor plans, the A/E must provide the following:
- (1) **LOG Plan (if applicable).** Provide a separate composite LOG plan showing architectural, structural, and mechanical interfaces and floor elevations. Include typical details showing view points, breakouts, and ladder arrangements.
  - (2) **CCTV Camera and Surveillance Plan (if applicable).** Provide a separate composite CCTV camera plan showing camera locations. The CCTV camera plan must include major structural, architectural, mechanical, and

---

electrical elements affecting camera views. Each proposed CCTV camera location must indicate the camera's field of view.

- (3) **Lobby Plan.** Provide a separate plan showing post office box, self-service, and service lobby functional arrangements and equipment locations. Include a complete list of equipment provided by the Postal Service that is to be installed by the contractor.
  - (4) **Roof Drainage Plan (if applicable).** Provide a small-scale roof plan for all buildings showing roof slopes, drain locations, overflow protection, and roof-mounted equipment.
  - (5) **Finish Schedule.** Provide an interior finish schedule for principle types of spaces (i.e., workroom, office, lobby, support, platform, toilet, and locker rooms) including a proposed color schedule.
  - (6) **Color and Material Panel.** Provide a preliminary color and material panel showing chips of paint colors and samples of material and colors for carpets, paneling, and floor coverings proposed for interior finishes. The color and material panel must include samples or chips of colors of exterior building finishes and materials, especially those related to a renovation project where the existing material must be matched.
  - (7) **Fire Exit Plan With Code Summary.** Provide a fire exit plan that includes a code summary. The fire exit plan must conform to all national, state, and local requirements.
  - (8) **List of Postal Service-Furnished Equipment.** Coordinate and confer with the Postal Service to develop a list of equipment and items that the Postal Service will furnish to the construction contractor. Provide a list of all Postal Service-furnished equipment with the concept design submission.
- g. **Elevations and Perspective Sketches.** The A/E must provide two-dimensional drawings of all proposed building elevations for the recommended final design. In addition, the A/E must provide two alternate perspective sketches showing overall site development, building massing, and design concepts. The A/E must also provide supplemental sketches showing interior and exterior features, such as customer and employee entrances and interior concepts, to explain the building design. Sketches must incorporate the design concepts and revisions discussed during the preconcept design review meeting.

Perspective sketches must be single-line drawings, either hard-line ruled or controlled freehand delineations in color, using watercolor, marker, or colored pencil; CAD-prepared renderings; or 3-D models. Sketches must indicate materials, finishes, fenestration, and site landscaping. The A/E must furnish black-and-white copies of the alternative perspective sketches with the concept design submission and submit the color sketches during the concept design review meeting.

The A/E must present the sketches, discuss alternatives, and recommend the most appropriate final design for the project to Postal Service senior design staff. The A/E's recommendations for the final design must be justified on the bases of postal image, economics, and environmental and local design considerations.

The Postal Service intends to establish the design upon completion of the concept design review. However, if further drawings are required to consolidate items of discussion resulting from the concept design review submission, then the A/E

---

must provide additional drawings or necessary revisions within 2 weeks at no cost to the Postal Service.

- h. **Sections and Details.** The A/E must provide overall cross sections through typical parts of the building, along with typical wall sections, showing the intended construction. Sections must clearly show the proposed roof system as well as ceiling heights of all major spaces. The A/E must show all floor and wall openings. Details for these openings must be provided at the final design phase.
- i. **Structural.** The A/E must provide structural data defining the applicable building code, occupancy and “use-group” classification, fire resistive ratings, design loads, and the design strength of materials. The A/E must include a layout of a typical workroom bay for the proposed foundation and structural framing system. The A/E must also evaluate the functional and economic merits of each proposed foundation system and at least three structural framing systems.
- j. **Space Conditioning.** The A/E must describe the proposed heating and air-conditioning systems, including the detailed functional and economic rationale for selecting these systems. The proposed space conditioning systems must be based upon a 20-year life-cycle functional and economic evaluation. The A/E must provide the following:
  - (1) Layouts of all heating and air-conditioning systems. The layout drawings must show:
    - (a) Equipment and proposed zoning and control for the entire building or facility.
    - (b) Room identification, including room name and room number.
    - (c) Location and arrangement of all major equipment along with the space allotted for servicing and maintaining the equipment.
    - (d) Ductwork using double lines.
  - (2) In addition to the layout drawings:
    - (a) Drawings and a narrative description of the method of control for all major equipment and systems.
    - (b) A schematic flow diagram for each major system.
    - (c) A tabulation with capacity of each major piece of equipment.
    - (a) An analysis of the utility systems containing calculations and economic studies on Form 2215, *Energy and Equipment Life Cycle Cost Analysis*, and Form 2238, *Thermal Load Estimate Calculations*.
- k. **Plumbing.** The A/E must provide plumbing drawings showing the locations and general arrangements of all plumbing fixtures and major equipment. The A/E must also submit a list of narrative descriptions of the types of plumbing fixtures and equipment proposed for use. The A/E must base the proposed plumbing system on functional and economic considerations.
- l. **Fire Protection.** The A/E must summarize applicable code requirements, including fire zone, fire resistance requirements for major components, area and height limitations, standpipe and sprinkler coverage (if required), and hazard classification. The A/E must indicate the method of operation and alarm signaling features

---

Handbook AS-503,  
Module 2A, Chapter 4,  
Appendix

---

---

and describe special protection features and the extent of the fire protection system. The A/E must obtain and include data such as hydrant flow tests, including static pressure, flow available in gallons per minute, associated residual pressure at the point of supply, and the size of the supply main. The A/E must provide basic information and calculations on the water supply, including its source. The A/E must take advantage of provisions in applicable building codes that permit increases in building heights and area limits when sprinkler systems are installed.

m. **Electrical.** The A/E must provide all of the following for the proposed electrical system:

(1) The A/E must provide a narrative description of the following:

- (a) Operation of the proposed electrical distribution system.
- (b) Wiring methods and materials.
- (c) Details of the proposed typical lighting fixtures for:
  - i. Offices.
  - ii. Workrooms.
  - iii. Platforms.
  - iv. Lobbies.
  - v. Exterior.

Selection of the proposed system must be based on the results of preliminary calculations and economic studies, using representative areas based as block area loads.

(2) In addition to the narrative description, the A/E must provide:

- (a) Single-line diagrams of the electrical distribution system.
- (b) Single-line diagrams of the fire alarm system.
- (c) Single-line diagrams of the telephone system.
- (d) Single-line diagrams of the sound system.
- (e) Single-line diagrams showing how the electrical and telephone systems tie in with local utilities.
- (f) Drawings showing proposed locations of major items of electrical equipment and LOGs.
- (g) Partial layouts of typical lighting in major areas showing proposed fixtures, spacing, and illumination levels (in foot-candles).
- (h) Drawings showing power locations and details for Postal Service specialized equipment.

(3) The A/E must furnish written confirmation of the availability of service and the rates from the local utilities.

(4) The workroom and platform illumination levels must be calculated and compared with and without at least two levels of daylight.

- 
- (5) The A/E must perform a life-cycle cost evaluation for lighting areas by using natural light instead of man-made light.

**Note:** The electrical design (narrative and drawings) must include structured wiring information.

- n. **Other Utility Systems.** The A/E must provide descriptions, locations, tables, and calculations for all miscellaneous building or facility equipment such as mechanical door operators, dock ramps, scales, and the like.
- o. **Environmental Studies.** The Postal Service provides the A/E with copies of the required environmental studies (i.e., environmental impact statement, environmental assessment, floodplain impact study, hazardous waste site assessment, etc.). The A/E must assess all mitigation measures identified in the environmental studies and ensure that all items identified in these studies as having an adverse environmental effect are mitigated by the concept design. The A/E must ensure that all permits listed in the environmental studies as being required for the project are obtained.

The A/E may be required to provide environmental studies. Environmental studies are additional services (optional) to the base A/E scope of services and are further defined in section 1-2 of this part.

- p. **Code Analysis.** The A/E must update the code analysis submitted during the pre-concept design to justify solutions selected as being economical and meeting code requirements. The A/E must provide a drawing showing the code analysis, defining the basis for design.

The A/E must update the fire protection plans, providing a summary of the code provision used on the drawings.

- q. **Building Area Tabulations.** The A/E must update the building area tabulations and the small-scale plans included in the preconcept design submission to reflect all changes and refinements.
- r. **Building System Comparisons.** The A/E must provide a comparison of various building systems being investigated for recommendation. The building system comparison, where applicable, must include:

- (1) At least three exterior wall systems with a minimum thermal mass of 70 pounds per square foot and a 0.07 maximum "U" value.
- (2) At least three roof membrane and insulation systems with a 0.05 maximum "U" value.
- (3) At least three structural framing systems.
- (4) Structural bay spacing alternatives.
- (5) Alternative viable foundation systems.
- (6) Alternative viable roof heights (including a multiple-level versus single-level roof).
- (7) Typical sections and details of each alternative, showing clear ceiling heights, foundations, pavements, HVAC, electrical, plumbing, and so forth.
- (8) Analyses and calculations of the functional use and cost for each building system.

---

The building system comparison must also substantiate the selection of window types, roof colors, exterior building colors, and the like, taking into account energy savings.

- s. **Energy Conservation Analysis.** The A/E must update the energy conservation analysis provided in the preconcept design submission. For each system or feature recommended, provide a life-cycle cost (LCC) analysis together with climatic and building energy consumption analyses to substantiate the recommendations. (Provide analyses for a minimum of three different systems.) The A/E must also then provide an overall energy analysis, which may be accomplished with a recognized microcomputer analysis program. The report developed as a result of the analyses must be coordinated with the deliverables, including Forms 2215 and 2238, as required by Postal Service criteria.
- t. **LCC Analysis.** The A/E must submit a 20-year LCC analysis to justify the selection of the exterior wall system, roof membrane and insulation system, multiple- or single-level roof height, and energy-conserving features or systems. The A/E must follow the National Institute of Building Sciences (NIBS) Handbook 135, *Life Cycle Cost Manual for the Federal Energy Management Program*, including its appendices. The A/E must fully describe each system studied and submit all supporting calculations with the completed LCC analysis work sheets. The A/E must supplement cost figures with a comparison of the system analyzed.
- a. **Specifications.** The A/E must modify and edit the *Master Specification* on the *Building Design Standards* CD-ROM with the specific requirements of each MSBD project. It is recommended that the A/E use the long version of the *Master Specification* for MSBD projects. For the concept design phase submission, the A/E must provide the following:
- (1) A detailed table of contents of all the specifications (by title and number) that are to be included in the complete specifications.
  - (2) A draft of all Division I, General Requirements (edited and customized from the *Master Specification, Building Design Standards*).
  - (3) A complete list of Postal Service-furnished equipment.
  - (4) A list and draft of all proposed supplementary conditions.
  - (5) A working draft of the technical specifications, Divisions 2 through 16, in outline form, that demonstrates that the A/E is in the process of editing and customizing the *Master Specification* for specific project requirements.
- The A/E is responsible for coordinating the contract specifications so that they do not repeat or conflict with supplemental conditions, postal provisions, or contract clauses.
- v. **Cost Estimate.** The A/E must update and refine the cost estimate submitted at the preconcept design review meeting. All data necessary to fully support the cost estimate must be provided. Cost estimates must be provided for alternative systems in order to justify the economy of the selected systems such as exterior walls, structural framing, foundations, roofing, pavements, mechanical and electrical systems, and so forth. The cost estimate must clearly indicate the date on which the estimate was prepared. The cost estimates must be prepared in a Construction Specifications Institute (CSI) format in a form acceptable to the Postal Service.

---

Handbook AS-503,  
Module 2A, Chapter 4,  
Appendix

---

---

Handbook AS-506,  
Part I, 3-1.1d

---

---

*MSBD Manual* 113.3

---

- 
- w. **Project Scheduling.** The A/E must comment on the construction schedule as well as the overall project schedule by reviewing the specific project requirements including materials, time of year of construction, and potential delays. In addition to the narrative schedule comments, the A/E must provide a bar chart project schedule that is shown in weeks.

### 2-2.3.3 Concept Design Review Meeting

The concept design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The A/E must have in attendance the same disciplines that attended the preconcept design review meeting. At the concept design review meeting, the A/E must attend and be prepared to discuss the following:

- a. All items or concerns that may affect or delay the design process.
- b. Any specific areas that could cause the project budget to increase.
- c. Utility concerns.
- d. Environmental concerns that require immediate resolution.
- e. Any code issues that could delay the design process or long-lead items.

The A/E must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the concept design review meeting.

## 2-2.4 Final Design Phase

### 2-2.4.1 General

The final design phase submission must consist of a 100-percent completed set of drawings, specifications, analyses, and calculations that are signed, sealed, and ready for solicitation of proposals. The final design is to complete, compile, and coordinate the overall design that has progressed through the previous design phases. The final design includes completing the requirements outlined in all previous design phases for each element whether or not it is specifically mentioned in this phase.

The A/E is responsible for coordinating all design documents and ensuring the accuracy of the entire overall design.

### 2-2.4.2 Submission Requirements

 Clause FB-220

The A/E must submit the final design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the final design review meeting.

The Postal Service does not sign the completed documents. The A/E must submit a final design package that is complete for soliciting proposals without further review and which is expected to result in a construction contract without claims or changes. The A/E is to sign and seal all documents, which certifies that the A/E has fully complied with all federal legislative as well as applicable state and local code requirements.

The final design consists of the following minimum components:

- 
- a. **Site Utilization Plan.** The A/E must update and complete the site utilization plan submitted at the concept design phase.
  - b. **Site Restrictions and Improvements.** The A/E must finalize the site restrictions and improvements information submitted at the concept design phase. All site restrictions and improvements necessary for the project, including all necessary off-site improvements, rights-of-way, easements, permits, and the like, must have been identified by the final design and must be filed with the appropriate state, city, or local authority.

The A/E must furnish information concerning the status of all easements, permits, and so forth, at the final design review. The A/E must state the cost of permits (and the lead time for obtaining permits and action taken to obtain them to avoid delays during project construction).

- c. **Civil Design.** The A/E must update and finalize the civil design submitted at the concept design phase, as follows:
  - (1) The civil design must contain, as a minimum, all components and features from the concept design submission including:
    - (a) Stormwater.
    - (b) Streets.
    - (c) Driveways and parkways.
    - (d) Pavement design.
    - (e) Grades.
    - (f) Site utilities.
    - (g) Miscellaneous features.
    - (h) Vicinity map.
    - (i) Easements.
    - (j) Legal descriptions.
    - (k) Off-site conditions.
    - (l) Subsurface soils investigation report, including boring logs.
  - (2) The A/E must submit a written statement at the completion of the concept design review and before the final design submission stating that:
    - (a) The scope and quality of the topographic, site data, and subsurface investigations are adequate, accurate, and up to date.
    - (b) All changed conditions are reflected in order to ensure that the latest and current information is included in the solicitation proposal document.
- d. **Site Plan.** The A/E must update and finalize the topographical site plan submitted at the concept design phase.
- e. **Architectural Floor Plans.** The A/E must update and fully develop the floor plans submitted at the concept design phase.

---

f. **Additional Architectural Plans and Designs.** In addition to the architectural floor plans, the A/E must update and fully develop the following information submitted at the concept design phase:

- (1) **LOG Plan (if applicable).** The A/E must obtain Postal Service approval before designing any penetrations or depressions (mechanical, electrical, plumbing, structural, mechanization, and the like) through the LOGs that would limit clear headroom to less than 6 feet, 6 inches inside. The A/E must show the location of all penetrations or depressions on the LOG plan and provide adequate details. The A/E must note on the drawings that no other penetrations are permitted without prior approval from the contracting officer.
- (2) **CCTV Camera and Surveillance Plan (if applicable).** The A/E must update and fully develop the CCTV camera and surveillance plan submitted at the concept design phase.
- (3) **Lobby Plan.** The A/E must update and fully develop the lobby plan submitted at the concept design phase.
- (4) **Roof Drainage Plan.** The A/E must update and fully develop the roof drainage plan submitted at the concept design phase, including detailing all roofing systems, roof drainage, roof penetrations, and roof-mounted equipment.
- (5) **Finish Schedule.** The A/E must update and fully develop the finish schedule submitted at the concept design phase. The finish schedule must show finishes and colors in all areas.
- (1) **Color and Material Panel.** The A/E must update and fully develop the color and material panel submitted at the concept design phase:
  - (a) Display panel showing chips of paint colors, samples of materials, and colors for carpets, paneling, and resilient flooring tile proposed for interior finishes of the project.
  - (b) Display panel with samples of exterior face brick, trim, and metal wall colors as required.
- (7) **Fire Exit Plan With Code Summary.** The A/E must update and fully develop the fire exit plan, including the code summary, that was submitted at the concept design phase. The A/E is responsible for submitting the fire exit plan to and obtaining approval from any governing organization.
- (8) **Casework Drawings.** The A/E must prepare casework drawings and details necessary to fully define and describe the casework requirements.
- (9) **List of Postal Service-Furnished Equipment.** The A/E must provide a completed list of Postal Service-furnished equipment in accordance with MSBD requirements.

 Clause FB-220

The A/E must furnish a separate signed statement on the firm's letterhead certifying that the facility has been designated to be in compliance with Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*.

g. **Elevations and Perspective Sketches.** The A/E must provide fully developed building elevations of all views showing vertical dimensions, exterior materials, window and door openings, and the massing of the buildings.

- 
- h. **Sections and Details.** The A/E must update and fully develop wall sections for all walls and their details.
  - i. **Structural.** The A/E must fully develop all structural systems and substantiate them with appropriate calculations and economic analyses.
  - j. **Space Conditioning.** The A/E must provide a fully developed space conditioning system design including descriptions, diagrams, and sequence of operation to the following minimum extent:

- (1) Provide a complete schedule of all equipment shown on the drawings.
- (2) Provide equipment room layouts indicating all equipment, piping, duct work, and access space required for maintenance.
- (3) Indicate zoning controls, duct sizes, and air quantities.
- (4) Show the final version of the automated building control systems, including fire detection and alarm systems.
- (5) Provide written confirmation from a fuel supplier of fuel availability and rates.

The A/E must substantiate the designs with up-to-date calculations for all rooms, zones, and building blocks.

The A/E must prepare a psychometric chart describing the thermodynamic properties of each air-handling unit.

- k. **Plumbing.** The A/E must provide final plumbing and fuel system drawings showing the locations and arrangements of all fixtures and equipment of the complete system. Plan and riser diagrams must show the location and size of hot and cold water piping and the waste and vent system. The A/E must provide a plumbing fixture schedule which also lists the location and type of fixtures and pipe sizes.

The fuel system drawing must identify the location and arrangements of the complete system.

- l. **Fire Protection.** Generally, complete automatic sprinkler drawings need not be developed. The fire protection drawings must show the automatic sprinkler risers and fire zones and must be designated to comply with applicable codes. The fire protection drawings must also show all spaces that require fire protection. The specifications must require the contractor to meet all applicable codes.

- m. **Electrical.** The A/E must update and fully develop the electrical design submitted during the concept design phase, as follows:

- (1) The electrical design must include descriptions and updated supportive calculations for all power, lighting, grounding, communications, and alarm systems.
- (2) The A/E must provide site plans, elevations, schedules, and detail drawings sufficient to reflect the overall facility design and to locate all equipment.
- (3) The A/E must provide final single-line diagrams of the electrical distribution and communications systems showing tie-ins with local utilities.
- (4) The electrical design must include elevations of switchboards, motor control centers, and other major equipment showing the arrangement of equipment.

- 
- (5) The A/E must provide a short-circuit and fully coordinated circuit-interrupting device summary that includes all analyses and calculations.
- n. **Other Utility Systems.** The A/E must update and fully develop the following items:
- (1) The A/E must provide fully developed drawings and supporting calculations for all miscellaneous building or facility equipment such as scales, mechanical door operators, dock ramps, and the like.
  - (2) The A/E must provide complete plans, riser diagrams, schedules, sizes, and locations for VMF equipment and systems.
  - (3) The A/E must provide fully developed plans and elevations of LOG utility systems as applicable.
  - (4) The A/E must identify and take action to obtain power, sewer, gas, or water services requiring long lead times for design or construction by others (i.e., utility companies). If permits or fees are required, the A/E must identify them and obtain fees for them from the Postal Service.
- o. **Code Analysis.** The A/E must update the fire protection and code analysis summary submitted during the concept design phase. The code analysis summary must include all components and features from the concept design submission including, but not limited to,:
- (1) Code listing.
  - (2) Small-scale floor plan.
  - (3) Alternatives.
- p. **Building Area Tabulation.** The A/E must submit the final building and site area tabulations. The A/E must correct the small-scale floor plan and space summary tabulations provided with the concept design submission to accurately reflect the final solicitation documents. The A/E must include a site summary showing the area of building coverage, paving for parking and maneuvering, ramps, landscaping, and site area as applicable to MSBD requirements.
- On the site plan, include updated site area tabulations that reflect changes in Postal Service-owned land, such as land to be given to municipalities for street access, rights-of-way, easements, and so forth. Place a note on this drawing stating that all site and building area tabulations shown are for Postal Service reference only and that the contractor is responsible for calculating the quantity and area.
- q. **Specifications.** The A/E must modify and edit the *Master Specification* on the *Building Design Standards* CD-ROM for the specific requirements of each project. The final design phase submission of the specifications must be fully developed and must reveal the full intent of the A/E's design in relation to all proposed systems, materials, and special design considerations.

The Postal Service is not required to obtain building inspection or occupancy permits. The A/E must determine the cost of all other fees and permits (connection fees, tap fees, off-site inspection fees, special community development fees, and so forth) and include a list of all such fees and charges to be paid by the contractor in *Master Specification* section 01115, Leased Building [Design-Build] Requirements, or section 01116, General Construction.

---

The specification must state that the contractor is to pay all costs for utilities (gas, water, and electricity) used during final Postal Service tests of completely installed systems and while training Postal Service personnel.

For facilities equipped with a card access system, the submission must specify that the quantity of access cards supplied by the contractor is to be 1.5 times the number of the initial complement of postal employees scheduled to work at the facility.

- a. **Cost Estimate.** The final cost estimate must be developed as a “detailed quantity survey” type with breakdown of material and labor prices — not a readjustment of preliminary cost estimates. The A/E must:
  - (1) Include separate prices for labor and material, and summary sheets listing the estimated costs of the major building systems for each building and separate costs for major systems in the site work.
  - (2) Revise the final cost estimate as required based on Postal Service final review changes and comments.
  - (3) Submit the revised final estimate for Postal Service approval at least 10 days before the planned solicitation distribution date.
  - (4) Provide a construction cost estimate that is within 10 percent of the probable lowest qualified proposal.
- s. **Project Scheduling.** The A/E must finalize the project schedule provided at the concept design submission and submit all recommendations necessary for scheduling long-lead time construction or procurement items.
- t. **Small, Minority-Owned, and Woman-Owned Business Contracting Goals and Source List.** Provide recommended small, minority-owned, and woman-owned business contracting goals and the names, addresses, and specialties of such businesses located in the general area of the project.
- u. **List of Referenced Publications.** The A/E must provide a list of all publications that the solicitation references.
- a. **Complete Design Computations.** The A/E must provide the complete unabridged computations actually used by the designers. All calculations must be legible, self-explanatory, and indexed.

 Clause FB-220

 Clause FB-220

The cover sheets of the design documents must contain the signature and registration stamps or seals of the engineer responsible for the work.

The A/E must advise the project manager in writing of all changes to previously accepted design phase submittals.

The A/E must retain the original tracings, specifications, and/or electronic media for printing the contract documents unless otherwise directed by the contracting officer.

### 2-2.4.3 Final Design Review Meeting

The final design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The A/E must have in attendance the same disciplines that attended the concept design review meeting. The A/E must attend and be prepared to discuss the following:

- 
- a. The A/E's cost estimate as it relates to the postal construction budget.
  - b. The A/E's schedule as it relates to the start of construction.
  - c. All issues discussed at the concept design review meeting that are still unresolved.

The A/E must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the final design review meeting.

## 2-2.5 Solicitation Phase

The A/E is responsible for the following activities, if they are included in the contract, during the solicitation period:

- a. **Solicitation Documents.** The A/E arranges to have sets of the total solicitation package reproduced, collated, bound, and packaged for mailing. The A/E must receive and fill requests for solicitation documents from qualified offerors. The cost and distribution are detailed below:

- (1) **Reproduction Costs.** Before the solicitation period, the A/E obtains and forwards to the Postal Service project manager three price quotations from local printers for printing solicitation sets and a price quotation for additional sets to be ordered. The quotations must include the cost for full-size sets of prints and an itemized cost for sets of half-size prints required by the Postal Service. The A/E must include the cost of reproducing an estimated three addenda.

The A/E is reimbursed for the cost of reproducing and mailing solicitation sets and addenda. For mailing to Postal Service addresses, use Express Mail (if available); otherwise, use Priority Mail.

The A/E recommends the number of sets to be printed and the price to be charged per set to offerors for the Postal Service to approve. Only full sets of drawings and specifications will be sold. The fee an offeror pays for solicitation sets is nonrefundable. The purpose of the fee is to ensure that firms requesting documents have a positive interest in submitting a proposal for the project. The fee is not intended to recover all costs of reproducing and distributing the solicitation documents.

- (2) **Accounting.** Checks and money orders for payment of solicitation sets are to be made payable to the Postal Service disbursing officer. These instruments and cash payments received will be held in a secure place by the A/E until delivered to the Postal Service at the final accounting at the end of the solicitation period.

The A/E must keep a daily log of all remittances (nonrefundable) received that shows the name and address of the requesting firm, the amount, the check or money order number, and the date the request was filled (mailed). A duplicate of the solicitation list must be kept to facilitate the mailing of addenda and the solicitation list to interested subcontractors.

At the end of the solicitation period, the A/E delivers to the project manager a copy of the daily log, a Form 1940, *Remittance Register*, with only the itemized portion completed (sheet heading and totals are to be blank), and all

---

checks. Undistributed sets must be disposed of as directed by the project manager.

- (3) **Complimentary Distribution.** As approved by the project manager, the A/E sends one copy of the solicitation at no charge to information organizations such as Blue Reports, Dodge Reports, local contractor organizations, and local trade organizations. Delivery must be recorded in the daily log by the A/E.

- b. **Requests for Information (RFIs) and Questions.** The A/E must respond to questions from offerors as follows:

 Clause FB-220

- (1) All telephone and written questions from offerors received by the A/E are to be recorded. The A/E must advise the requesting party that the questions will be replied to within a reasonable time and that the reply will be one of the following:
- (a) An interpretation of solicitation documents that can be rendered without requiring an addendum.
  - (b) No change to the solicitation; therefore the proposal should be based on the documents as prepared.
  - (c) An addendum to the solicitation that will be issued to clarify the items in question.
- (2) All questions must be reviewed by telephone with the Postal Service project manager. Backup information and the A/E's recommended answer must be provided.
- (3) A reply to the offeror making the request must be prepared, to be signed by the contracting officer, in accordance with the project manager's instructions.

- c. **Addendum.** The A/E is responsible for preparing any required addendum as follows:

 Clause FB-220

- (1) When an addendum is required, the A/E must prepare the addendum, obtain the contracting officer's approval of it, and issue it to all plan holders. Under no circumstances may an addendum be issued without prior approval of the contracting officer.
- (2) Amendments (addenda) to solicitation documents must be sent (post-marked) to offerors no later than 2 weeks (14 days) before the proposal-opening date. This is necessary in order to provide prospective offerors with sufficient time to incorporate the amendments in their proposals.

- d. **Preproposal Meetings.** The A/E must attend all preproposal meetings as may be required by the contracting officer.

- e. **Technical Proposal Evaluations.** The Postal Service must open and evaluate all proposals. The A/E must render such assistance in the proposal evaluation and preaward period as may be required by the contracting officer. The A/E is not to be present when proposals are opened.

## 2-2.6 Submission Checklist

The checklist in Exhibit 2-2.6 identifies the minimum design components that the A/E is required to submit at each of the design phases.

**Submission Checklist**

**Design Phase Submission Checklist**  
**Mandatory A/E Services**

<b>Design Submittal Required</b>	<b>Prenegotiation Orientation &amp; Negotiations Phase</b>	<b>Preconcept Phase (10%)</b>	<b>Concept Phase (30%)</b>	<b>Final Phase (100% Design)</b>
<b>PLANS/DRAWINGS</b>				
<b>Site Plans</b>				
Site Utilization		X	X	X
Site Restrictions and Improvements		X	X	X
Civil Design			X	X
Site Plan			X	X
<b>Architectural</b>				
Floor Plans		X	X	X
Elevations and Perspectives		X	X	X
Sections and Details			X	X
Lookout Gallery Plan			X	X
CCTV Camera			X	X
Lobby Plan			X	X
Roof Drainage Plan			X	X
Finish Schedule			X	X
Color and Material Panels			X	X
Fire Exit Plan With Code Summary			X	X
Casework Drawings				X
Certification Letter for Compliance With Handbook RE-4				X
Complete List of Postal Service-Furnished Equipment			X	X
<b>Structural</b>			X	X
<b>Space Conditioning (HVAC)</b>			X	X
<b>Plumbing</b>			X	X
<b>Fire Protection</b>			X	X
<b>Electrical</b>			X	X
<b>Other Utility Systems</b>			X	X

**Submission Checklist**

<b>Design Submittal Required</b>	<b>Prenegotiation Orientation &amp; Negotiations Phase</b>	<b>Preconcept Phase (10%)</b>	<b>Concept Phase (30%)</b>	<b>Final Phase (100% Design)</b>
<b>ANALYSIS/TABULATIONS/ CALCULATIONS</b>				
Professional Services Estimating Sheets	X			
Environmental Studies			X	X
Code Analysis Report		X	X	X
Building Area Tabulations		X	X	X
Building System Comparisons		X	X	
Energy Conservation Analysis		X	X	
Environmental Policy		X		
Life-Cycle Cost Analysis			X	
<b>SPECIFICATIONS</b>			X	X
<b>COST ESTIMATES</b>		X	X	X
<b>SCHEDULES</b>			X	X
<b>SMALL, MINORITY-OWNED, &amp; WOMAN-OWNED BUSINESS CONTRACTING GOALS AND SOURCE LIST</b>				X
<b>LIST OF REFERENCES PUBLICATIONS</b>				X
<b>COMPLETE DESIGN COMPUTATIONS</b>				X

---

## 2-3 A/E Modifications of Design

---

Changes in the scope of work or Postal Service requirements not covered in the initial A/E contract are considered to be contract modifications in accordance with Clause B-2, Changes, in the A/E contract.

 Clause B-2

Modifications required before the award of the construction contract are prepared by the A/E when the contracting officer accepts the proposed modification in writing. The A/E must prepare the necessary design drawing and specification revisions and must perform all applicable services related to the modification as though they were contained in the original scope of work.

The A/E must furnish an estimate of the effect the modification may have on the project construction cost and scheduling.

Fees for these services will be based on the rates negotiated and included in Clause FB-290, Design Services, at the time of A/E contract award. Rates include all costs, direct and indirect, and overhead and profit.

 Clause FB-290

## 2-4 Additional Design Phase Services (Options)

---

A separate cost proposal must be prepared for each service described in sections 2-4.1, 2-4.2, 2-4.3, and 2-4.4, and when these additional services (options) are included in Section A, Items and Prices, of the A/E contract. Each item includes all overhead, profit, and costs (direct and indirect), including A/E administration and technical support costs, necessary to complete the services described. The A/E will not be compensated for optional design phase services unless they are included in the A/E's contract.

 Clause FB-291

The optional services described in this section only apply when specific project requirements are more demanding than those covered in all the sections of 2-2, Design Phase Services. Some of the optional A/E design phase services are required under the base scope of A/E services to a more limited extent.

### 2-4.1 Perspective Drawing

The A/E must provide a 20-inch x 30-inch perspective drawing in color showing the building to its best advantage. The drawing must be capable of being used for producing photographic prints of sufficient contrast to ensure good newsprint reproduction. Also provide a negative and six 8-inch x 10-inch glossy black-and-white prints and two 35-millimeter color slides of the official A/E rendering. The A/E must provide the original perspective drawing and two copies that are to be matted, glazed with clear nonglare glass, framed, and prepared for hanging. The original and one copy must be forwarded to the appropriate facilities service office (FSO) or major facilities office (MFO). One copy is to be forwarded to the plant manager.

### 2-4.2 Supplementary Drawing

The A/E must provide the following drawings:

- a. **Postal Service-Furnished Property.** Prepare a drawing of box and service lobbies and an elevation of the post office boxes. Show the location and number of

under-counter items and self-service items, and a plan and elevation indicating the location of post office box modules. Provide a table of all property that is furnished by the Postal Service and installed by the contractor, giving the following information:

Name and Description	No.	Quantity	Misc.	*Date Required
----------------------	-----	----------	-------	----------------

\*This column is to be left blank and filled in by the Postal Service with dates furnished by the construction contractor.

A checklist of Postal Service-furnished property is provided by the Postal Service as required.

- b. **Outline Floor Plan (Grid).** Provide an outline floor plan at 1/8 inch = 1 foot square with a 1/4-inch background grid. This drawing is for Postal Service operational planning. Number all rooms and spaces on this plan.
- c. **Major Milestone Flowchart.** Provide a major milestone flowchart for construction unless directed otherwise by the contracting officer during negotiations. Show the sequence, starting and completion dates, and duration of each major activity. Scheduling must be in days, with the date of the notice to proceed as the starting date for the flowchart. This flowchart is intended only as a guide to the successful offeror and an aid for Postal Service program planning.

### 2-4.3 Roofing Consultant

Provide the services of a roofing consultant who is thoroughly qualified in the design, construction, observation, and testing of all types of roofing systems and materials. The responsibilities of this consultant during the design phase include:

- a. Reviewing specifications, drawings, and other contract documents related to roofing.
- b. Critiquing and commenting on the design, including sketches and alternative details for consideration by the A/E and the Postal Service.
- c. Working with the A/E in developing alternative roof system comparisons and contract documents.
- d. Assisting in conducting preconstruction roofing conferences with the contracting officer's representative and construction contractor.
- e. Reviewing the construction contractor's submittals and providing comments to the contracting officer.
- f. Providing full-time, on-site observation of the construction to verify that it complies with the contract documents. Subject to the approval of the contracting officer, the full-time, on-site construction observation may be carried out by an assistant to the principal consultant. Primary reviews, attendance at meetings, and periodic supervisory visits are to be carried out by the principal consultant. Specific services include, but are not limited to, the following:
  - (1) Provide daily, weekly, and final observation reports to include photographs and other data substantiating the findings.
  - (2) Assist the contracting officer to conduct all progress meetings.

- 
- (3) Review roofing-related quality control reports submitted by the contractor.
  - (4) For built-up roofing, supervise the contractor when samples are cut. Review and analyze the laboratory reports and submit a report evaluating the findings to the contracting officer.
  - (5) For elasto-plastic roofing work, test the materials and workmanship as appropriate to verify that they meet the requirements of the specifications.
  - (6) When the contractor sends notice of completion of the roofing work, conduct a final on-site inspection and advise the contracting officer in writing when the work can be accepted.
  - (7) Charge construction observation fees on an as-needed, man-day basis. The consultant must submit, as a part of this proposal, an estimated length of time for roof installation.
- g. Completing a field evaluation of the existing roof system if a project involves an addition or substantial renovation to an existing building. This evaluation includes a visual examination, limited cut samplings for visual examination, and laboratory analyses of the cut samples. The consultant must provide a separate optional price for a nondestructive evaluation of moisture in the roofing system. The consultant must submit a written report with a summary of findings, list of recommendations, cost estimates, and all background data.

#### **2-4.4 Fire Protection Consultant**

The A/E must provide the consulting services of a fire protection engineer. This person must be a full member of the Society of Fire Protection Engineers and must demonstrate equivalent qualifying experience or have an applicable state registration as a fire protection engineer.

---

## Part III

# Customer Service Facilities

## 3 Construction Phase Services

### 3-1 Design Services During Construction (Options)

---

#### 3-1.1 General

The requirements of this section apply if the A/E's contract includes in Section A, Items and Prices, an option for the A/E to provide support services during the construction phase. A/E services during construction include reviewing contractor submissions, participating in meetings, interpreting contract documents, and inspecting the site a minimal number of times during the construction period. These services include time and effort both in the office and at the work site. Rates for all services must include both direct and indirect costs and overhead and profit.

 Clause FB-205  
 Clause FB-292

#### 3-1.2 A/E Support Services

---

Handbook P-2, 6-1.2

---

The A/E is to provide the following support services:

- a. **Support Services.** Support services supplied by the A/E are services that are necessary to assist the field office and that require a trip to the site. These include, but are not limited to, the following:
  - (1) Participating in preconstruction and progress meetings, including preparation and distribution of meeting minutes.
  - (2) Interpreting and clarifying contract documents.
  - (3) Assisting the Postal Service project manager in maintaining quality control.
  - (4) Observing field installation conditions and materials in support of the resident engineer.
  - (5) Providing administrative support to the field office.
  - (6) Providing technical support to the field office during construction for preparing punch lists and accepting the facility.
  - (7) Participating in prefinal, safety, final, and warranty inspections.
  - (8) Supporting small, minority-owned, and woman-owned business subcontracting program services, including, but not limited to, the following:
    - (a) Monitoring the program, giving special attention to the contractor's efforts at attaining goals, the contractor's plan for developing minority-owned business participation, the completeness and accuracy of the

---

contractor's minority-owned business subcontracting reports, and so forth.

- (b) Assisting the contractor in locating and developing potential minority-owned business subcontractors.
- (c) At the preconstruction conference, reviewing the contractor's initial minority-owned business reports and giving timely recommendations or assistance as required to attain the best possible program start.
- (d) Reviewing the status of the contractor's minority-owned business program at each monthly construction meeting and reporting about it.
- (e) Maintaining an on-site minority-owned business subcontracting file containing copies of all contractor's reports, minutes of meetings, and other pertinent information.
- (f) Administering the contractor's submittals of quarterly reports.

- b. **Home Office Support Services.** Home office support includes field support services identified in 3-1.2a above that the A/E can accomplish in the office without the need for a trip to the field.

### 3-1.3 Submission Review and Approvals

The A/E must review all contractor submittals for compliance with contract documents, for field dimensions and clearances, in relation to available space, and in relation to work by the Postal Service or separate contracts. The A/E must review all submittals promptly so as not to delay the construction progress. The duration of all reviews must not exceed the time frames required in the construction contracts. The contractor submittals that the A/E is required to review include, but are not limited to, those discussed in the following sections.

#### 3-1.3.1 Shop Drawings and Samples

The A/E must review and approve or reject, on the basis of contract documents, all contractor submittals of shop drawings, samples, color schedules, catalog cuts, and construction schedule.

Shop drawings must be submitted to the A/E for review only after they have been checked and approved by the contractor. Failure to show that the submittal has been thoroughly checked may result in the submittal being returned without being reviewed. When shop drawings reach the A/E's office, they must be stamped with the date and assigned the A/E's file number and an appropriate identifying number. The process of receiving, examining, approving, and distributing shop drawings is critical. The A/E must keep a record of the handling of these drawings during review to ensure the orderly processing of this work.

The A/E must approve the shop drawings only for conformance with the design concept of the project and with the information given in the contract documents. The approval does not extend to the shop drawing information related to shop fabrication process, field construction techniques, or coordination of trades and their work. The language recommended to stamp shop drawings is as follows:

 *Building Design Standards, Master Specification 01310*

 *Building Design Standards, Master Specification 01330*

 *Clause B-56*

- 
- a. **Approved.** If “approved” is checked, fabrication, manufacture, or construction may proceed, provided the work complies with the contract documents. This action does not authorize changes to the contract sum unless they are stated in a separate letter or change order.
  - b. **Approved as Noted.** If “approved as noted” is checked, fabrication, manufacture, or construction may proceed, provided the work complies with the A/E’s notations and the contract documents. This action does not authorize changes to the contract sum unless they are stated in a separate letter or change order.
  - c. **Rejected; Resubmit.** If “rejected; resubmit” is checked, fabrication, manufacture, or construction may *not* proceed. The contractor must submit to the A/E a new shop drawing that has been corrected as marked (no additional changes are allowed). Any submission marked “rejected; resubmit” is not permitted on the site.

The A/E’s review of samples is only to ensure their conformance with the design concept of the project and compliance with the information given in the contract documents. The construction contractor is responsible for dimensions that are to be confirmed and correlated at the site; for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences, and procedures of construction; and for coordination of the work of all the trades. The language the A/E uses in any stamp or letter pertaining to the approval of samples must parallel the language used in shop drawing approval procedures as described in this section.

### 3-1.3.2 Coordination Drawings

The A/E must provide a general review of contractor-submitted coordination drawings for their conformance to contract documents; however, the A/E must make it clearly known to the contractor that coordination is the construction contractor’s responsibility.

### 3-1.3.3 Schedule of Values and Progress Payments

The A/E must review the contract value breakdown on the initial schedule of values submitted by the contractor. The A/E must notify the contracting officer of construction activities that are not included on the schedule of values as well as the reasonableness of the costs assigned to each scheduled item. The A/E must ensure that the schedule of values is not “front-end loaded.”

The contractor is required to submit to the contracting officer for approval a schedule of values of the various costs of the work by trade, equal to the total sum of the contract. This cost breakdown must be realistic because it will be used as a basis for progress payments to the contractor. The A/E is responsible for the following:

- a. Approving the selection and number of activities.
- b. Reviewing, evaluating, and analyzing the proposed network diagrams, including activity durations, costs, and workforce loading, when applicable.
- c. Revising and analyzing the monthly update of network diagrams, when applicable.

The A/E is responsible for certifying Form 4211-B, *Invoice and Payment Authorization (Facility and Fixed Mechanization Contract)*, which is submitted monthly by the contractor, after reviewing the schedule of values and substantiating data submitted by the contractor. This form, which certifies the accuracy of the progress payments, must be signed by a designated representative of the A/E firm and forwarded to the contracting officer for signature.

 Building Design Standards, Master Specification 01310

 Clause 1-3  

---

Handbook P-2, 6.4.5

---

### 3-1.3.4 Schedules

The contractor is required to submit a construction progress schedule to the contracting officer. The form and complexity of the required schedule can vary depending on the size of the project. The A/E must review the contractor's initial progress schedule as well as the monthly schedule updates that this contractor submits with the partial payment requests. The A/E must verify that this contractor's schedules, at a minimum:

- a. Show the complete sequence of construction by activity, with dates for beginning and completing each element of construction.
  - b. Identify each item by specification section number.
  - c. Identify work of separate stages and other logically grouped activities.
  - d. Provide subschedules to define critical portions of the entire schedule.
  - e. Include conferences and meetings in the schedule.
  - f. Show the accumulated percentage of completion of each item and total percentage of work completed as of the first day of each month.
  - g. Provide a separate schedule of submittal dates for shop drawings, product data, and samples, including Postal Service-furnished products, and the dates that reviewed submittals will be required from the contracting officer as specified in Section 01330, Submittal Procedures.
- a. Coordinate the content with the schedule of values.

### 3-1.3.5 Spare Parts Data

The A/E must review the spare parts data to ensure that it complies with the contract documents and to ensure that the contractor provides all necessary spare parts.

### 3-1.3.6 Warranties and Guarantees

The A/E must review all warranties and guarantees to ensure their compliance with the contract documents and to ensure that the contractor provides all special warranties and guarantees that are required by the contract.

### 3-1.3.7 Operation and Maintenance Manuals

The contractor must assemble, coordinate, and index operation and maintenance (O&M) manuals for each utility system and major component of building equipment. The A/E must review the manuals for completeness and accuracy and recommend to the Postal Service and/or the construction manager whether or not to approve them.

After Postal Service approval, the A/E obtains from the contractor the specified number of O&M manuals necessary for training and distributes them as directed by the Postal Service project manager. All O&M manuals must be delivered in sufficient time to provide training to Postal Service personnel before the facility is occupied.

### 3-1.3.8 Test Reports

The A/E must review all test reports to ensure that they comply with the contract documents.

 Clause FB-246  
 Clause B-59

---

Handbook P-2, 6.2.3

---

 Clause B-40

 Clause B-58  
 *Building Design Standards, Master Specification 07180*

 Clause B-61  
 *Building Design Standards, Master Specification 07180*

---

Handbook P-2, 6.3

---

 *Building Design Standards, Master Specification 07180*

---

Handbook P-2, 6.3

---

 *Building Design Standards, Master Specification 01450*

---

Handbook P-2, 6.3.1

---

---

The A/E must ensure that all required tests are performed at the proper time.

### 3-1.3.9 Change Orders and Contract Modifications

The A/E prepares, assembles, reviews, negotiates, and issues all construction contract modifications directed by the contracting officer. Modification proposals initiated by the construction contractor, the Postal Service, or the A/E must be processed by the A/E as follows:

- a. Obtain approval to proceed with the proposal change from the construction manager. Assign a serialized control number to the proposal change and notify the contractor that the proposal change is in progress.
- b. Review field conditions and prepare the necessary design drawings, specifications and revisions, A/E cost estimate, justification, and recommendations for the proposal change.
- c. Issue a copy of the proposal change drawings to the contractor, requesting a proposal and specifying a time for response. Do not include the A/E independent cost estimate. Simultaneously, provide the Postal Service with a copy of the request for proposal, including the proposal change and all documents required.
- d. Review the contractor's proposal with the Postal Service and the contractor to resolve cost differences. The construction manager must negotiate any conditions that cannot be resolved between the A/E and the contractor.
- e. Upon Postal Service acceptance of the contractor's proposal, prepare a contract modification on the Postal Service-provided form, obtain the contractor's signature, and submit it to the construction manager complete with all backup material and Form 4211, *Facility and Fixed Mechanization Project Contract*.
- f. Upon receipt of a signed copy of modifications, ensure that the contractor's work is in accordance with the changed scope of work.

Fees for these services are based on the rates negotiated and included in Clause FB-294, Architect-Engineer Modifications of Design. Rates include all costs, both direct and indirect, and overhead and profit.

### 3-1.3.10 As-Built Drawings and Specifications

The construction contract documents require the contractor to provide the A/E with drawings and specifications incorporating the revisions and changes made during construction up to acceptance of the project. The A/E must review the contractor's as-built drawings monthly to ascertain the contractor's compliance before processing payment requests. The A/E must revise the original contract documents to indicate as-built conditions, including revisions in site and building area tabulations.

The A/E must furnish the Postal Service with a set of reproducible record drawings (as-built drawings) showing significant changes made during the construction process, based on the marked-up prints, drawings, and other data furnished to the A/E by the contractor.

### 3-1.3.11 Electronic Format (As-Built Information)

The A/E must provide all record drawings (as-built drawings) to the Postal Service in electronic format that is compatible with design documents.

 Clause B-10

 Clause B-21

 Clause B-37

---

Handbook P-2, 6.5

 Clause FB-294

 Clause B-57

---

### 3-1.3.12 As-Built Photographs

When construction is completed, the A/E must provide two color 8-inch x 10-inch photographs, six exterior views, and 20 exterior and interior views, including views that show the accessibility features of the building, to be submitted in digital format as directed by the CO. Coordinate the selection and location of these views with the contracting officer.

### 3-1.3.13 Closeout Certificates

The A/E must provide the following certificates to the Postal Service:

- a. Handicapped accessibility.
- b. Lead-based paint.
- c. Asbestos-containing materials.

---

## 3-2 Modifications of Design During Construction

Changes in the scope of work or Postal Service requirements not covered in the initial A/E contract are considered to be contract modifications in accordance with Clause B-2, Changes, in the A/E's contract.

Modifications of design during construction not due to design errors or omissions will be compensated for in accordance with the fee schedule in Clause FB-294.

 Clause B-2  
 Clause FB-294

---

## 3-3 Field Services During Construction (Options)

### 3-3.1 Requirement

The requirements of this section apply if the contract includes in Section A, Items and Prices, an option for the A/E to provide field services. A/E field services during construction are to provide on-site field support services that include, but are not limited to, construction observation, contract administration, and clerical assistance. Rates for all services must include both direct and indirect costs and overhead and profit. The scope of services for each position is defined in this section.

 Clause FB-293  
 Clause FB-206

### 3-3.2 General Responsibility

The Postal Service must forward letters of current authorities and limitations to the Postal Service representatives who are involved in administering the contract to the A/E and general contractor. A Postal Service decision and signature are required for all contractual actions and must be accompanied by a written detailed justification and a specific recommendation by the construction administrator. The A/E or authorized representative (i.e., the construction administrator) is not authorized to revoke, alter, enlarge, relax, or release any requirements of the project drawings or specifications; to approve or accept any portion of the work; or to issue instructions (oral or written) that would be contrary to the contract documents. All dealings in terms of the contract must be made with the contractor's superintendent and not with a subcontractor.

---

Handbook P-2, 6-1

---

### 3-3.3 Contract Administration

Contract administration responsibilities are as follows:

- a. The A/E is responsible for administering the contract between the Postal Service and the contractor. The A/E's duties, responsibilities, and limits of authority are shown below and in Sections G and H, Clauses, of the A/E's contract. The A/E or A/E's representatives, as agents of the Postal Service, must discharge this responsibility by:
  - (1) Interpreting the contract documents and all changes made to them.
  - (2) Establishing the standards of workmanship.
  - (3) Judging the performance of the contractor (i.e., progress of the project as constructed) compared with that of the project as planned.
  - (4) Certifying payments to the contractor on the basis of the schedule of values of the work-in-place and stored materials.
  - (5) Inspecting the work to determine the date of substantial completion.
  - (6) Informing the Postal Service about the status of the project relative to the above points.
  - (7) Conducting monthly progress meetings with the contractor and Postal Service representatives to evaluate progress of the work and to resolve problems related to contract compliance.
  - (8) Submitting the following reports to the contracting officer:
    - (a) The daily log each week.
    - (b) A weekly summary of progress of the work, problems noted, and actions taken.
    - (c) Minutes of the monthly progress meetings.
    - (d) A monthly status of modifications, along with the contractor's monthly payment requests, with the construction administrator's recommendation to the contracting officer.
    - (e) Quarterly minority-owned business reports.
    - (f) Monthly progress reports.
    - (g) Updated submittal log.
    - (h) Updated RFI logs.
    - (i) Updated request for proposal (RFP) logs.
  - (9) Negotiating and processing construction modifications for the contracting officer's signature.
- b. As the Postal Service's agent, the A/E is responsible for guarding the Postal Service against defects and deficiencies in the work of the contractor. The A/E may reject work as failing to conform to the contract documents, a failure that will keep the building or any portion of it from having the intended appearance or being capable of full use in the manner and for the purpose for which it was

---

intended. The right to reject work does not extend to the areas of safety precautions and programs in connection with the work or to the adequacy of construction means, methods, techniques, sequences, or procedures, all of which are solely the responsibility of the contractor.

- c. The A/E's construction administrator, who is assigned full-time to projects with a construction cost greater than \$8 million, must be responsible for directing the overall technical and managerial efforts of the A/E that are required for field services during construction.
- d. The A/E's resident engineer, who is normally assigned full-time to the project, must observe the progress of the work performed by the contractor.
- e. The construction administrator, resident engineer, and resident engineer's staff must accomplish other activities as may be required by the contracting officer.
- f. A Postal Service decision or signature is required for all actions that could result in a modification or change to the contract, and must be accompanied with a written detailed justification and a specific recommendation by the construction administrator.

### 3-3.4 Construction Observation and Field Supervision

Construction observation and field supervision responsibilities are as follows:

- a. **Site Inspection.** Throughout the construction period the A/E is required to inspect the project site periodically at suitable times to observe the progress of the work. The construction must be inspected to ensure its compliance with plans, specifications, and other contract documents. The A/E must advise the Postal Service project manager of any deviations or deficiencies and recommend corrective action. In those cases in which a resident engineer is assigned part- or full-time, he or she is directed by the A/E's construction administrator.
- b. **Labor Interviews.** The A/E or representative must randomly interview contractor and subcontractor employees monthly. Their responses regarding their classification and rate of pay must be checked against payrolls and applicable wage rates. Use DOD Form 1567, *Defense Department Labor Standards*, for this purpose.
- c. **Safety and Security.** The A/E must review and monitor the contractor's safety plan and security program. Safety precautions, programs, and requirements are specified in various safety codes and regulations. Although the contract administrator must be concerned generally with their observances, compliance with them is solely the contractor's responsibility.

### 3-3.5 Progress Meetings

The A/E must schedule and chair all monthly progress meetings and other required project meetings and must forward the minutes of all meetings to the contracting officer within 5 working days after each meeting.

Before the monthly progress meeting, the A/E must spend at least 1 hour reviewing with the contractor the contractor's compliance with contract requirements for labor standards, equal employment opportunity (EEO) policies, minority-owned business participation, payrolls, and safety. The findings must be reviewed at the progress meeting and included in the minutes of the meeting.

 *Building Design Standards, Master Specification 01310*

---

### 3-3.6 Records

A log must be maintained by the A/E. This log must be neatly and accurately recorded, since it may subsequently be used in legal proceedings. Enter the following items every inspection from the start to the completion of the project:

- a. **Progress Work.** Status for work in progress, new work started, and current and anticipated problems of scheduling and coordination.
- b. **Workforce.** The number of foremen and mechanics for each trade at the site.
- c. **Weather.** The high and low temperatures, precipitation, and a general description of the 24-hour weather conditions.
- d. **Telephone Calls.** All pertinent conversations.
- e. **Site Visits.** The names, titles, and official capacity of all persons, with times and purposes of visits noted. For Postal Service payment to be approved, A/E personnel making authorized site visits must sign in at the site.
- f. **Miscellaneous Items.** The A/E must note all work or material in place that does not correspond with drawings or specifications, as well as all other problems or abnormal occurrences that have arisen during each day. Include notations of any particular lack of activity. Note corrective actions taken.

### 3-3.7 Construction Project File

The A/E must maintain a construction project file that contains all appropriate and necessary records that document the execution of the construction contract. The construction project file must consist of copies of the original documents, not the original documents. The construction project file must include, but is not limited to, the following categories (when applicable):

- a. **Initial submittals for approval:**
  - Schedule of values.
  - Construction schedule.
  - System construction estimate breakdown.
  - List of subcontractors.
  - Qualifications of testing agencies and project personnel.
  - Shop drawings submittal log.
- b. **Correspondence:**
  - Correspondence.
- c. **Meeting minutes:**
  - Preconstruction conference.
  - Monthly progress meetings.
  - Coordination meetings.

- 
- d. **Job drawings:**
- Contract drawings.
  - Supplemental clarification drawings.
  - Drawings containing changes.
  - Coordination drawings.
- e. **Shop drawings:**
- Shop drawings (those that have been reviewed and approved as final).
  - Shop drawings log.
  - Samples.
- f. **Test reports:**
- Testing log.
  - Tests.
- g. **Substitution request:**
- Justification and determination, including:
    - Contracting officer's decision.
- h. **RFI log:**
- RFI log.
  - General contractor-initiated requests.
- i. **Schedules:**
- Construction progress schedule.
  - Equipment and procurement schedules.
  - Submittal schedule.
  - O&M training schedule.
  - Occupancy schedule.
- j. **Requisitions:**
- Approved requisitions for payment.
- k. **Certified payrolls:**
- Certified payrolls.
- l. **Monthly and quarterly submittals:**
- General contract progress synopsis.
  - Labor standards interview.
  - Employee utilization report.
  - Stored material log and invoices.
  - Updated submittal log.
  - Subcontractor minority business enterprise (MBE) form.
  - Schedule of values.

- 
- m. **Daily construction log:**
- Inspector's daily construction log.
  - Contractor's daily construction log.
- n. **Photos:**
- Photographs.
- o. **Modifications and/or change orders:**
- Form 4909, *Findings of Fact for Contract Modifications*.
  - Scope of modification.
  - Request for proposal, including:
    - Contractor's cost proposal.
    - Subcontractor's cost breakdown.
  - Independent estimate (A/E or Postal Service).
  - Reconciliation of estimates and proposal.
  - Analysis of schedules.
  - Negotiation record.
  - A/E's recommendation (if applicable).
- p. **Claims:**
- Claims log.
  - Claims:
    - Independent estimate (A/E or Postal Service) of claim.
    - Reconciliation of estimates and claim.
    - Analysis of schedules.
    - Negotiation record.
    - A/E's recommendation (if applicable).
    - Contracting officer's final decision.
- q. **Small, minority, and woman-owned business subcontracting:**
- Initial subcontracting plan.
  - Reports.
  - Meeting minutes.
- r. **Construction reports:**
- Employee wages.
  - Progress.
  - Prefinal.
  - Final.
- s. **Closeout documents and documentation:**
- Punch lists:
    - Prefinal punch list.
    - Final punch list.

- 
- Final inspection and acceptance:
    - Contractor's request for inspection.
    - Prefinal inspection.
    - Final inspection report.
  - Certificates:
    - Certification of Asbestos and Lead Paint Usage.
    - Certificate of lead-free water.
    - Certificate of Accessibility and Architectural Barriers Survey.
  - Closeout:
    - Form 1233, *Project Financial Change/Completion Report*.
    - Inventory sheet.
    - Form 1233-B, *Project Completion Report (Personal Property Identification and Cost Allocation)*.
    - Form 4209, *Project Authorization*.
    - Form 7307, *Contractor's Release*.
    - Notification to surety, project acceptance, and total contract amount.
  - t. **Project acceptance letter:**
    - Project acceptance letter.
  - u. **O&M manuals:**
    - List of required operations and maintenance manuals.
    - One copy of each manual.
    - List of attendees at operations and maintenance training.
  - v. **Warranties and guarantees:**
    - Warranty and guarantee log.
    - Warranties and guarantees.
  - w. **Performance evaluation:**
    - Form 5002, *Construction Contractor Performance Evaluation*.
  - x. **As-built drawings:**
    - Final contract drawings.
    - Final shop drawings.
  - y. **One-year warranty inspection:**
    - Inspection report.
  - z. **Postoccupancy evaluation and review:**
    - List of warranty items.
    - Resolution of inspection items.
    - Notification letter.

---

aa. **Administration miscellaneous:**

- Cure notice (issue at any time performance is jeopardized except within 10 days of completion).
- Show cause letter.
- Termination for default.

### 3-3.8 Quality Control and Inspection

 Clause B-33

---

Handbook P-2, 6.3.1

---

The A/E must observe the construction, materials, and workmanship to ensure that they comply with plans, specifications, and other contract documents. The following must be observed at suitable times during the progress of the work:

- a. Benchmarks and building layout.
- b. Dimensions and grades.
- c. Excavations.
- d. Soil under footings.
- e. Public utility connections.
- f. Foundation sizes and reinforcing.
- g. Pile driving.
- h. Caisson work.
- i. Concrete forms.
- j. Concrete tests.
- k. Concrete reinforcing.
- l. Structural frames.
- m. Floor openings, sleeves, and hangers.
- n. Quality and placing of concrete.
- o. Weather precautions.
- p. Masonry layout, materials, bonding, anchorage, and flashings.
- q. Setting of frames and prefabricated elements.
- r. Partition layout.
- s. Temporary enclosures, heat, and light.
- t. Protection of finished work and roofing.
- u. Setting of doorframes.
- v. Partition construction.
- w. Plaster work.
- x. Tile work.

- 
- y. Electrical work.
  - z. Mechanical work.
  - aa. Special equipment.
  - bb. Elevators.
  - cc. Furring and lathing.
  - dd. Plumbing work.
  - ee. Cabinet work.
  - ff. Finishes.
  - gg. Painting and papering.
  - hh. Hardware.
  - ii. Inspection and tests.

As related to MSBD projects, the amount of time required to properly inspect the construction installation is at the contracting officer's discretion.

### 3-3.9 Progress Photographs

The A/E must provide photographs during construction in the manner indicated below:

- a. Twelve photographs are to be taken each month during construction to properly record the sequence of construction and the placement of major building components and to show the status of each specific building system. Photographs should be taken during field visits and should show specific progress of conforming and nonconforming items of work. Follow-up photographs must be taken to show correction of nonconforming work items. All photographs are to be marked on the back with the name of the project, city, state, date taken, photographer's name, and the negative number.
- b. The A/E, in consultation with the contracting officer, is to select two pictures for the month. Two 8-inch x 10-inch color prints are to be made of these pictures. Photographs are to be submitted to the contracting officer.

### 3-3.10 Schedule of Values and Payments

The A/E must review the contract value breakdown on the initial schedule of values submitted by the contractor. The A/E must notify the contracting officer of construction activities that are not included on the schedule of values as well as the reasonableness of the costs assigned to each scheduled item. The A/E must ensure that the schedule of values is not "front-end loaded."

The contractor is required to submit to the contracting officer for approval a schedule of values of the various costs of the work, by trade, aggregating to the total sum of the contract. This cost breakdown must be realistic because it will be used as a basis for progress payments to the contractor. The A/E is responsible for the following:

- a. Approving the selection and number of activities.

 Clause 1-3

Handbook P-2, 6.4.5

- 
- b. Revising and analyzing the monthly update of the master schedule and progress chart, where applicable.

The A/E is responsible for certifying Form 4211-B, *Invoice and Payment Authorization (Facility and Fixed Mechanization Contract)*, which is submitted monthly by the contractor, after reviewing the schedule of values and substantiating data submitted by the contractor. This form, which certifies the accuracy of the progress payments, must be signed by a designated representative of the A/E firm and forwarded to the contracting officer for signature.

### 3-3.11 Clarifications

The A/E must furnish written interpretations and drawings necessary for the proper execution of the work with reasonable promptness so that the contractor can execute the work without delay. All interpretations and decisions must be consistent with the intent of the contract documents. These interpretations must not cause changes in the time or money required to execute the construction contract.

### 3-3.12 Operating Tests

The A/E must ensure that all required tests are executed at the proper time. The contract administrator or representative must be present for all tests.

 *Building Design  
Standards, Master  
Specification 01450*  

---

Handbook P-2, 6.3.1

### 3-3.13 Training

Training furnished by the contractor must be coordinated with the A/E and the Postal Service. The A/E must ensure that all maintenance and operational training is scheduled and provided to Postal Service personnel as required by the solicitation documents, and that the operation of the systems is in accordance with the intent of the design, particularly with regard to energy conservation operation procedures.

Training must not be scheduled or conducted until after all testing has been satisfactorily completed and until after the Postal Service trainees have had ample time to review the approved operation and maintenance manuals.

### 3-3.14 Guarantees and Instructions

As the contractor completes the work, he or she must submit the following items to the A/E for approval:

- a. All required operating instructions.
- b. The schedule of training on the operation and maintenance of the various systems and equipment.
- c. Complete keying schedule with master, submaster, room, and special keys. All keys must be properly marked or tagged.
- d. All required guarantees and certificates of inspection.
- e. Certified air balance reports, with a cover letter from the A/E stating that HVAC systems satisfy the contract requirements.

---

The A/E forwards all of the above to the occupying postmaster with copies transmitted to the contracting officer.

### **3-3.15 Preoccupancy Safety and Health Inspection**

Handbook P-2, 6.3.1-15

When construction is between 90 percent and 100 percent complete, an on-site Postal Service team, which includes the A/E, must inspect the construction work and report to the CO any deficiencies noted during the inspection. The inspection must be conducted in accordance with Management Instruction AS-510-87-3, *Compliance With OSHA Standards — Facility Construction Program*.

### **3-3.16 Accessibility Inspection**

Handbook P-2, 6.3.1-16

Before the Postal Service accepts the facility, the COR, the A/E, and the CM (if any) must inspect the facility, and the A/E or CM must furnish a signed statement certifying that the facility has been constructed to be in compliance with Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*.

The A/E must provide a Certificate of Accessibility prior to contract closeout.

Handbook P-2, 6.3.2-30

### **3-3.17 Preliminary Completion Inspection**

Handbook P-2, 6.3.2-13

To expedite closeout procedures, a preliminary completion inspection may be conducted jointly with the preoccupancy safety and health inspection. The COR, A/E, or CM conducts the inspection and assembles a list of work items remaining to be completed or corrected. This is a “preliminary punch list” that is provided to the contractor to assist the contractor in expeditiously completing the work.

The contractor should have available at the preliminary inspection all O&M manuals, instructions, and equipment warranties and guarantees required by the contract specifications. O&M manuals, instructions, and equipment warranties and guarantees not available at the preliminary inspection should be identified on the preliminary punch list and must be submitted prior to the substantial completion inspection.

### **3-3.18 Substantial Completion Inspection**

Handbook P-2, 6.3.2-14  
thru 6.3.2-152

A substantial completion inspection must be conducted on every construction project to accomplish all the following purposes:

- a. Determine whether or not the work is substantially complete.
- b. Prepare a punch list of work items that must be completed and corrected in order to conform to the requirements of the construction contract and achieve final completion.
- c. Receive final approval submittals from the contractor.

The substantial completion inspection should be conducted by the COR and the A/E and/or CM accompanied by the contractor and representatives of the occupying organization. This inspection team should include the same persons who participated in the preliminary inspection and environmental professionals as appropriate.

The inspection team must review the facility for compliance with the contract documents, surveying the facility room by room and ensuring that all equipment is in good

---

working order. All items listed on the preliminary punch list must be reinspected, and all tests originally listed as unacceptable must be executed again. The inspection team must proceed with the inspection in order to prepare a substantial completion punch list of all remaining defects and omissions. The list must be precise, giving all information necessary to locate and correct deficient items. By the time the inspection is completed, the COR must recommend whether or not the project is substantially complete.

The A/E must make it clear to the contractor that the Postal Service will not conduct special inspections to determine substantial completion until there is sufficient evidence to indicate that this condition may have been attained.

The A/E must ensure that if the following items have not been previously submitted, they must be submitted by the contractor at the substantial completion inspection for transfer to appropriate parties, as the contract may require:

- a. A complete set of as-built drawings annotated to show all authorized changes and variations from the original contract drawings.
- b. All outstanding operation and maintenance manuals and instructions for equipment items.
- c. All environmental operating permits, manifests, etc.
- d. All outstanding equipment warranties and guarantees.
- e. Keys.
- f. Spare parts.
- g. Occupancy permit (for leased facilities) and inspection certificates.

### **3-3.19 Final Completion Inspection**

Handbook P-2, 6.3.2-16

Upon receipt of notice from the contractor that substantial completion punch list items have been completed or corrected, the A/E and the designated postal representatives must inspect these items by comparing them to the punch list and must confirm their completion in writing when appropriate. This may be done by sending a confirming letter or by checking off, annotating, and initialing a copy of the substantial completion inspection punch list for each party. When it has been confirmed that the contractor has completed all the items on the substantial completion inspection punch list, final completion of the contract has been achieved.

### **3-3.20 Final Payment Review**

The contractor must apply for final payment on Form 4211-B, as in the case of the progress payments, and must attach a completed Form 7307.

The A/E must review the contractor's request for final payment and recommend to the Postal Service whether or not it is to be paid.

---

This page intentionally left blank

---

## Part III

# Customer Service Facilities

## 4 Postconstruction Phase A/E Services

### 4-1 Design Services After Construction (Options)

---

#### 4-1.1 Record Drawings and Specifications

The construction contract documents require the contractor to provide the A/E with drawings and specifications incorporating the revisions and changes made during construction up to acceptance of the project. The contractor must, during the progress of the work, keep a master set of prints on the job site, on which is kept a careful and neat record of all deviations from the contract drawings prepared by the A/E that have been made during the course of the work. The A/E must review the contractor's as-built drawings monthly to ascertain the contractor's compliance with this task before processing payment requests.

Upon completion of the project, these as-built prints must be certified as to their correctness by the signature of the contractor and turned over to the A/E for use in preparing a permanent set of as-built record drawings. The A/E must revise the original contract documents to indicate as-built conditions, including revisions in site and building area tabulations.

#### 4-1.2 Contract Appeals

Appeals made by the contractor may be heard by the Postal Service Board of Contract Appeals or the Claims Court. The resident engineer or other professionals having knowledge of the dispute may be required to support the Postal Service during appeal hearings. Reimbursement for these services will be at the same daily rates specified for services included in Clause B-293, Architect/Engineer Field Duties During Construction (Option), Section A, Items and Prices, of the A/E's contract. In addition, travel expenses are reimbursed to the extent that they would be allowable for Postal Service employees under travel regulations in effect at the time of travel.

### 4-2 Field Services After Construction (Option)

---

#### 4-2.1 Six-Month Postoccupancy Evaluations

The purpose of the postoccupancy evaluations is to provide feedback to the Postal Service that is necessary for improving the design standards. The A/E, at the direction of the CO, may be required to participate in and/or review and provide an analysis of postoccupancy evaluations. There are two different levels of postoccupancy evaluations:

 Clause B-57

 *Building Design Standards, Master Specification 01780*

---

*Purchasing Manual*  
6.8.3

---

 Clause B-293

 *Building Design Standards*

- 
- a. **Level One Postoccupancy Evaluation.** A level one postoccupancy evaluation is to be conducted on all types of newly completed facilities, as follows:
- (1) The level one postoccupancy evaluation is accomplished by completing the Postoccupancy Evaluation Questionnaire. This is completed by the postmaster or facility manager and the manager of the Administrative Support unit.
  - (2) The Postoccupancy Evaluation Questionnaire is to be completed between 4 and 6 months after the facility has been occupied.
  - (3) The manager of Design and Construction at the FSO must send one copy of the Postoccupancy Evaluation Questionnaire to the postmaster or facility manager and another copy to the manager of the Administrative Support unit.
  - (4) The completed questionnaire is to be returned to the manager of Design and Construction for review and comments.
- b. **Level Two Postoccupancy Evaluation.** Headquarters, with a specialized consultant, will conduct a site visit and a more extensive evaluation for selected facilities using the following tools:
- (1) **Employee Questionnaire.** The consultant conducts these questionnaire interviews during the site visit.
  - (2) **Customer Interview.** The consultant conducts interviews with customers during the site visit.

The consultant prepares a narrative report with engineering studies of the findings from the employee and customer interviews.

#### 4-2.2 Guarantee Inspection

If defects become evident during the guarantee period, the Postal Service may authorize the A/E to investigate and report on them.

#### 4-2.3 One-Year Warranty Inspection

The purpose of the one-year warranty inspection is to identify construction warranty and/or guarantee defects before the end of the 1-year warranty period for new construction and major repairs.

At least 4 weeks before expiration of the warranty date, the project manager or COR will schedule and conduct the final one-year warranty inspection. Participants in the inspection will be the CO, the contractor, the local postal official, the COR or designee, and the A/E. Before the one-year warranty inspection is conducted, all earlier noted deficiencies not corrected should be listed.

The warranty log prepared at final acceptance is to be used as a checklist for each warranted item to be inspected to ensure that it is performing satisfactorily. All warranty deficiencies noted during the inspection must be listed, and a “draft” copy of the deficiency list must be given to the contractor at the end of the inspection. The CO will formally transmit the deficiency list to the contractor via a letter.

---

The local postal official will monitor the correction of warranty defects until such time as all defects are corrected. The local postal official will also inform the COR as to the status of uncorrected warranty deficiencies. The CO will notify the contractor's surety company if the contractor does not respond in a timely manner.

---

This page intentionally left blank

---

## Part IV

# Repair and Alteration Contracts

### Contents

1	Predesign Phase A/E Services .....	153
1-1	Survey of Existing Facilities.....	153
1-2	Additional Services (Options).....	153
1-2.1	Boundary and Topographic Site Survey .....	153
1-2.2	Subsurface Investigation.....	153
1-2.3	Investigative Services for Existing Facilities .....	153
1-2.4	Traffic Impact Studies .....	154
2	Design Phase A/E Services .....	155
2-1	General Design Services .....	155
2-1.1	General .....	155
2-1.2	Transmitting Submissions.....	155
2-1.3	Records Ownership .....	156
2-1.4	Postal Service-Furnished Property .....	156
2-1.5	Changes.....	156
2-1.6	Meetings.....	156
2-2	Design Phase Services .....	157
2-2.1	Concept Design Phase .....	157
2-2.1.1	General .....	157
2-2.1.2	Submission Requirements .....	157
2-2.1.3	Concept Design Review Meeting .....	169
2-2.2	Final Design Phase .....	170
2-2.2.1	General .....	170
2-2.2.2	Submission Requirements .....	170
2-2.2.3	Final Design Review Meeting.....	175
2-2.3	Solicitation Phase.....	175
2-2.4	Submission Checklist.....	177
2-3	A/E Modifications of Design .....	180
2-4	Additional Design Phase Services (Options) .....	180
2-4.1	Perspective Drawing .....	180
2-4.2	Supplementary Drawing.....	180
2-4.3	Roofing Consultant .....	181
2-4.4	Fire Protection Consultant .....	182
3	Construction Phase A/E Services .....	183
3-1	Design Services During Construction (Options).....	183
3-1.1	General .....	183
3-1.2	A/E Support Services .....	183
3-1.3	Submission Review and Approvals.....	184
3-1.3.1	Shop Drawings, Product Data, and Samples.....	184

3-1.3.2	Coordination Drawings.....	186
3-1.3.3	Schedule of Values and Progress Payments.....	186
3-1.3.4	Schedules .....	186
3-1.3.5	Spare Parts Data.....	187
3-1.3.6	Warranties and Guarantees.....	187
3-1.3.7	Operation and Maintenance Manuals .....	187
3-1.3.8	Test Reports .....	187
3-1.3.9	Change Orders and Contract Modifications.....	188
3-1.3.10	As-Built Drawings and Specifications.....	188
3-1.3.11	Electronic Format (As-Built Information).....	189
3-1.3.12	As-Built Photographs .....	189
3-1.3.13	Closeout Certificates.....	189
3-2	Modifications of Design During Construction .....	189
3-3	Field Services During Construction (Options).....	189
3-3.1	Requirement .....	189
3-3.2	General Responsibility .....	189
3-3.3	Contract Administration.....	190
3-3.4	Field Supervision.....	191
3-3.5	Progress Meetings .....	192
3-3.6	Records.....	192
3-3.7	Construction Project File.....	193
3-3.8	Quality Control and Inspection .....	196
3-3.9	Monthly Progress Photographs.....	197
3-3.10	Schedule of Values and Payments .....	198
3-3.11	Clarifications .....	198
3-3.12	Operating Tests .....	198
3-3.13	Training .....	199
3-3.14	Guarantees and Instructions.....	199
3-3.15	Preoccupancy Safety and Health Inspection .....	199
3-3.16	Accessibility Inspection .....	199
3-3.17	Preliminary Completion Inspection .....	200
3-3.18	Substantial Completion Inspection.....	200
3-3.19	Final Completion Inspection.....	201
3-3.20	Final Payment Review .....	201
4	Postconstruction Phase A/E Services .....	203
4-1	Design Services After Construction (Options) .....	203
4-1.1	Record Drawings and Specifications .....	203
4-1.2	Contract Appeals .....	203
4-2	Field Services After Construction (Option).....	203
4-2.1	Six-Month Postoccupancy Evaluations .....	203
4-2.2	Guarantee Inspection.....	204
4-2.3	One-Year Warranty Inspection .....	204

---

## Part IV

# Repair and Alteration Contracts

## 1 Predesign Phase A/E Services

### 1-1 Survey of Existing Facilities

---

The architect and/or engineer (A/E) must perform all investigative survey, research, and reviews that are necessary to prepare the design. All existing facilities must be surveyed. This survey must include, but is not limited to,:

- a. Analysis of the site.
- b. Analysis of availability and capacity of underground and aboveground utilities.

The A/E's survey must analyze the existing facility's electrical, mechanical, and structural capabilities as well as review the existing drawings for critical inaccuracies. The survey must include interviewing Operations and Maintenance personnel and measuring field conditions.

### 1-2 Additional Services (Options)

---

#### 1-2.1 Boundary and Topographic Site Survey

The A/E prepares, reviews, and coordinates the topographic and property line surveys, including easements, setbacks, and utility locations, necessary for completing the solicitation documents as described in the *Boundary and Topographic Site Survey* (RETB, September 1996) found in Handbook AS-503, *Standard Design Criteria*. All available Postal Service survey information must be provided to the A/E. The A/E must coordinate required soil borings, quantity, locations, depth, analysis, etc., with the environmental specialists.

---

Handbook AS-503

 Clause FB-291

#### 1-2.2 Subsurface Investigation

The A/E prepares, reviews, and coordinates the subsurface soil investigation as necessary for preparation of the solicitation documents. If sufficient information is not available at the time of contract negotiation, the A/E must submit a proposal afterward. This must be a technical proposal stating the fixed cost for accomplishing the work, with breakdown of labor, time, materials, and unit costs sufficient to perform field work, test soils, analyze results, and compile the report.

---

Handbook AS-503,  
Module 1, 1-1.2

 Clause FB-291

#### 1-2.3 Investigative Services for Existing Facilities

The A/E must perform all field investigations, measurements, surveys, and testing of existing facilities necessary to generate "as-built" drawings for the areas and systems affected by the proposed work. Investigative tests must be the nondestructive type. The A/E must visit the site, taking supporting personnel representing appropriate disciplines

---

needed to inspect the existing conditions and to take measurements, notes, and pictures, as needed, for preparing “as-built” drawings for areas and systems affected the work.

#### **1-2.4 Traffic Impact Studies**

The A/E must perform a comprehensive traffic impact study if this task is included in the contract. The traffic impact study must include analyses and evaluations of the impact that the proposed construction would have on pedestrian and vehicular traffic, including public mass transportation and public parking. The traffic impact study must consider the proposed construction and also all long-term plans for future postal expansion. The traffic impact study must also address all restrictions due to traffic congestion and the cost of all necessary traffic improvements. The A/E must attend public meetings and hearings as required and make presentations as necessary to local and governing authorities.

---

## Part IV

# Repair and Alteration Contracts

## 2 Design Phase A/E Services

### 2-1 General Design Services

---

#### 2-1.1 General

These instructions describe the services, specifications, drawings, cost estimates, and submissions to be provided by the A/E under an indefinite-quantity contract for professional services to the United States Postal Service. Delivery or performance will be made only as authorized by work orders issued in accordance with the Ordering and Work Order clauses of the contract. The listing and limits of the A/E's scope of work are delineated on the individual A/E indefinite-quantity contract work order.

During the negotiation of the contract, if the A/E elects to reject any of the performance criteria listed in these instructions, the Postal Service may take any of the following actions:

- a. Should the A/E be unable to meet a performance guideline contained herein (one that the Postal Service considers essential to the terms of the contract), the Postal Service may elect not to enter into a contract. If the A/E does not express reservations concerning specific performance guidelines during contract negotiations, it is assumed that the A/E accepts the performance guidelines as written.
- b. The Postal Service may modify or delete a specific performance guideline and negotiate the fee accordingly.
- c. The Postal Service may add additional performance guidelines if the A/E is required to furnish additional services determined to be beneficial to the Postal Service.

Each of the guidelines stands on its own and relates to services for which the Postal Service may contract within that work category. Contracts may be negotiated for all work categories or for any one category.

The A/E services indefinite-quantity contracts are intended to be used on construction projects that are repair and alteration in nature. These A/E services indefinite-quantity contracts are performed under individual work orders for design services on in-place indefinite-quantity contracts or a formally advertised fixed-price single project when the estimated construction cost is \$100,000 to \$500,000.

#### 2-1.2 Transmitting Submissions

The minimum quantity of submissions is to be determined at contract negotiations. Each submission must be delivered on time and must be fully complete, containing all deliverable items described for the respective phase of the project completion. When submittals are found to be incomplete or lacking substance, the Postal Service may reject the submission, and all additional information or drawings submitted, without

---

further review until the A/E resolves the deficiencies. Corrections of deficiencies or makeup of time delays is at the A/E's expense and at no additional cost to the Postal Service.

To avoid unnecessary delays during the design process and the subsequent potential for causing the construction cost to escalate, it is normally expedient to use Express Mail when it is available. Use Priority Mail when mailing design submissions for Postal Service review. The A/E must include the costs of mailing items in the design expense as a lump sum price.

### 2-1.3 Records Ownership

 Clause 4-7

The Postal Service may, at its option, demand and take, without additional compensation, all records relating to the services provided under this agreement. The A/E must turn over all such records upon request, but may retain copies of documents produced.

### 2-1.4 Postal Service-Furnished Property

 *Building Design Standards, Master Specification 01116*

The A/E is responsible for ensuring that the design includes Postal Service-furnished items, equipment, and property, as applicable. The A/E must edit and modify the list of Postal Service-furnished items included in the *Master Specification*, section 01116, published on the *Building Design Standards* CD-ROM. The A/E must verify all the dimensions and must accommodate the structural and the utility (electrical, mechanical, etc.) requirements for all Postal Service-furnished items. The A/E must ensure that the design clearly defines the extents and limits of the items furnished by the Postal Service and clearly identifies all components necessary for a complete installation.

---

*Purchasing Manual 2.2.7*

---

 Clause 2-11  
 Clause 2-12  
 Clause 2-13  
 Clause 2-14  
 Clause FB-255  
 Clause FB-234

### 2-1.5 Changes

Changes must be administered as follows:

- a. The A/E must not undertake work that the firm considers to be a cost or schedule modification to the contract without prior written authorization from the contracting officer.
- b. Changes in the scope of work or in the initial A/E contract are considered contract modifications.
- c. Modifications required before construction contract award are prepared by the A/E only after the contracting officer has accepted the proposed modifications in writing.
- d. The A/E must prepare the necessary design drawings and specification revisions and must fulfill all applicable services related to the modification as though they were contained in the original scope of work.

### 2-1.6 Meetings

The A/E must deliver the required submittals to the Postal Service offices designated by the project manager in sufficient time to allow for review before the design review meetings. A minimum of 21 calendar days should be allowed for Postal Service to review and schedule the review meeting.

---

An A/E representative is to attend all local field review meetings.

## **2-2 Design Phase Services**

---

### **2-2.1 Concept Design Phase**

#### **2-2.1.1 General**

The concept design consists of the architectural and engineering plans, elevations, sketches, diagrams, analyses, estimates, cost benefit justifications, and other data needed to clearly describe the recommended design. The concept design phase data must be developed into a comprehensive design development presentation of the basic design for all disciplines.

All disciplines must justify using the type of building system they recommend (i.e., heating, ventilation, and air-conditioning (HVAC) systems, electrical systems, lighting, fuel, structural, framing, bay spacing, mechanization, walls, roofing membrane, and insulations). The recommendations must be substantiated by detailed cost and supporting analyses.

Postal Service acceptance of the concept submission establishes the final building and site layout. Postal Service acceptance of this submission gives the A/E functional and operational authorization to proceed with the design toward the final solicitation proposal documents.

When concept designs as submitted do not meet Postal Service functional requirements, or when additional sketches or revised development plans are required to clarify and ensure mutual understanding of the proposed design, additional submittals or sketches may be required. The A/E provides such submittals, sketches, or resubmittals necessary to continue the design development of the project at no cost to the Postal Service if the scope of work remains unchanged.

#### **2-2.1.2 Submission Requirements**

The following submission requirements are to be coordinated with the A/E scope of work in accordance with the individual work order. The A/E must submit the concept design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the concept design review meeting. The concept design submission must be complete and contain all of the required material.

Building plans must be at a scale of 1/16 inch = 1 foot except for MSBD drawings. If a larger plan detail is necessary to fully explain the development of the design, the drawing may be drawn at a larger scale. The A/E must not anticipate preparation of working drawings by using larger than needed drawing scales (thereby increasing the number of drawings and work effort), because the design development as represented by the concept submission may need to be further changed and refined to complete the design. Drawings must show Postal Service Data Systems (PSDS) equipment where required.

The concept design consists of the following minimum components (as they apply to the specific project):

- 
- a. **Site Utilization Plan.** The site utilization plan must be prepared as a single overall plan on one sheet and must include, at a minimum, the following:
- (1) Building.
  - (2) Property lines.
  - (3) Parking locations (by dimensions).
  - (4) Topography.
  - (5) Traffic flow.
  - (6) Entrances.
  - (7) Prevailing wind direction.
  - (8) Availability of utilities.
  - (9) Proposed utilities.
  - (10) Building expansion capability.
  - (11) Stormwater drainage.
  - (12) Anticipated off-site or on-site easements and construction.
  - (13) Potential problems associated with site utilization.
  - (14) Wetland delineation.
  - (15) Other pertinent information.
- b. **Site Restrictions and Improvements.** The A/E must investigate and identify all site restrictions and limitations, local ordinances, and legal building requirements pertaining to the proposed facility. The A/E must identify all site restrictions and improvements necessary to ensure a complete and comprehensive design for the construction and operation of the facility. The A/E must include the time and cost of all items for which the permit process or construction process requires a long-lead time. The A/E must be prepared to discuss this information at the design review meeting. The A/E's investigative effort must include, but not be limited to, the following:
- (1) Utilities.
  - (2) Easements.
  - (3) Rights-of-way.
  - (4) Street improvements.
  - (5) Bonds.
  - (6) Fees.
- c. **Civil Design.** The A/E must provide a comprehensive civil design. The civil design must include design data and drawings identifying the following:
- (1) **Stormwater.** Include the site's stormwater drainage design criteria, such as design storm frequency and duration curves, storm frequency adopted by the local jurisdiction, and all other considerations to substantiate the proposed

---

design. Submit the site survey and subsurface investigation reports, if required, no later than the concept design submission.

- (2) **Streets.** Show street names, directions of traffic, width and number of traffic lanes, dimensions of pavement, rights-of-way, easements, traffic lights, and traffic survey data, as required. Provide the names of jurisdictions controlling street rights-of-way.
  - (3) **Driveways and Parkways.** Indicate the direction of traffic, dimensions of driveways, parking spaces, concrete aprons, and the number of each type of vehicle space. Identify the locations of truck, employee, official, and customer parking. Indicate buildings and other features on adjacent property within 10 feet of property lines. Show area requirements for future building expansion by dotted lines.
  - (4) **Pavement Design.** Justify the pavement design by design analysis and economic rationales.
  - (5) **Grades.** Establish a clear understanding of the existing and proposed site grading and surface drainage requirements.
  - (6) **Site Utilities.** Show the layout, size, and invert elevations of all sanitary and storm sewers, water and gas mains, and telephone and electrical lines available or required to serve the site.
  - (7) **Miscellaneous Features.** Show the locations and extent of site security fencing, gates, guardhouses, and lighting poles. Indicate areas to be landscaped.
  - (8) **Vicinity Map.** Provide a small inset vicinity and site location plan showing the site location with respect to major highways, airport, the business district, and the like.
  - (9) **Easements.** Show the location and extent of all required off-site and on-site easements or rights-of-way. Note fees required by local ordinances or utilities to be paid by the Postal Service before construction.
  - (10) **Legal Description.** All easements, rights-of-way, and the like must be identified at this stage by a legal description and a metes and bounds survey tied to a corner description of the Postal Service site. If an easement or permit must be acquired, the A/E must notify the Postal Service no later than the concept design review meeting.
  - (11) **Off-Site Construction.** Show the location and extent of all off-site construction that is required and all easements that must be obtained.
  - (12) **Subsurface Soils Investigation Report.** If the A/E is required to provide a subsurface soils investigation report as an additional predesign phase service, the A/E must submit the report, including the boring logs, along with the concept design.
- d. **Site Plan.** The A/E must provide an overall site plan on one sheet showing streets, building locations, landscaping, parking, and so forth. This plan may be combined with the civil design plan if all the required features can be clearly shown. The site plan must present a table with the number and types of parking spaces. The site plan must also include the tabulations (as dictated by the project requirements) for:

- 
- (1) Building coverage.
  - (2) Platform coverage.
  - (3) Landscaping.
  - (4) Driveways.
  - (5) Parking and maneuvering areas.
  - (6) Sidewalks.

e. **Architectural Floor Plans.** The floor plan scales for drawings must be as specified and provided on the *Building Design Standards* CD-ROM. Building floor plans are to be drawn at a scale of 1/8 inch = 1 foot. Lobby plan layouts and other areas requiring larger detail to fully explain plan concepts may be drawn at a scale of 1/4 inch = 1 foot. When a 1/8 inch = 1 foot scale building plan does not fit on a single drawing sheet, provide an additional overall building plan at a smaller scale. The floor plans at the design phase must, at a minimum, include the following:

- (1) Overall dimensions.
- (2) Location and relationship of all building spaces.
- (3) Mezzanines (if applicable).
- (4) Lookout galleries (LOGs) and closed-circuit television (CCTV) camera locations (if applicable).
- (5) Breakouts (if applicable).
- (6) Major nonfixed mechanization (such as letter sorting machines; cull, face, cancel machines; and the like) (if applicable).
- (7) Registry and key cages.
- (8) Locations for future equipment that will require power, etc.

The A/E must also provide an overall small-scale (1/16-inch preferred) comprehensive floor plan on one sheet.

f. **Additional Architectural Plans and Designs.** In addition to the architectural floor plans, the A/E must provide the following (as dictated by the project requirements):

- (1) **Lookout Gallery (LOG) Plan (if applicable).** Provide a separate composite LOG plan showing architectural, structural, and mechanical interfaces and floor elevations. Include typical details showing view points, breakouts, and ladder arrangements.
- (2) **CCTV Camera and Surveillance Plan (if applicable).** Provide a separate composite CCTV camera plan showing camera locations. The CCTV camera plan must include major structural, architectural, mechanical, and electrical elements affecting camera view. Each proposed CCTV camera location must indicate the camera's field of view.
- (3) **Lobby Plan (if applicable).** Provide a separate plan showing post office box, self-service, and service lobby functional arrangements and equipment locations. Include a complete list of equipment that is provided by the Postal Service that is to be installed by the contractor.

- 
- (4) **Roof Drainage Plan (if applicable).** Provide a small-scale roof plan for all buildings showing roof slopes, drain locations, overflow protection, and roof-mounted equipment.
  - (5) **Finish Schedule.** Provide an interior finish schedule for principle types of spaces (i.e., workroom, office, lobby, support, platform, toilet, and locker rooms) including a proposed color schedule.
  - (6) **Color and Material Panel.** Provide a preliminary color and material panel showing chips of paint colors and samples of material and colors for carpets, paneling, and floor covering proposed for interior finishes. The color and material panel must include samples or chips of colors of exterior building finishes and materials, especially those related to a renovation project where the existing material must be matched. Also include samples of chips of colors for fixed mechanization equipment by system, except for tray conveyors which may be the manufacturer's standard color.
  - (7) **Fire Exit Plan With Code Summary.** Provide a fire exit plan that includes a code summary. The fire exit plan must conform to all national, state, and local requirements.
  - (8) **List of Postal Service-Furnished Equipment.** Coordinate and confer with the Postal Service to develop a list of equipment and items that the Postal Service will furnish to the construction contractor. Provide a list of all Postal Service-furnished equipment with the concept design submission.
- g. **Elevations and Perspective Sketches.** The A/E must prepare a minimum of three alternate perspective sketches to show the overall site development, building massing, and design concept. In addition, the A/E must provide supplementary sketches showing interior and exterior features, such as customer entrances, employee entrances, and interior views, necessary to explain the design concepts.
- Perspective sketches must be single-line drawings, either hard-line ruled or controlled freehand delineations in color, using watercolor marker or colored pencil (renderings generated on computer-aided design (CAD) equipment and three-dimensional (3D) modeling are acceptable). Sketches must indicate materials, finishes, fenestration, and site landscaping.
- The A/E must furnish black-and-white copies of the alternate perspective sketches with the concept design submission and submit the color sketches during the concept design review meeting. The A/E must present the sketches, discuss alternates, and recommend designs, with supporting justifications, to the Postal Service during the design review meeting. All items of discussion and design direction must be noted by the A/E and incorporated into further design submission required at the final design phase.
- h. **Sections and Details.** The A/E must provide overall cross sections through typical parts of the building, along with typical wall sections, showing the intended construction. Sections must clearly show the proposed roof system as well as ceiling heights of all major spaces. The A/E must show all floor and wall openings. Details for these openings must be provided at the final design phase.
- i. **Structural (if applicable).** The A/E must provide structural data defining the applicable building code, occupancy and "use-group" classification, fire resistive ratings, design loads, and the design strength of materials. The A/E must include a layout of a typical workroom bay for the proposed foundation and structural

---

framing system. The A/E must also evaluate the functional and economic merits of each proposed foundation system and at least three structural framing systems.

- j. **Space Conditioning (if applicable).** The A/E must describe the proposed heating and air-conditioning systems, including the detailed functional and economic rationale for selecting these systems. The proposed space conditioning systems must be based upon a 20-year life-cycle functional and economic evaluation. The A/E must provide the following:
- (1) Layouts of all heating and air-conditioning systems. The layout drawings must show:
    - (a) Equipment and proposed zoning and control for the entire building or facility.
    - (b) Room identification, including room name and room number.
    - (c) Location and arrangement of all major equipment along with the space allotted for servicing and maintaining the equipment.
    - (d) Ductwork using double lines.
  - (2) In addition to the layout drawings:
    - (a) Drawings and a narrative description of the method of control for all major equipment and systems.
    - (b) A schematic flow diagram for each major system.
    - (c) A tabulation with capacity of each major piece of equipment.
    - (a) An analysis of the utility systems containing calculations and economic studies on Form 2215, *Energy and Equipment Life Cycle Cost Analysis*, and Form 2238, *Thermal Load Estimate Calculations*.
- k. **Plumbing (if applicable).** The A/E must provide plumbing drawings showing the locations and general arrangement of all plumbing fixtures and major equipment. The A/E must also submit a list of narrative descriptions of the types of plumbing fixtures and equipment proposed for use. The A/E must base the proposed plumbing system on functional and economic considerations.
- l. **Fire Protection (if applicable).** The A/E must summarize applicable code requirements, including fire zone, fire resistance requirements of major components, area and height limitations, standpipe and sprinkler coverage, and hazard classification. The A/E must indicate the method of operation and alarm signaling features and describe special protection features and the extent of the fire protection system. The A/E must obtain and include data such as hydrant flow tests, including static pressure, flow available in gallons per minute, associated residual pressure at the point of supply, and the size of the supply main. The A/E must provide basic information and calculations on the water supply, including its source. The A/E must take advantage of provisions in applicable building codes that permit increases in building heights and area limits when sprinkler systems are installed.
- m. **Electrical.** The A/E must provide all of the following for the proposed electrical system:

---

(1) The A/E must provide a narrative description of the following:

- (a) Operation of the proposed electrical distribution system.
- (b) Wiring methods and materials.
- (c) Details of the proposed typical lighting fixtures for:
  - i. Offices.
  - ii. Workrooms.
  - iii. Platforms.
  - iv. Lobbies.
  - v. Exterior.

Selection of the proposed system must be based on the results of preliminary calculations and economic studies, using representative areas based as block area loads.

(2) In addition to the narrative description, the A/E must provide:

- (a) Single-line diagrams of the electrical distribution system.
- (b) Single-line diagrams of the fire alarm system.
- (c) Single-line diagrams of the telephone system.
- (d) Single-line diagrams of the sound system.
- (e) Single-line diagrams showing how the electrical and telephone systems tie in with local utilities.
- (f) Drawings showing proposed locations of major items of electrical equipment and LOGs.
- (g) Partial layouts of typical lighting in major areas showing proposed fixtures, spacing, and illumination levels (in foot-candles).
- (h) Drawings showing power locations and details for Postal Service specialized equipment.

(3) The A/E must furnish written confirmation of the availability of service and the rates from the local utilities.

(4) The workroom and platform illumination levels must be calculated and compared with and without at least two levels of daylight.

(5) The A/E must perform a life-cycle cost evaluation for lighting areas by using natural light instead of man-made light.

**Note:** The electrical design (narrative and drawings) must include structured wiring information.

n. **Other Utility Systems.** The A/E must provide descriptions, locations, tables, and calculations for all miscellaneous building or facility equipment such as mechanical door operators, dock ramps, scales, and the like.

- 
- o. **Environmental Studies (if applicable).** The Postal Service provides the A/E with copies of the required environmental studies (i.e., environmental impact statement, environmental assessment, floodplain impact study, hazardous waste site assessment, etc.). The A/E must assess all mitigation measures identified in the environmental studies and ensure that all items identified in these studies as having an adverse environmental effect are mitigated by the concept design. The A/E must ensure that all permits listed in the environmental studies as being required for the project are obtained.

The A/E may be required to provide environmental studies. Environmental studies are additional services (optional) to the base A/E scope of services and are further defined in section 1-2 of this part.

- p. **Code Analysis.** The A/E must submit a complete code analysis with the concept design. The A/E must investigate and identify all applicable governing codes, ordinances, and legal building requirements pertaining to the proposed facility. The code analysis must include the time and cost of all items for which the permit process or construction process requires a long-lead time. The code analysis must include:

- (1) **Code Listing.** The code analysis must include a complete listing of all applicable codes, ordinances, and regulations, including but not limited to:
  - (a) All applicable Occupational Safety and Health Administration (OSHA) codes.
  - (b) All applicable National Fire Protection Association (NFPA) codes.
  - (c) All applicable state codes.
  - (d) All applicable local codes.
  - (e) Zoning regulations.
  - (f) Ordinances.
- (2) **Small-Scale Floor Plan.** The code analysis must include a small-scale floor plan of the total building that shows the following:
  - (a) Locations of all required fire exits.
  - (b) Exit units.
  - (c) Rated walls and structures.
  - (d) Smoke vents.
  - (e) Smoke curtains.
  - (f) Paths of travel indicating actual distances. (Workrooms with long travel distances are often a problem and must be carefully considered.)
- (3) **Alternatives.** The code analysis must identify conflicts with applicable codes and provide alternative solutions. For codes for which the Postal Service is the "authority having jurisdiction," which is often the case with the NFPA; the A/E must submit a written request with a full justification when recommending a special ruling, equivalent or superior to the intent of the codes, the A/E believes is required to provide a safe and economical design.

q. **Building Area Tabulations.** The A/E must include the following items with the building area tabulations submitted with the concept design:

- (1) **Single-Line Floor Plan.** The A/E must submit a single-line small-scale floor plan (1/8 inch = 1 foot scale preferred) of the entire customer service facility and related areas. The single-line floor plan must clearly designate the number and name of each functional space and the overall building dimensions and must include the building tabulation lists as they relate to the customer service areas.
- (2) **Building Area Tabulation Lists.** Building area tabulation lists must be included on the single-line floor plan and also must be submitted separately. The MSBD program calculations are acceptable when applicable. The building area tabulation lists must include the following information:
  - (a) The location for each functional area by number and name in the order in which it appears in Form 919 or 929.
  - (b) The net area for each functional area shown on the Form 919 or 929.
  - (c) The net area provided for each functional area.
  - (d) The percentage of deviation from Form 919 or 929 for each area.
  - (e) Subtotals for each group of related functional areas.
- (3) **Building Areas and Calculations.** The building or facility areas are calculated as discussed below:
  - (a) **Gross Area.** The gross area of a building is defined as the building footprint measured to the outside of exterior walls and adding mezzanine and LOG splines, calculated as 100 percent. Loading dock platform is calculated as 100 percent for both closed and open loading. Carrier loading is not included unless the loading area is completely covered. Covered carrier loading when the entire loading area, including driveways, is completely covered is calculated as 50 percent of the area under roof. Enclosed covered carrier loading is calculated as 100 percent.

The following guidelines are used to determine gross areas:

Location or Space	Included in Gross Area	Not Included in Gross Area
Full area of lookout gallery system	X	
Mezzanines	X	
Platforms enclosed by exterior walls	X	
Covered platforms outside exterior walls	X	
Necessary circulation aisles	X	
Door recesses	X	
Coat closets	X	
Canopied areas		X

---

The gross area of the facility must be kept to a minimum and must not exceed the estimated gross area agreed upon at the negotiation meeting.

- (b) **Net Area.** The net area of a building is defined as the area within each room or space calculated from finished wall surface to finished wall surface, exclusive of canopied area. The following spaces must be designed no smaller than the area specified in the Form 919 or 929 and, if necessary for plan conformity, may be increased up to a maximum of 5 percent of the area specified in the Form 919 or 929:
- i. Office spaces of 120 square feet or less.
  - ii. Postmasters' offices.
  - iii. Station or branch managers' offices.

Except for the three areas identified above, each large office space must be designed within plus or minus 5 percent of the area specified in Form 919 or 929. The total net area of all office space provided must be within plus or minus 5 percent of the total net area specified in the Form 919 or 929.

The workroom net area must be within plus or minus 1 percent of the area specified in the Form 919 or 929.

- (c) **Calculations.** The building area calculations must comply with those shown on the Form 919 or 929. The A/E must summarize the area calculations on all submissions, including the solicitation proposal documents. The building area calculations must show the ratios of the gross areas over the net floor areas for each major building space (i.e., office, workroom, lobby, platform, support, mechanical, and electrical spaces) and for the total building.

If the layout or the orientation of the facility changes the site and floor plan contained in the design data, the A/E must submit a detailed description of the effect of the changes on the gross area limitations and the total estimated cost of the facility. The A/E must explain all changes to the program requirements with footnotes that reference the source and date of the document that authorized the change.

- r. **Building System Comparisons.** A schedule of various building systems being investigated for recommendation within the *Master Specification* guidelines must be submitted during the concept design phase. The building system comparisons must include, at a minimum, the following:
- (1) At least three exterior wall systems with a minimum thermal mass of 70 pounds per square foot and a 0.07 maximum "U" value. (Exterior wall systems with a mass less than 70 pounds per square foot may be considered if justified by the A/E, e.g., when a facility is to be located in a geographic location where the weather is extremely mild or the building may be subjected to strong earthquake forces.)
  - (2) At least three roof membrane and insulation systems with a 0.05 maximum "U" value.
  - (3) Alternate viable foundation systems.

- 
- (4) A written description of the type of analyses and calculations, including cost-effectiveness, that will accompany the concept design phase submission.
  - (5) A list of building systems, including interior and exterior finishes, tentatively proposed that is the basis for the cost estimate.

The building system comparisons must show clear ceiling heights, foundations, pavements, HVAC, electrical, plumbing, and so forth.

- s. **Energy Conservation Analysis.** The A/E must submit a written report identifying the active and passive features that are being considered as potentially cost-effective for the project. Handbook AS-503 and the *Building Design Standards* identify energy conservation features and systems to be considered in a building design. The active and passive features and systems identified are to be analyzed on a life-cycle cost (LCC) basis. The facility design must comply with the prescribed design energy budget established in the Functional Design Specifications (FDS). The A/E must ensure that the design complies with the energy budget by performing an energy analysis appropriate to each stage of the design.

---

Handbook AS-503,  
Module 2A, Chapter 4,  
Appendix

---

For each system or feature recommended, provide an LCC analysis together with climatic and building energy consumption analyses to substantiate the recommendations. (Provide analyses for a minimum of three different systems.) The A/E must also then provide an overall energy analysis, which may be accomplished with a recognized microcomputer analysis program. The report developed as a result of the analyses must be coordinated with the deliverables, including Forms 2215 and 2238, as required by Postal Service criteria.

- t. **LCC Analysis (if applicable).** The A/E must submit a 20-year LCC analysis to justify the selection of the exterior wall system, roof membrane and insulation system, multiple- or single-level roof height, and energy-conserving features or systems. The A/E must follow the National Institute of Building Sciences (NIBS) Handbook 135, *Life Cycle Cost Manual for the Federal Energy Management Program*, including its appendices. The A/E must fully describe each system studied and submit all supporting calculations with the completed LCC analysis work sheets. The A/E must supplement cost figures with a comparison of the system analyzed.

- a. **Postal Service Environmental Policy and Guiding Principals.** The A/E must submit a report identifying the environmentally conscious products and procedures that are being considered for use on the project. The *Green Addendum* to the *Master Specification* identifies environmentally conscious products and procedures that are to be considered in the building design. The A/E must ensure that the environmentally conscious products and procedures used are cost-effective and provide maximum energy conservation. The life-cycle costs of the environmentally conscious products and procedures identified in the design submission are to be analyzed and compared to conventional products and procedures in the concept design submission.

 *Building Design Standards*

- a. **Specifications.** The A/E must modify and edit the *Master Specification* on the *Building Design Standards* CD-ROM with the specific requirements of each project. For the concept design phase submission, the A/E must provide the following:

---

Handbook AS-506,  
Part I, 3-1.1d

---

- (1) A detailed table of contents of all the specifications (by title and number) that are to be included in the complete specifications.

- 
- (2) A draft of all Division I, General Requirements (edited and customized from the *Master Specification, Building Design Standards*).
  - (3) A complete list of Postal Service-furnished equipment.
  - (4) A list and draft of all proposed supplementary conditions.
  - (5) A working draft of the technical specifications, Divisions 2 through 17, in outline form, that demonstrates that the A/E is in the process of editing and customizing the *Master Specification* for specific project requirements.

The A/E is responsible for coordinating the contract specifications so that they do not repeat or conflict with supplemental conditions, postal provisions, or contract clauses.

- w. **Cost Estimate.** The A/E must submit a preliminary cost estimate with the concept design. This and all subsequent cost estimates must be formatted identically to allow direct comparison of the estimates as the design phases progress. This estimate should be accurate and realistic, not a "safe" (high) estimate. The cost estimate is used to monitor compliance with the budget and to evaluate pricing proposals from construction contracts. All cost estimates are confidential material for official Postal Service use only. The A/E must not divulge cost estimates or working papers used to prepare them to any individual who does not have a need to have them for performance of services under this A/E contract.

The cost estimate must include information sufficient to provide evidence that the design is within the construction cost limit. Lump sum amounts for major items that cannot be readily analyzed will not be accepted. Cost estimates must be provided for alternative systems in order to economically justify the selection of systems such as exterior walls, structural framing, foundations, roofing, pavements, mechanical, and electrical systems.

The cost estimate must reflect the construction cost that the A/E anticipates on the date the proposal opens. The A/E must ensure that the cost estimate reflects prices for work and materials, taking into account possible labor shortages that may occur because of other known proposed projects in the area, local construction conditions, complexity of the project, degree of risk, and size of the job. The cost estimate is to be categorized to show material and labor. The cost estimates must be prepared in a Construction Specifications Institute (CSI) format in a form acceptable to the Postal Service

All estimates must use hourly labor rates not less than the rates as determined by the Secretary of Labor. The Postal Service will supply the A/E with a list of wage rate determinations.

The A/E must provide an overall cost estimate that summarizes all costs in a table as well as provide separate cost estimates for each facility and building as provided and site work.

The cost estimates provided by the A/E must be categorized into the following building systems:

---

<b>CSI Divisions</b>	<b>Building System</b>
1	General requirements
2	Site work
3	Concrete
4	Masonry
5	Metals
6	Wood and plastics
7	Thermal and moisture protection
8	Doors and windows
9	Finishes
10	Specialties
11	Equipment
12	Furnishings
13	Special construction
15	Mechanical
16	Electrical
17	Mechanization

---

- x. **Project Scheduling.** The A/E must comment on the construction schedule as well as the overall project schedule by reviewing the specific project requirements including materials, time of year of construction, and potential delays. In addition to the narrative schedule comments, the A/E must provide a bar chart project schedule that is shown in weeks.

### 2-2.1.3 Concept Design Review Meeting

The concept design review meeting will be held at the office of the contracting officer or a location as designated by the CO. At this meeting, the A/E must attend and must be prepared to discuss the following:

- a. All items or concerns that may affect or delay the design process.
- b. Any specific areas that could cause the project budget to increase.
- c. Utility concerns.
- d. Environmental concerns.
- e. Potential delays or major concerns with long-lead deliverables.

Along with the lead project architect, the A/E is to have the lead designers from each of the following disciplines present to answer any questions that may arise: civil, structural, mechanical, electrical, CCTV and communications, plumbing, fire protection, cost estimating, and others as appropriate.

The A/E must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the concept design review meeting.

---

## 2-2.2 Final Design Phase

### 2-2.2.1 General

The final design phase submission must consist of a 100-percent completed set of drawings, specifications, analyses, and calculations that are signed, sealed, and ready for solicitation of proposals. The final design is to complete, compile, and coordinate the overall design that has progressed through the previous design phase. The final design includes completing the requirements outlined in the previous design phase for each element whether or not it is specifically mentioned in this section.

The A/E is responsible for coordinating all design documents and ensuring the accuracy of the entire overall design.

### 2-2.2.2 Submission Requirements

 Clause FB-220

The A/E must submit the final design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the final design review meeting.

The Postal Service does not sign the completed documents. The A/E must submit a final design package that is complete for soliciting proposals without further review and which is expected to result in a construction contract without claims or changes. The A/E is to sign and seal all documents, which certifies that the A/E has fully complied with all federal legislative as well as applicable state and local code requirements.

The final design consists of the following minimum components (as they apply to the specific project):

- a. **Site Restrictions and Improvements.** The A/E must finalize the site restrictions and improvements information submitted at the concept design phase. All site restrictions and improvements necessary for the project, including all necessary off-site improvements, rights-of-way, easements, permits, and the like, must have been identified by the final design and must be filed with the appropriate state, city, or local authority.

The A/E must furnish information concerning the status of all easements, permits, and so forth, at the final design review. The A/E must state the cost of permits (and the lead time for obtaining permits and action taken to obtain them to avoid delays during project construction).

- b. **Civil Design.** The A/E must update and finalize the civil design submitted at the concept design phase, as follows:
  - (1) The civil design must contain, as a minimum, all components and features from the concept design submission including:
    - (a) Stormwater.
    - (b) Streets.
    - (c) Driveways and parkways.
    - (d) Pavement design.
    - (e) Grades.
    - (f) Site utilities.

- 
- (g) Miscellaneous features.
  - (h) Vicinity map.
  - (i) Easements.
  - (j) Legal descriptions.
  - (k) Off-site conditions.
  - (l) Subsurface soils investigation report, including boring logs.
- (2) The A/E must submit a written statement at the completion of the concept design review and before the final design submission stating that:
- (a) The scope and quality of the topographic, site data, and subsurface investigations are adequate, accurate, and up to date.
  - (b) All changed conditions are reflected in order to ensure that the latest and current information is included in the solicitation proposal document.
- c. **Site Plan.** The A/E must update and finalize the topographical site plan submitted at the concept design phase.
- d. **Architectural Floor Plans.** The A/E must update and fully develop the floor plans submitted at the concept design phase.
- e. **Additional Architectural Plans and Designs.** In addition to the architectural floor plans, the A/E must update and fully develop the following information submitted at the concept design phase:
- (1) **LOG Plan (if applicable).** The A/E must obtain Postal Service approval before designing any penetrations or depressions (mechanical, electrical, plumbing, structural, mechanization, and the like) through the LOGs that would limit clear headroom to less than 6 feet, 6 inches inside. The A/E must show the location of all penetrations or depressions on the LOG plan and provide adequate details. The A/E must note on the drawings that no other penetrations are permitted without prior approval from the contracting officer.
  - (2) **CCTV Camera and Surveillance Plan (if applicable).** The A/E must update and fully develop the CCTV camera and surveillance plan submitted at the concept design phase.
  - (3) **Lobby Plan.** The A/E must update and fully develop the lobby plan submitted at the concept design phase.
  - (4) **Roof Drainage Plan.** The A/E must update and fully develop the roof drainage plan submitted at the concept design phase, including detailing all roofing systems, roof drainage, roof penetrations, and roof-mounted equipment.
  - (5) **Finish Schedule.** The A/E must update and fully develop the finish schedule submitted at the concept design phase. The finish schedule must show finishes and colors in all areas.
- (1) **Color and Material Panel.** The A/E must update and fully develop the color and material panel submitted at the concept design phase:

- 
- (a) Display panel showing chips of paint colors, samples of materials, and colors for carpets, paneling, and resilient flooring tile proposed for interior finishes of the project.
  - (b) Display panel with samples of exterior face brick, trim, and metal wall colors as required.
- (7) **Fire Exit Plan With Code Summary.** The A/E must update and fully develop the fire exit plan, including the code summary, that was submitted at the concept design phase. The A/E is responsible for submitting the fire exit plan to and obtaining approval from any governing organization.
- (8) **Casework Drawings.** The A/E must prepare casework drawings and details necessary to fully define and describe the casework requirements.
- (9) **List of Postal Service-Furnished Equipment.** The A/E must provide a completed list of Postal Service-furnished equipment in accordance with requirements.

The A/E must furnish a separate signed statement on the firm's letterhead certifying that the facility has been designated to be in compliance with Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*.

- f. **Elevations and Perspective Sketches.** The A/E must provide fully developed building elevations of all views showing vertical dimensions, exterior materials, window and door openings, and the massing of the buildings.
- g. **Sections and Details.** The A/E must update and fully develop wall sections for all walls and their details.
- h. **Structural.** The A/E must fully develop all structural systems and substantiate them with appropriate calculations and economic analyses.
- i. **Space Conditioning.** The A/E must provide a fully developed space conditioning system design including descriptions, diagrams, and sequence of operation to the following minimum extent:
  - (1) Provide a complete schedule of all equipment shown on the drawings.
  - (2) Provide equipment room layouts indicating all equipment, piping, duct work, and access space required for maintenance.
  - (3) Indicate zoning controls, duct sizes, and air quantities.
  - (4) Show the final version of the automated building control systems, including fire detection and alarm systems.
  - (5) Provide written confirmation from a fuel supplier of fuel availability and rates.

The A/E must substantiate the designs with up-to-date calculations for all rooms, zones, and building blocks.

The A/E must prepare a psychometric chart describing the thermodynamic properties of each air-handling unit.

- j. **Plumbing.** The A/E must provide final plumbing and fuel system drawings showing the locations and arrangements of all fixtures and equipment of the complete system. Plan and riser diagrams must show the location and size of hot and cold

---

water piping and the waste and vent system. The A/E must provide a plumbing fixture schedule which also lists the location and type of fixtures and pipe sizes.

The fuel system drawing must identify the location and arrangements of the complete system.

- k. **Fire Protection.** Generally, complete automatic sprinkler drawings need not be developed. The fire protection drawings must show the automatic sprinkler risers and fire zones and must be designated to comply with applicable codes. The fire protection drawings must also show all spaces that require fire protection. The specifications must require the contractor to meet all applicable codes.
- l. **Electrical.** The A/E must update and fully develop the electrical design submitted during the concept design phase, as follows:
  - (1) The electrical design must include descriptions and updated supportive calculations for all power, lighting, grounding, communications, and alarm systems.
  - (2) The A/E must provide site plans, elevations, schedules, and detail drawings sufficient to reflect the overall facility design and to locate all equipment.
  - (3) The A/E must provide final single-line diagrams of the electrical distribution and communications systems showing tie-ins with local utilities.
  - (4) The electrical design must include elevations of switchboards, motor control centers, and other major equipment showing the arrangement of equipment.
  - (5) The A/E must provide a short-circuit and fully coordinated circuit-interrupting device summary that includes all analyses and calculations.
- m. **Other Utility Systems.** The A/E must update and fully develop the following items:
  - (1) The A/E must provide fully developed drawings and supporting calculations for all miscellaneous building or facility equipment such as scales, mechanical door operators, dock ramps, and the like.
  - (2) The A/E must provide complete plans, riser diagrams, schedules, sizes, and locations for VMF equipment and systems.
  - (3) The A/E must provide fully developed plans and elevations of LOG utility systems as applicable.
  - (4) The A/E must identify and take action to obtain power, sewer, gas, or water services requiring long lead times for design or construction by others (i.e., utility companies). If permits or fees are required, the A/E must identify them and obtain fees for them from the Postal Service.
- n. **Code Analysis.** The A/E must update the fire protection and code analysis summary submitted during the concept design phase. The code analysis summary must include all components and features from the concept design submission including, but not limited to, :
  - (1) Code listing.
  - (2) Small-scale floor plan.
  - (3) Alternatives.

- 
- o. **Building Area Tabulation.** The A/E must submit the final building and site area tabulations. The A/E must correct the small-scale floor plan and space summary tabulations provided with the intermediate design submission to accurately reflect the final solicitation documents. The A/E must include a site summary showing the area of building coverage, paving for parking and maneuvering, ramps, landscaping, total site area, and separate site areas allocated for the GMF and the VMF. The areas are calculated and listed as follows:
- (1) The area of the site allocated to the VMF is the sum of the following areas:
    - (a) Footprint of the VMF structure.
    - (b) Paved areas specifically allocated to the VMF, such as parking, fueling island, and maneuvering areas.
    - (c) VMF employee parking spaces located within the main employee parking lot (allocated at 300 square feet per car).
    - (d) The area of drives provided solely for the VMF and one-half of the area of drives designated for the common use of the GMF and VMF.
    - (e) A proportion of the total landscaped areas, based on the ratio of the sum of the areas from the four items above to the total used site area (excluding landscaped areas).
  - (2) The area of the site allocated to the GMF is the remainder of the entire site after the site allocated to the VMF is subtracted.
  - (3) On the site plan, include updated site area tabulations that reflect changes in Postal Service-owned land, such as land to be given to municipalities for street access, rights-of-way, easements, and so forth. Place a note on this drawing stating that all site and building area tabulations shown are for Postal Service reference only and that the contractor is responsible for calculating the quantity and area.
- p. **Specifications.** The A/E must modify and edit the *Master Specification* on the *Building Design Standards* CD-ROM for the specific requirements of each project. The final design phase submission of the specifications must be fully developed and must reveal the full intent of the A/E's design in relation to all proposed systems, materials, and special design considerations.

The Postal Service is not required to obtain building inspection or occupancy permits. The A/E must determine the cost of all other fees and permits (connection fees, tap fees, off-site inspection fees, special community development fees, and so forth) and include a list of all such fees and charges to be paid by the contractor in *Master Specification* section 01115, Leased Building [Design-Build] Requirements, or section 01116, General Construction.

The specification must state that the contractor is to pay all costs for utilities (gas, water, and electricity) used during final Postal Service tests of completely installed systems and while training Postal Service personnel.

For facilities equipped with a card access system, the submission must specify that the quantity of access cards supplied by the contractor is to be 1.5 times the number of the initial complement of postal employees scheduled to work at the facility.

- 
- a. **Cost Estimate.** The final cost estimate must be developed as a “detailed quantity survey” type with breakdown of material and labor prices — not a readjustment of preliminary cost estimates. The A/E must:
- (1) Include separate prices for labor and material, and summary sheets listing the estimated costs of the major building systems for each building and separate costs for major systems in the site work.
  - (2) Revise the final cost estimate as required based on Postal Service final review changes and comments.
  - (3) Submit the revised final estimate for Postal Service approval at least 10 days before the planned solicitation distribution date.
  - (4) Provide a construction cost estimate that is within 10 percent of the probable lowest qualified proposal.
- r. **Project Scheduling.** The A/E must finalize the project schedule provided at the concept design submission and submit all recommendations necessary for scheduling long-lead time construction or procurement items.
- s. **Small, Minority-Owned, and Woman-Owned Business Contracting Goals and Source List.** Provide recommended small, minority-owned, and woman-owned business contracting goals and the names, addresses, and specialties of such businesses located in the general area of the project.
- t. **List of Referenced Publications.** The A/E must provide a list of all publications that the solicitation references.
- a. **Complete Design Computations.** The A/E must provide the complete unabridged computations actually used by the designers. All calculations must be legible, self-explanatory, and indexed.

 Clause FB-220

 Clause FB-220

The cover sheets of the design documents must contain the signature and registration stamps or seals of the engineer responsible for the work.

The A/E must advise the project manager in writing of all changes to previously accepted design phase submittals.

The A/E must retain the original tracings, specifications, and/or electronic media for printing the contract documents unless otherwise directed by the contracting officer.

### 2-2.2.3 Final Design Review Meeting

The final design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The A/E must have in attendance the same disciplines that attended the concept design review meeting. The A/E must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the final design review meeting.

### 2-2.3 Solicitation Phase

The A/E is responsible for the following activities, if they are included in the contract, during the solicitation period:

- 
- a. **Solicitation Documents.** The A/E arranges to have sets of the total solicitation package reproduced, collated, bound, and packaged for mailing. The A/E must receive and fill requests for solicitation documents from qualified offerors. The cost and distribution are detailed below:

- (1) **Reproduction Costs.** Before the solicitation period, the A/E obtains and forwards to the Postal Service project manager three price quotations from local printers for printing solicitation sets and a price quotation for additional sets to be ordered. The quotations must include the cost for full-size sets of prints and an itemized cost for sets of half-size prints required by the Postal Service. The A/E must include the cost of reproducing an estimated three addenda.

The A/E is reimbursed for the cost of reproducing and mailing solicitation sets and addenda. For mailing to Postal Service addresses, use Express Mail (if available); otherwise, use Priority Mail.

The A/E recommends the number of sets to be printed and the price to be charged per set to offerors for the Postal Service to approve. Only full sets of drawings and specifications will be sold. The fee an offeror pays for solicitation sets is nonrefundable. The purpose of the fee is to ensure that firms requesting documents have a positive interest in submitting a proposal for the project. The fee is not intended to recover all costs of reproducing and distributing the solicitation documents.

- (2) **Accounting.** Checks and money orders for payment of solicitation sets are to be made payable to the Postal Service disbursing officer. These instruments and cash payments received will be held in a secure place by the A/E until delivered to the Postal Service at the final accounting at the end of the solicitation period.

The A/E must keep a daily log of all remittances (nonrefundable) received that shows the name and address of the requesting firm, the amount, the check or money order number, and the date the request was filled (mailed). A duplicate of the solicitation list must be kept to facilitate the mailing of addenda and the solicitation list to interested subcontractors.

At the end of the solicitation period, the A/E delivers to the project manager a copy of the daily log, a Form 1940, *Remittance Register*, with only the itemized portion completed (sheet heading and totals are to be blank), and all checks. Undistributed sets must be disposed of as directed by the project manager.

- (3) **Complimentary Distribution.** As approved by the project manager, the A/E sends one copy of the solicitation at no charge to information organizations such as Blue Reports, Dodge Reports, local contractor organizations, and local trade organizations. Delivery must be recorded in the daily log by the A/E.

- b. **Requests for Information (RFIs) and Questions.** The A/E must respond to questions from offerors as follows:

 Clause FB-220

- (1) All telephone and written questions from offerors received by the A/E are to be recorded. The A/E must advise the requesting party that the questions will be replied to within a reasonable time and that the reply will be one of the following:

- 
- (a) An interpretation of solicitation documents that can be rendered without requiring an addendum.
  - (b) No change to the solicitation; therefore the proposal should be based on the documents as prepared.
  - (c) An addendum to the solicitation that will be issued to clarify the items in question.
- (2) All questions must be reviewed by telephone with the Postal Service project manager. Backup information and the A/E's recommended answer must be provided.
- (3) A reply to the offeror making the request must be prepared, to be signed by the contracting officer, in accordance with the project manager's instructions.
- c. **Addendum.** The A/E is responsible for preparing any required addendum as follows:
- (1) When an addendum is required, the A/E must prepare the addendum, get the contracting officer's approval of it, and issue it to all plan holders. Under no circumstances may an addendum be issued without prior approval of the contracting officer.
  - (2) Amendments (addenda) to solicitation documents must be sent (post-marked) to offerors no later than 2 weeks (14 days) before the proposal-opening date. This is necessary in order to provide prospective offerors with sufficient time to incorporate the amendments in their proposals.
- d. **Preproposal Meetings.** The A/E must attend all preproposal meetings as may be required by the contracting officer.
- e. **Technical Proposal Evaluations.** The Postal Service must open and evaluate all proposals. The A/E must render such assistance in the proposal evaluation and preaward period as may be required by the contracting officer. The A/E is not present when proposals are opened.

 Clause FB-220

## 2-2.4 Submission Checklist

The checklist in Exhibit 2-2.4 is to be completed by the Postal Service, based on the scope and the magnitude of the project, to identify the A/E's scope of work. This checklist identifies the minimum design components that the A/E is required to submit. **Note:** This checklist is *not* part of the A/E services indefinite-quantity contract work order.

**Submission Checklist**

**Design Phase Submission Checklist  
Mandatory A/E Services**

Design Submittal	Concept Design Phase		Final Design Phase	
	Required	Not Required	Required	Not Required
<b>PLANS/DRAWINGS</b>				
<b>Site Plans</b>				
Site Utilization				
Site Restrictions and Improvements				
Civil Design				
Site Plan				
<b>Architectural</b>				
Floor Plans				
Elevations and Perspectives				
Sections and Details				
Lookout Gallery Plan				
CCTV Camera and Surveillance				
Lobby Plan				
Roof Drainage Plan				
Finish Schedule				
Color and Material Panels				
Fire Exit Plan With Code Summary				
Casework Drawings				
Certification Letter for Compliance With Handbook RE-4				
Complete List of Postal Service-Furnished Equipment				
<b>Structural</b>				
<b>Space Conditioning (HVAC)</b>				
<b>Plumbing</b>				
<b>Fire Protection</b>				
<b>Electrical</b>				
<b>Other Utility Systems</b>				

**Submission Checklist**

Design Submittal	Concept Design Phase		Final Design Phase	
	Required	Not Required	Required	Not Required
<b>ANALYSIS/TABULATIONS/CALCULATIONS</b>				
Professional Services Estimating Sheets				
Environmental Studies				
Code Analysis Report				
Building Area Tabulations				
Building System Comparisons				
Energy Conservation Analysis				
Environmental Policy				
Life-Cycle Cost Analysis				
<b>SPECIFICATIONS</b>				
<b>COST ESTIMATES</b>				
<b>SCHEDULES</b>				
<b>SMALL, MINORITY-OWNED, &amp; WOMAN-OWNED BUSINESS CONTRACTING GOALS AND SOURCE LIST</b>				
<b>LIST OF REFERENCE PUBLICATIONS</b>				
<b>COMPLETE DESIGN COMPUTATIONS</b>				

---

## 2-3 A/E Modifications of Design

---

Changes in the scope of work or Postal Service requirements not covered in the initial A/E contract are considered to be contract modifications in accordance with Clause B-2, Changes, in the A/E contract.

 Clause B-2

Modifications required before the award of the construction contract are prepared by the A/E when the contracting officer accepts the proposed modification in writing. The A/E must prepare the necessary design drawing and specification revisions and must perform all applicable services related to the modification as though they were contained in the original scope of work.

The A/E must furnish an estimate of the effect the modification may have on the project construction cost and scheduling.

Fees for these services will be based on the rates negotiated and included in Clause FB-290, Design Services, at the time of A/E contract award. Rates include all costs, direct and indirect, and overhead and profit.

 Clause FB-290

## 2-4 Additional Design Phase Services (Options)

---

A separate cost proposal must be prepared for the services described in sections 2-4.1, 2-4.2, 2-4.3, and 2-4.4, and when these additional services (options) are included in Section A, Items and Prices, of the A/E contract. Each item includes all overhead, profit, and costs (direct and indirect), including A/E administration and technical support costs, necessary to complete the services described. The A/E will not be compensated for optional design phase services unless they are included in the A/E's contract.

 Clause FB-291

The optional services described in this section only apply when specific project requirements are more demanding than those covered in all the sections of 2-2, Design Phase Services. Some of the optional A/E design phase services are required under the base scope of A/E services to a more limited extent.

### 2-4.1 Perspective Drawing

The A/E must provide a 20-inch x 30-inch perspective drawing in color showing the building to its best advantage. The drawing must be capable of being used for producing photographic prints of sufficient contrast to ensure good newsprint reproduction. Also provide a negative and six 8-inch x 10-inch glossy black-and-white prints and two 35-millimeter color slides of the official A/E rendering. The A/E must provide the original perspective drawing and two copies that are to be matted, glazed with clear nonglare glass, framed, and prepared for hanging. The original and one copy must be forwarded to the appropriate facilities service office (FSO) or major facilities office (MFO). One copy is to be forwarded to the plant manager.

### 2-4.2 Supplementary Drawing

The A/E must provide the following drawings:

- a. **Postal Service-Furnished Property.** Prepare a drawing of box and service lobbies and an elevation of the post office boxes. Show the location and number of

under-counter items and self-service items, and a plan and elevation indicating the location of post office box modules. Provide a table of all property that is furnished by the Postal Service and installed by the contractor, giving the following information:

Name and Description	No.	Quantity	Misc.	*Date Required
----------------------	-----	----------	-------	----------------

\*This column is to be left blank and filled in by the Postal Service with dates furnished by the construction contractor.

A checklist of Postal Service-furnished property is provided by the Postal Service as required.

- b. **Outline Floor Plan (Grid).** Provide an outline floor plan at 1/8 inch = 1 foot square with a 1/4-inch background grid. This drawing is for Postal Service operational planning. Number all rooms and spaces on this plan and show all mechanization located less than 7-feet 6-inches above the finished floor.
- c. **Major Milestone Flowchart.** Provide a major milestone flowchart for construction unless otherwise directed by the contracting officer during negotiations. Show the sequence, starting and completion dates, and duration of each major activity, including the mechanization. Scheduling must be in days, with the date of the notice to proceed as the starting date for the flowchart. This flowchart is intended only as a guide to the successful offeror and an aid for Postal Service program planning.

### 2-4.3 Roofing Consultant

Provide the services of a roofing consultant who is thoroughly qualified in the design, construction, observation, and testing of all types of roofing systems and materials. The responsibilities of this consultant during the design phase include:

- a. Reviewing specifications, drawings, and other contract documents related to roofing.
- b. Critiquing and commenting on the design, including sketches and alternative details for consideration by the A/E and the Postal Service.
- c. Working with the A/E in developing alternative roof system comparisons and contract documents.
- d. Assisting in conducting preconstruction roofing conferences with the contracting officer's representative and construction contractor.
- e. Reviewing the construction contractor's submittals and providing comments to the contracting officer.
- f. Providing full-time, on-site observation of the construction to verify that it complies with the contract documents. Subject to the approval of the contracting officer, the full-time, on-site construction observation may be carried out by an assistant to the principal consultant. Primary reviews, attendance at meetings, and periodic supervisory visits are to be carried out by the principal consultant. Specific services include, but are not limited to, the following:
  - (1) Provide daily, weekly, and final observation reports to include photographs and other data substantiating the findings.

- 
- (2) Assist the contracting officer to conduct all progress meetings.
  - (3) Review roofing-related quality control reports submitted by the contractor.
  - (4) For built-up roofing, supervise the contractor when samples are cut. Review and analyze the laboratory reports and submit a report evaluating the findings to the contracting officer.
  - (5) For elasto-plastic roofing work, test the materials and workmanship as appropriate to verify that they meet the requirements of the specifications.
  - (6) When the contractor sends notice of completion of the roofing work, conduct a final on-site inspection and advise the contracting officer in writing when the work can be accepted.
  - (7) Charge construction observation fees on an as-needed, man-day basis. The consultant must submit, as a part of this proposal, an estimated length of time for roof installation.
- g. Completing a field evaluation of the existing roof system if a project involves an addition or substantial renovation to an existing building. This evaluation includes a visual examination, limited cut samplings for visual examination, and laboratory analyses of the cut samples. The consultant must provide a separate optional price for a nondestructive evaluation of moisture in the roofing system. The consultant must submit a written report with a summary of findings, list of recommendations, cost estimates, and all background data.

#### **2-4.4 Fire Protection Consultant**

The A/E must provide the consulting services of a fire protection engineer. This person must be a full member of the Society of Fire Protection Engineers and must demonstrate equivalent qualifying experience or have an applicable state registration as a fire protection engineer.

---

## Part IV

# Repair and Alteration Contracts

### 3 Construction Phase A/E Services

#### 3-1 Design Services During Construction (Options)

---

##### 3-1.1 General

The requirements of this section apply if the A/E's contract includes in Section A, Items and Prices, an option for the A/E to provide support services during the construction phase. A/E services during construction include reviewing contractor submissions, participating in meetings, interpreting contract documents, and inspecting the site a minimal number of times during the construction period. These services include time and effort both in the office and at the work site. Rates for all services must include both direct and indirect costs and overhead and profit.

 Clause FB-205  
 Clause FB-292

##### 3-1.2 A/E Support Services

---

Handbook P-2, 6-1.2

---

The A/E is to provide the following support services:

- a. **Support Services.** Support services supplied by the A/E are services that are necessary to assist the field office and that require a trip to the site. These include, but are not limited to, the following:
  - (1) Participating in preconstruction and progress meetings, including preparation and distribution of meeting minutes.
  - (2) Interpreting and clarifying contract documents.
  - (3) Assisting the Postal Service project manager in maintaining quality control.
  - (4) Observing field installation conditions and materials in support of the resident engineer.
  - (5) Providing administrative support to the field office.
  - (6) Providing technical support to the field office during construction for preparing punch lists and accepting the facility.
  - (7) Participating in prefinal, safety, final, and warranty inspections.
  - (8) Supporting small, minority-owned, and woman-owned business subcontracting program services, including, but not limited to, the following:
    - (a) Monitoring the program, giving special attention to the contractor's efforts at attaining goals, the contractor's plan for developing minority-owned business participation, the completeness and accuracy of the

---

contractor's minority-owned business subcontracting reports, and so forth.

- (b) Assisting the contractor in locating and developing potential minority-owned business subcontractors.
- (c) At the preconstruction conference, reviewing the contractor's initial minority-owned business reports and giving timely recommendations or assistance as required to attain the best possible program start.
- (d) Reviewing the status of the contractor's minority-owned business program at each monthly construction meeting and reporting about it.
- (e) Maintaining an on-site minority-owned business subcontracting file containing copies of all contractor's reports, minutes of meetings, and other pertinent information.
- (f) Administering the contractor's submittals of quarterly reports.

- b. **Home Office Support Services.** Home office support includes field support services identified in 3-1.2a above that the A/E can accomplish in the office without the need for a trip to the field.

### 3-1.3 Submission Review and Approvals

The A/E must review all contractor submittals for compliance with contract documents with respect to field dimensions and clearances, relation to available space, and relation to work by the Postal Service or separate contracts. The A/E must review all submittals promptly so as not to delay the construction progress. The duration of all reviews must not exceed the time frames required in the construction contracts.

The A/E must inspect contractor and subcontractor manufacturing, assembling, and warehousing facilities when required by the Postal Service. The A/E must also accomplish factory acceptance tests and accept those items of equipment that require such acceptance in the mechanization specification. The dates of such visits and inspections must be approved by the Postal Service at least 1 week in advance in order to permit the Postal Service to participate. The cost is reimbursed in accordance with the terms contained in Section F, Payment and Funding, of the A/E's contract.

The contractor submittals that the A/E is required to review include, but are not limited to, those discussed in the following sections.

#### 3-1.3.1 Shop Drawings, Product Data, and Samples

The A/E must review and approve or reject, on the basis of contract documents, all contractor submittals of shop drawings, product data, catalog cuts, samples, manufacturer's installation instructions, color schedules, and similar information. In addition to the normal building shop drawings, the following mechanization shop drawings and samples require approval and submittal to the Postal Service:

- a. Building loads.
- b. Computer hardware and software reports.
- c. Belting and its certification.
- d. Equipment arrangement drawings.

 *Building Design Standards, Master Specification 01310*

 *Building Design Standards, Master Specification 01330*

 *Clause B-56*

- 
- e. Elevation drawings.
  - f. Plan views.
  - g. Electrical elementary drawings of the mechanization systems.
  - h. Control panel elementary drawings.
  - i. Master electrical interconnection drawings.
  - j. Distribution riser diagrams.
  - k. Electrical, mechanical operations, and maintenance manuals.
  - l. Spare parts list.
  - m. Mechanization load drawings.

The A/E must inform the contracting officer of all loads for specific equipment selection that exceed the loads on the contract documents before the CO grants approval for that equipment.

The A/E must review formwork and falsework drawings and schedules for their construction submitted by the contractor. The A/E must require the construction contractor to submit for review all the design drawings associated with formwork and erection of falsework. These submissions must be reviewed to ensure that the A/E's design, per contract documents, is properly executed aesthetically and structurally, including the layout of forms, ties, embedded items, expansion joints, and water stops. These submissions must contain or be supplemented by a schedule for erecting and removing falsework, placing construction loads, and doing required testing. The A/E and contractor must coordinate their efforts so that the integrity of the A/E's design is maintained while the contractor remains responsible for the design and erection of falsework and safe construction.

Shop drawings must be submitted to the A/E for review only after they have been checked and approved by the contractor. Failure to show that the submittal has been thoroughly checked may result in the submittal being returned without being reviewed. When shop drawings reach the A/E's office, they must be stamped with the date and assigned the A/E's file number and an appropriate identifying number. The process of receiving, examining, approving, and distributing shop drawings is critical. The A/E must keep a record of the handling of these drawings during review to ensure the orderly processing of this work.

The A/E must approve the shop drawings only for conformance with the design concept of the project and with the information given in the contract documents. The approval does not extend to the shop drawing information related to shop fabrication process, field construction techniques, or coordination of trades and their work. The language recommended to stamp shop drawings is as follows:

- a. **Approved.** If "approved" is checked, fabrication, manufacture, or construction may proceed, provided the work complies with the contract documents. This action does not authorize changes to the contract sum unless they are stated in a separate letter or change order.
- b. **Approved as Noted.** If "approved as noted" is checked, fabrication, manufacture, or construction may proceed, provided the work complies with the A/E's notations and the contract documents. This action does not authorize changes to the contract sum unless they are stated in a separate letter or change order.

- 
- c. **Rejected; Resubmit.** If “rejected; resubmit” is checked, fabrication, manufacture, or construction may *not* proceed. The contractor must submit to the A/E a new shop drawing that has been corrected as marked (no additional changes are allowed). Any submission marked “rejected; resubmit” is not permitted on the site.

The A/E’s review of samples is only to ensure their conformance with the design concept of the project and compliance with the information given in the contract documents. The construction contractor is responsible for dimensions that are to be confirmed and correlated at the site; for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences, and procedures of construction; and for coordination of the work of all the trades. The language the A/E uses in any stamp or letter pertaining to the approval of samples must parallel the language used in shop drawing approval procedures as described in this section.

### 3-1.3.2 Coordination Drawings

The A/E must provide a general review of contractor-submitted coordination drawings for their conformance to contract documents; however, the A/E must make it clearly known to the contractor that coordination is the construction contractor’s responsibility.

### 3-1.3.3 Schedule of Values and Progress Payments

The A/E must review the contract value breakdown on the initial schedule of values submitted by the contractor. The A/E must notify the contracting officer of construction activities that are not included on the schedule of values as well as the reasonableness of the costs assigned to each scheduled item. The A/E must ensure that the schedule of values is not “front-end loaded.”

The contractor is required to submit to the contracting officer for approval a schedule of values of the various costs of the work by trade, equal to the total sum of the contract. This cost breakdown must be realistic because it will be used as a basis for progress payments to the contractor. The A/E is responsible for the following:

- a. Approving the selection and number of activities.
- b. Reviewing, evaluating, and analyzing the proposed network diagrams, including activity durations, costs, and workforce loading, when applicable.
- c. Revising and analyzing the monthly update of network diagrams, when applicable.

The A/E is responsible for certifying Form 4211-B, *Invoice and Payment Authorization (Facility and Fixed Mechanization Contract)*, which is submitted monthly by the contractor, after reviewing the schedule of values and substantiating data submitted by the contractor. This form, which certifies the accuracy of the progress payments, must be signed by a designated representative of the A/E firm and forwarded to the contracting officer for signature.

### 3-1.3.4 Schedules

The contractor is required to submit a construction progress schedule to the contracting officer. The form and complexity of the required schedule can vary depending on the size of the project. The A/E must review the contractor’s initial progress schedule as well as the monthly schedule updates that this contractor submits with the partial payment requests. The A/E must verify that this contractor’s schedules, at a minimum:

 Building Design Standards, Master Specification 01310

 Clause 1-3

---

Handbook P-2, 6.4.5

---

 Clause FB-246

 Clause B-59

---

Handbook P-2, 6.2.3

---

- a. Show the complete sequence of construction by activity, with dates for beginning and completing each element of construction.
  - b. Identify each item by specification section number.
  - c. Identify work of separate stages and other logically grouped activities.
  - d. Provide subschedules to define critical portions of the entire schedule.
  - e. Include conferences and meetings in the schedule.
  - f. Show the accumulated percentage of completion of each item and total percentage of work completed as of the first day of each month.
  - g. Provide a separate schedule of submittal dates for shop drawings, product data, and samples, including Postal Service-furnished products, and the dates that reviewed submittals will be required from the contracting officer as specified in Section 01330, Submittal Procedures.
- a. Coordinate the content with the schedule of values.

 Clause B-40

### 3-1.3.5 Spare Parts Data

The A/E must review the spare parts data to ensure that it complies with the contract documents and to ensure that the contractor provides all necessary spare parts.

 Clause B-58  
 *Building Design Standards, Master Specification 07180*

### 3-1.3.6 Warranties and Guarantees

The A/E must review all warranties and guarantees to ensure that they comply with the contract documents and to ensure that the contractor provides all special warranties and guarantees that are required by the contract.

 Clause B-61  
 *Building Design Standards, Master Specification 07180*

Handbook P-2, 6.3

### 3-1.3.7 Operation and Maintenance Manuals

The contractor must assemble, coordinate, and index operation and maintenance (O&M) manuals for each utility system and major component of building equipment and maintenance manuals for the mechanization system. The A/E must ensure that the contractor submits this material in sufficient time for review and approval, not less than 90 days prior to occupancy for the building manuals and as specified by USPS-M-5000 for the mechanization manuals. When it is determined during design that the facility is to be incrementally or partially occupied, the A/E must specify that the contractor must supply O&M manuals for training and spare parts on-site in a timely manner for the affected areas. Training cannot begin until O&M manuals have been approved.

 *Building Design Standards, Master Specification 07180*

Handbook P-2, 6.3

The A/E must review the manuals for completeness and accuracy and recommend to the contracting officer whether or not to approve them. After Postal Service approval, the A/E must prepare and deliver eight copies of all building manuals to the postmaster before the start of training. After Postal Service approval, the contractor must deliver 20 copies of the mechanization maintenance manuals to the A/E, who delivers them to the postmaster.

### 3-1.3.8 Test Reports

The A/E must review all test reports to ensure that they comply with the contract documents.

 *Building Design Standards, Master Specification 01450*

Handbook P-2, 6.3.1

---

The A/E must ensure that all required tests are completed at the proper time. The scheduling of the mechanization operational tests must be coordinated with the Postal Service at least 3 weeks in advance. The resident engineer or the mechanization resident engineer must be present for all tests.

### 3-1.3.9 Change Orders and Contract Modifications

The A/E prepares, assembles, reviews, negotiates, and issues all construction contract modifications directed by the contracting officer. Modification proposals initiated by the construction contractor, the Postal Service, or the A/E must be processed by the A/E as follows:

- a. Obtain approval to proceed with the proposal change from the construction manager. Assign a serialized control number to the proposal change and notify the contractor that the proposal change is in progress.
- b. Review field conditions and prepare the necessary design drawings, specifications and revisions, A/E cost estimate, justification, and recommendations for the proposal change.
- c. Issue a copy of the proposal change drawings to the contractor, requesting a proposal and specifying a time for response. Do not include the A/E independent cost estimate. Simultaneously, provide the Postal Service with a copy of the request for proposal, including the proposal change and all documents required.
- d. Review the contractor's proposal with the Postal Service and the contractor to resolve cost differences. The construction manager must negotiate any conditions that cannot be resolved between the A/E and the contractor.
- e. Upon Postal Service acceptance of the contractor's proposal, prepare a contract modification on the Postal Service-provided form, obtain the contractor's signature, and submit it to the construction manager complete with all backup material and Form 4211, *Facility and Fixed Mechanization Project Contract*.
- f. Upon receipt of a signed copy of modifications, ensure that the contractor's work is in accordance with the changed scope of work.

Fees for these services are based on the rates negotiated and included in Clause FB-294, Architect-Engineer Modifications of Design. Rates include all costs, both direct and indirect, and overhead and profit.

### 3-1.3.10 As-Built Drawings and Specifications

The construction contract documents require the contractor to provide the A/E with drawings and specifications incorporating the revisions and changes made during construction up to acceptance of the project. The A/E must review the contractor's as-built drawings monthly to ascertain the contractor's compliance before processing payment requests. The A/E must revise the original contract documents to indicate as-built conditions, including revisions in site and building area tabulations.

The A/E must furnish the Postal Service with a set of reproducible record drawings (as-built drawings) showing significant changes made during the construction process, based on the marked-up prints, drawings, and other data furnished to the A/E by the contractor.

 Clause B-10

 Clause B-21

 Clause B-37

---

Handbook P-2, 6.5

 Clause FB-294

 Clause B-57

---

### 3-1.3.11 Electronic Format (As-Built Information)

The A/E must provide all record drawings (as-built drawings) to the Postal Service in electronic format that is compatible with design documents.

### 3-1.3.12 As-Built Photographs

When construction is completed, the A/E must provide two color 8-inch x 10-inch photographs, six exterior views, and 20 exterior and interior views, including views that show the accessibility features of the building, to be submitted in digital format as directed by the CO. Coordinate the selection and location of these views with the contracting officer.

### 3-1.3.13 Closeout Certificates

The A/E must provide the following certificates to the Postal Service:

- a. Handicapped accessibility.
- b. Lead-based paint.
- c. Asbestos-containing materials.

---

## 3-2 Modifications of Design During Construction

Changes in the scope of work or Postal Service requirements not covered in the initial A/E contract are considered as contract modifications in accordance with Clause B-2, Changes, in the A/E's contract.

Modifications of design during construction not due to design errors or omissions will be compensated for in accordance with the fee schedule in Clause FB-294.

 Clause B-2  
 Clause FB-294

---

## 3-3 Field Services During Construction (Options)

### 3-3.1 Requirement

The requirements of this section apply if the contract includes in Section A, Items and Prices, an option for the A/E to provide field support services, which include a construction administrator, resident engineer, assistant resident engineers, and a clerk/stenographer. Rates for all services must include both direct and indirect costs and overhead and profit. In addition to the previous, a mechanization assistant resident engineer is required on projects with fixed mechanization. The scope of services for each position is defined in this section.

 Clause FB-293  
 Clause FB-206

### 3-3.2 General Responsibility

The Postal Service must forward letters of current authorities and limitations to the Postal Service representatives who are involved in administering the contract to the A/E and general contractor. A Postal Service decision and signature are required for all contractual actions and must be accompanied by a written detailed justification and a specific recommendation by the construction administrator. The A/E or authorized

---

Handbook P-2, 6-1

---

representative (i.e., the construction administrator) is not authorized to revoke, alter, enlarge, relax, or release any requirements of the project drawings or specifications; to approve or accept any portion of the work; or to issue instructions (oral or written) that would be contrary to the contract documents. All dealings in terms of the contract must be made with the contractor's superintendent and not with a subcontractor.

### 3-3.3 Contract Administration

Contract administration responsibilities are as follows:

- a. The A/E is responsible for administering the contract between the Postal Service and the contractor. The A/E's duties, responsibilities, and limits of authority are shown below and in Sections G and H, Clauses, of the A/E's contract. The A/E or A/E's representatives, as agents of the Postal Service, must discharge this responsibility by:
  - (1) Interpreting the contract documents and all changes made to them.
  - (2) Establishing the standards of workmanship.
  - (3) Judging the performance of the contractor (i.e., progress of the project as constructed) compared with that of the project as planned.
  - (4) Certifying payments to the contractor on the basis of the schedule of values of the work-in-place and stored materials.
  - (5) Inspecting the work to determine the date of substantial completion.
  - (6) Informing the Postal Service about the status of the project relative to the above points.
  - (7) Conducting monthly progress meetings with the contractor and Postal Service representatives to evaluate progress of the work and to resolve problems related to contract compliance.
  - (8) Submitting the following reports to the contracting officer:
    - (a) The daily log each week.
    - (b) A weekly summary of progress of the work, problems noted, and actions taken.
    - (c) Minutes of the monthly progress meetings.
    - (d) A monthly status of modifications, along with the contractor's monthly payment requests, with the construction administrator's recommendation to the contracting officer.
    - (e) Quarterly minority-owned business reports.
    - (f) Monthly progress reports.
    - (g) Updated submittal log.
    - (h) Updated RFI logs.
    - (i) Updated request for proposal (RFP) logs.

- 
- (9) Negotiating and processing construction modifications for the contracting officer's signature.
- b. As the Postal Service's agent, the A/E is responsible for guarding the Postal Service against defects and deficiencies in the work of the contractor. The A/E may reject work as failing to conform to the contract documents, a failure that will keep the building or any portion of it from having the intended appearance or being capable of full use in the manner and for the purpose for which it was intended. The right to reject work does not extend to the areas of safety precautions and programs in connection with the work or to the adequacy of construction means, methods, techniques, sequences, or procedures, all of which are solely the responsibility of the contractor.
  - c. The A/E's resident engineer, who is normally assigned full-time to the project, must observe the progress of the work performed by the contractor.
  - d. The A/E must use due care and exercise reasonable skill and competence in observing the progress of the work and endeavoring to determine if it is proceeding in accordance with the requirements of the contract documents.
  - e. The resident engineer must randomly interview contractor and subcontractor employees monthly. Their responses regarding their classification and rate of pay must be checked against payrolls and applicable wage rates. Use DOD Form 1567, *Defense Department Labor Standards*, for this purpose.
  - f. The construction administrator, resident engineer, and resident engineer's staff must accomplish other activities as may be required by the construction manager.
  - g. A Postal Service decision or signature is required for all actions that could result in a modification or change to the contract, and must be accompanied with a written detailed justification and a specific recommendation by the construction administrator.

### 3-3.4 Field Supervision

Field supervision responsibilities are as follows:

- a. **Field Office Staff.** The field staff must consist of personnel capable of observing the contractor's effort with a minimum of support from the A/E's office. The field staff located at the construction site may consist of the construction administrator, resident engineer, assistant resident engineers as authorized, and a clerk/stenographer. The construction administrator, resident engineer, and clerk/stenographer are generally full-time staff. The assistant resident engineers are generally part-time staff who are experienced in observing the construction of a particular discipline (e.g., structural, mechanical, electrical, or mechanization material handling). The number of field personnel, therefore, may vary according to the status of the construction and is subject to Postal Service approval.

Resumes of at least three qualified construction administrators (when applicable) and resident engineers must be submitted by the A/E, with the A/E's recommendation, to the contracting officer no later than 10 days after approval of the intermediate design submittal. The selection of the resident engineer is subject to the approval of the contracting officer. The above personnel must be replaced at the discretion of the contracting officer if their performance is unacceptable.

- 
- b. **Field Office.** The physical space, furniture, utilities, and telephones that the A/E field staff will use are provided by the contractor as noted in Division 1 of the specifications. The A/E must provide all other equipment and materials.
  - c. **Contractor Superintendence.** The A/E must be aware that the contractor is responsible for the supervision required to assemble materials and accomplish the labor to complete the project. The contractor is responsible for delivering to the Postal Service a project constructed in full conformance with the contract documents. The contractor's duty is to manage the construction progress so that contract requirements are met efficiently, expeditiously, and accurately.
  - d. **Safety and Security.** The A/E must review and monitor the contractor's safety plan and security program. Safety precautions, programs, and requirements are specified in various safety codes or regulations. Although the resident engineer must be concerned generally with their observances, compliance with them is solely the contractor's responsibility.

### 3-3.5 Progress Meetings

The construction administrator schedules and chairs all monthly progress meetings and other required project meetings (attendance by his or her staff is at the discretion of the construction administrator). The construction administrator forwards the minutes of all meetings to the construction manager within 5 working days after each meeting.

Before the monthly progress meeting, the construction administrator must spend at least 1 hour reviewing with the contractor the contractor's compliance with contract requirements for labor standards, equal employment opportunity (EEO) policies, minority-owned business participation, payrolls, and safety. The findings must be reviewed at the progress meeting and included in the minutes of the meeting.

### 3-3.6 Records

A daily log must be maintained by the construction administrator. This log must be neatly and accurately recorded, since it may subsequently be used in legal proceedings. Enter the following items every day from the start to the completion of the project:

- a. **Progress Work.** Status for work in progress, new work started, and current and anticipated problems of scheduling and coordination.
- b. **Workforce.** The number of foremen and mechanics for each trade at the site.
- c. **Weather.** The high and low temperatures, precipitation, and a general description of the 24-hour weather conditions.
- d. **Telephone Calls.** All pertinent conversations.
- e. **Site Inspections.** The names, titles, and official capacity of all persons, with times and purposes of inspections noted. For Postal Service payment to be approved, A/E personnel making authorized site inspections must sign in at the site.
- f. **Miscellaneous Items.** The A/E must note all work or material in place that does not correspond with drawings or specifications, as well as all other problems or abnormal occurrences that have arisen during each day. Include notations of any particular lack of activity. Note corrective actions taken.

- 
- g. **Accidents.** For all accidents involving bodily injury, lost time, or property damage, the A/E must record the names of the injured and witnesses, conditions, extent of injury or damage, and time lost.

### 3-3.7 Construction Project File

The A/E must maintain a construction project file, at the project site, that contains all appropriate and necessary records that document the execution of the construction contract. The field construction project file must consist of copies of the original documents, not the original documents. The field file must include, but is not limited to, the following categories (when applicable):

a. **Initial submittals for approval:**

- Schedule of values.
- Construction schedule.
- System construction estimate breakdown.
- List of subcontractors.
- Qualifications of testing agencies and project personnel.
- Shop drawings submittal log.

b. **Correspondence:**

- Correspondence.

c. **Meeting minutes:**

- Preconstruction conference.
- Monthly progress meetings.
- Coordination meetings.

d. **Job Drawings:**

- Contract drawings.
- Supplemental clarification drawings.
- Drawings containing changes.
- Coordination drawings.

e. **Shop Drawings:**

- Shop drawings (those that have been reviewed and approved as final).
- Shop drawings log.
- Samples.

f. **Test reports:**

- Testing log.
- Tests.

g. **Substitution request:**

- Justification and determination, including:
  - Contracting officer's decision.

- 
- h. **RFI log:**
- RFI log.
  - General contractor-initiated requests.
- i. **Schedules:**
- Construction progress schedule.
  - Equipment and procurement schedules.
  - Submittal schedule.
  - O&M training schedule.
  - Occupancy schedule.
- j. **Requisitions:**
- Approved requisitions for payment.
- k. **Certified payrolls:**
- Certified payrolls.
- l. **Monthly and quarterly submittals:**
- General contractor progress synopsis.
  - Labor standards interview.
  - Employee utilization report.
  - Stored material log and invoices.
  - Updated submittal log.
  - Subcontractor minority business enterprise (MBE) form.
  - Schedule of values.
- m. **Daily construction log:**
- Inspector's daily construction log.
  - Contractor's daily construction log.
- n. **Photos:**
- Photographs.
- o. **Modifications and/or change orders:**
- Form 4909, *Findings of Fact for Contract Modifications*.
  - Scope of modification.
  - Request for proposal, including:
    - Contractor's cost proposal.
    - Subcontractor's cost breakdown.
  - Independent estimate (A/E or Postal Service).
  - Reconciliation of estimates and proposal.
  - Analysis of schedules.
  - Negotiation record.
  - A/E's recommendation (if applicable).

---

p. **Claims:**

- Claims log.
- Claims:
  - Independent estimate (A/E or Postal Service) of claim.
  - Reconciliation of estimates and claim.
  - Analysis of schedules.
  - Negotiation record.
  - A/E's recommendation (if applicable).
  - Contracting officer's final decision.

q. **Small, minority, and woman-owned business subcontracting:**

- Initial subcontracting plan.
- Reports.
- Meeting minutes.

r. **Construction reports:**

- Employee wages.
- Progress.
- Prefinal.
- Final.

s. **Closeout documents and documentation:**

- Punch lists:
  - Prefinal punch list.
  - Final punch list.
- Final inspection and acceptance:
  - Contractor's request for inspection.
  - Prefinal inspection.
  - Final inspection report.
- Certificates:
  - Certification of Asbestos and Lead Paint Usage.
  - Certificate of lead-free water.
  - Certificate of Accessibility and Architectural Barriers Survey.
- Closeout:
  - Form 1233, *Project Financial Change/Completion Report*.
  - Inventory sheet.
  - Form 1233-A, *Project Completion Report (Mechanization Identification and Cost Allocation)*.
  - Form 1233-B, *Project Completion Report (Personal Property Identification and Cost Allocation)*.
  - Form 4209, *Project Authorization*.
  - Form 7307, *Contractor's Release*.
  - Notification to surety, project acceptance, and total contract amount.

- 
- t. **Project acceptance letter:**
    - Project acceptance letter.
  - u. **O&M manuals:**
    - List of required operations and maintenance manuals.
    - One copy of each manual.
    - List of attendees at operations and maintenance training.
  - v. **Warranties and guarantees:**
    - Warranty and guarantee log.
    - Warranties and guarantees.
  - w. **Performance evaluation:**
    - Form 5002, *Construction Contractor Performance Evaluation*.
  - x. **As-built drawings:**
    - Final contract drawings.
    - Final shop drawings.
  - y. **One-year warranty inspection:**
    - Inspection report.
  - z. **Postoccupancy evaluation and review:**
    - List of warranty items.
    - Resolution of inspection items.
    - Notification letter.
  - aa. **Administration miscellaneous:**
    - Cure notice (issue at any time performance is jeopardized except within 10 days of completion).
    - Show cause letter.
    - Termination for default.

### 3-3.8 Quality Control and Inspection

The A/E must observe the construction, materials, and workmanship daily to ensure that they comply with plans, specifications, and other contract documents. The following must be observed at suitable times during the progress of the work. Items requiring observation and/or inspection include, but are not limited to,:

- a. Benchmarks and building layout.
- b. Dimensions and grades.
- c. Excavations.
- d. Soil under footings.
- e. Public utility connections.

 Clause B-33

---

Handbook P-2, 6.3.1

- 
- f. Foundation sizes and reinforcing.
  - g. Pile driving.
  - h. Caisson work.
  - i. Concrete forms.
  - j. Concrete tests.
  - k. Concrete reinforcing.
  - l. Structural frames.
  - m. Floor openings, sleeves, and hangers.
  - n. Quality and placing of concrete.
  - o. Weather precautions.
  - p. Masonry layout, materials, bonding, anchorage, and flashings.
  - q. Setting of frames and prefabricated elements.
  - r. Partition layout.
  - s. Temporary enclosures, heat, and light.
  - t. Protection of finished work and roofing.
  - u. Setting of doorframes.
  - v. Partition construction.
  - w. Plaster work.
  - x. Tile work.
  - y. Electrical work.
  - z. Mechanical work.
  - aa. Special equipment.
  - bb. Elevators.
  - cc. Furring and lathing.
  - dd. Plumbing work.
  - ee. Cabinet work.
  - ff. Finishes.
  - gg. Painting and papering.
  - hh. Hardware.
  - ii. Inspection and tests.

### **3-3.9 Monthly Progress Photographs**

The A/E must provide photographs during construction in the manner indicated below:

- 
- a. Twelve pictures are to be taken at each site inspection during construction. If there is a VMF or other ancillary building on the site, four additional pictures must be taken of that building at each site inspection. In all cases, the location of the pictures must be approved by the contracting officer.
  - b. Two 8-inch x 10-inch color prints are to be made of each picture. Include the name of the project, city, state, date taken, photographer's name, and the negative number on the back of each photograph. Photographs are to be delivered to the contracting officer.
  - c. In addition, at the discretion of the contracting officer, up to six aerial photographic flights may be conducted before and during construction. Approximately four pictures will be taken during each flight. Provide two mounted color prints, preferably 20-inch x 24-inch, of each picture.

### 3-3.10 Schedule of Values and Payments

The A/E must review the contract value breakdown on the initial schedule of values submitted by the contractor. The A/E must notify the contracting officer of construction activities that are not included on the schedule of values as well as the reasonableness of the costs assigned to each scheduled item. The A/E must ensure that the schedule of values is not "front-end loaded."

The contractor is required to submit to the contracting officer for approval a schedule of values of the various costs of the work, by trade, aggregating to the total sum of the contract. This cost breakdown must be realistic because it will be used as a basis for progress payments to the contractor. The A/E is responsible for the following:

- a. Approving the selection and number of activities.
- b. Reviewing, evaluating, and analyzing proposed network diagrams, including activity durations, cost, and workforce loading, when applicable.
- c. Revising and analyzing the monthly update of network diagrams, when applicable.

The A/E is responsible for certifying Form 4211-B, *Invoice and Payment Authorization (Facility and Fixed Mechanization Contract)*, which is submitted monthly by the contractor, after reviewing the schedule of values and substantiating data submitted by the contractor. This form, which certifies the accuracy of the progress payments, must be signed by a designated representative of the A/E firm and forwarded to the contracting officer for signature.

### 3-3.11 Clarifications

The A/E must furnish written interpretations and drawings necessary for the proper execution of the work with reasonable promptness so that the contractor can execute the work without delay. All interpretations and decisions must be consistent with the intent of the contract documents. These interpretations must not cause changes in the time or money.

### 3-3.12 Operating Tests

The A/E must ensure that all required tests are executed at the proper time. The scheduling of the mechanization operational tests must be coordinated with the Postal

 Clause 1-3

---

Handbook P-2, 6.4.5

---

 *Building Design Standards, Master Specification 01450*

---

Handbook P-2, 6.3.1

---

---

Service at least 3 weeks in advance. The resident engineer or the mechanization resident engineer must be present for all tests.

### 3-3.13 Training

Training furnished by the contractor must be coordinated with the A/E and the Postal Service. The A/E must ensure that all maintenance and operational training is scheduled and provided to Postal Service personnel as required by the solicitation documents, and that the operation of the systems is in accordance with the intent of the design, particularly with regard to energy conservation operation procedures.

Training must not be scheduled or conducted until after all testing has been satisfactorily completed and until after the Postal Service trainees have had ample time to review the approved operation and maintenance manuals.

### 3-3.14 Guarantees and Instructions

As the contractor completes the work, he or she must submit the following items to the A/E for approval:

- a. All required operating instructions.
- b. The schedule of training on the operation and maintenance of the various systems and equipment.
- c. Complete keying schedule with master, submaster, room, and special keys. All keys must be properly marked or tagged.
- d. All required guarantees, certificates of inspection, and bonds.
- e. Certified air balance reports, with a cover letter from the A/E stating that HVAC systems satisfy the contract requirements.

The A/E forwards all of the above to the occupying postmaster with copies transmitted to the construction manager.

### 3-3.15 Preoccupancy Safety and Health Inspection

Handbook P-2, 6.3.1-15

When construction is between 90 percent and 100 percent complete, an on-site Postal Service team, which includes the A/E, must inspect the construction work and report to the CO any deficiencies noted during the inspection. The inspection must be conducted in accordance with Management Instruction AS-510-87-3, *Compliance With OSHA Standards — Facility Construction Program*.

### 3-3.16 Accessibility Inspection

Handbook P-2, 6.3.1-16

Before the Postal Service accepts the facility, the COR, the A/E, and the CM (if any) must inspect the facility, and the designer of record or the construction monitor must furnish a signed statement certifying that the facility has been constructed to be in compliance with Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*.

The A/E must provide a Certificate of Accessibility prior to contract closeout.

Handbook P-2, 6.3.2-30

---

### 3-3.17 Preliminary Completion Inspection

Handbook P-2, 6.3.2-13

To expedite closeout procedures, a preliminary completion inspection may be conducted jointly with the preoccupancy safety and health inspection. The COR, A/E, or CM conducts the inspection and assembles a list of work items remaining to be completed or corrected. This is a "preliminary punch list" and is provided to the contractor to assist the contractor in expeditiously completing the work.

The contractor should have available at the preliminary inspection all O&M manuals, instructions, and equipment warranties and guarantees required by the contract specifications. O&M manuals, instructions, and equipment warranties and guarantees not available at the preliminary inspection should be identified on the preliminary punch list and must be submitted prior to the substantial completion inspection.

### 3-3.18 Substantial Completion Inspection

Handbook P-2, 6.3.2-14  
thru 6.3.2-152

A substantial completion inspection must be conducted on every construction project to accomplish all the following purposes:

- a. Determine whether or not the work is substantially complete.
- b. Prepare a punch list of work items that must be completed and corrected in order to conform to the requirements of the construction contract and achieve final completion.
- c. Receive final approval submittals from the contractor.

The substantial completion inspection should be conducted by the COR and the A/E and/or CM accompanied by the contractor and representatives of the occupying organization. This inspection team should include the same persons who participated in the preliminary inspection and environmental professionals as appropriate.

The inspection team must review the facility for compliance with the contract documents, surveying the facility room by room and ensuring that all equipment is in good working order. All items listed on the preliminary punch list must be reinspected, and all tests originally listed as unacceptable must be executed again. The inspection team must proceed with the inspection in order to prepare a substantial completion punch list of all remaining defects and omissions. The list must be precise, giving all information necessary to locate and correct deficient items. By the time the inspection is completed, the COR must recommend whether or not the project is substantially complete.

The A/E must make it clear to the contractor that the Postal Service will not conduct special inspections to determine substantial completion until there is sufficient evidence to indicate that this condition may have been attained.

The A/E must ensure that if the following items have not been previously submitted, they must be submitted by the contractor at the substantial completion inspection for transfer to appropriate parties, as the contract may require:

- a. A complete set of as-built drawings annotated to show all authorized changes and variations from the original contract drawings.
- b. All outstanding operation and maintenance manuals and instructions for equipment items.
- c. All environmental operating permits, manifests, etc.

- 
- d. All outstanding equipment warranties and guarantees.
  - e. Keys.
  - f. Spare parts.
  - g. Occupancy permit (for leased facilities) and inspection certificates.

### **3-3.19 Final Completion Inspection**

Handbook P-2, 6.3.2-16

Upon receipt of notice from the contractor that the substantial completion inspection punch list items have been completed or corrected, the A/E and the designated postal representatives must inspect these items by comparing them to the punch list and must confirm their completion in writing when appropriate. This may be done by sending a confirming letter to the contractor or by checking off, annotating, and initialing a copy of the substantial completion inspection punch list for each party. When it has been confirmed that the contractor has completed all the items on the substantial completion inspection punch list, final completion of the contract has been achieved.

### **3-3.20 Final Payment Review**

The contractor must apply for final payment on Form 4211-B, as in the case of the progress payments, and must attach a completed Form 7307.

The A/E must review the contractor's request for final payment and recommend to the Postal Service whether or not it is to be paid.

---

This page intentionally left blank

---

## Part IV

# Repair and Alteration Contracts

## 4 Postconstruction Phase A/E Services

### 4-1 Design Services After Construction (Options)

---

#### 4-1.1 Record Drawings and Specifications

The construction contract documents require the contractor to provide the A/E with drawings and specifications incorporating the revisions and changes made during construction up to acceptance of the project. The contractor must, during the progress of the work, keep a master set of prints on the job site, on which is kept a careful and neat record of all deviations from the contract drawings prepared by the A/E that have been made during the course of the work. The A/E must review the contractor's as-built drawings monthly to ascertain the contractor's compliance before processing payment requests.

Upon completion of the project, these as-built prints must be certified as to their correctness by the signature of the contractor and turned over to the A/E for use in preparing a permanent set of record as-built drawings. The A/E must revise the original contract documents to indicate as-built conditions, including revisions in site and building area tabulations.

#### 4-1.2 Contract Appeals

Appeals made by the contractor may be heard by the Postal Service Board of Contract Appeals or the Claims Court. The resident engineer or other professionals having knowledge of the dispute may be required to support the Postal Service during appeal hearings. Reimbursement for these services will be at the same daily rates specified for services included in Clause B-293, Architect/Engineer Field Duties During Construction (Option), Section A, Items and Prices, of the A/E's contract. In addition, travel expenses are reimbursed to the extent that they would be allowable for Postal Service employees under travel regulations in effect at the time of travel.

### 4-2 Field Services After Construction (Option)

---

#### 4-2.1 Six-Month Postoccupancy Evaluations

The purpose of the postoccupancy evaluations is to provide feedback to the Postal Service that is necessary for improving the design standards. The A/E, at the direction of the CO, may be required to participate in and/or review and provide an analysis of postoccupancy evaluations. There are two different levels of postoccupancy evaluations:

 Clause B-57

 *Building Design Standards, Master Specification 01780*

---

*Purchasing Manual 6.8.3*

---

 Clause B-293

 *Building Design Standards*

- 
- a. **Level One Postoccupancy Evaluation.** A level one postoccupancy evaluation is to be conducted on all types of newly completed facilities, as follows:
- (1) The level one postoccupancy evaluation is accomplished by completing the Postoccupancy Evaluation Questionnaire. This is completed by the postmaster or facility manager and the manager of the Administrative Support unit.
  - (2) The Postoccupancy Evaluation Questionnaire is to be completed between 4 and 6 months after the facility has been occupied.
  - (3) The manager of Design and Construction at the FSO must send one copy of the Postoccupancy Evaluation Questionnaire to the postmaster or facility manager and another copy to the manager of the Administrative Support unit.
  - (4) The completed questionnaire is to be returned to the manager of Design and Construction for review and comments.
- b. **Level Two Postoccupancy Evaluation.** Headquarters, with a specialized consultant, will conduct a site visit and a more extensive evaluation for selected facilities using the following tools:
- (1) **Employee Questionnaire.** The consultant conducts these questionnaire interviews during the site visit.
  - (2) **Customer Interview.** The consultant conducts interviews with customers during the site visit.

The consultant prepares a narrative report with engineering studies of the findings from the employee and customer interviews.

#### 4-2.2 Guarantee Inspection

If defects become evident during the guarantee period, the Postal Service may authorize the A/E to investigate and report on them.

#### 4-2.3 One-Year Warranty Inspection

The purpose of the one-year warranty inspection is to identify construction warranty and/or guarantee defects before the end of the 1-year warranty period for new construction and major repairs.

At least 4 weeks before expiration of the warranty date, the project manager or COR will schedule and conduct the final one-year warranty inspection. Participants in the inspection will be the CO, the contractor, the local postal official, the COR or designee, and the A/E. Before the one-year warranty inspection is conducted, all earlier noted deficiencies not corrected should be listed.

The warranty log prepared at final acceptance is to be used as a checklist for each warranted item to be inspected to ensure that it is performing satisfactorily. All warranty deficiencies noted during the inspection must be listed, and a “draft” copy of the deficiency list must be given to the contractor at the end of the inspection. The CO will formally transmit the deficiency list to the contractor via a letter.

---

The local postal official will monitor the correction of warranty defects until such time as all defects are corrected. The local postal official will also inform the COR as to the status of uncorrected warranty deficiencies. The CO will notify the contractor's surety company if the contractor does not respond in a timely manner.

---

This page intentionally left blank

---

## Part V Design-Build Contracts

### Contents

1	Predesign Phase Design-Build Contractor Services.....	211
1-1	Survey of Existing Facilities.....	211
1-2	Additional Services (Options).....	211
1-2.1	Boundary and Topographic Site Survey .....	211
1-2.2	Subsurface Investigation.....	211
1-2.3	Investigative Services for Existing Facilities .....	212
1-2.4	Environmental Assessment .....	212
1-2.5	Wetlands Impact Study.....	212
1-2.6	Hazardous Waste Site Assessment .....	212
1-2.7	Traffic Impact Studies .....	212
2	Design Phase Design-Build Contractor Services.....	213
2-1	General Design Services .....	213
2-1.1	Table of Design Phases.....	213
2-1.2	Transmitting Submissions.....	213
2-1.3	Records Ownership .....	214
2-1.4	Postal Service-Furnished Property .....	214
2-1.5	Changes.....	214
2-1.6	Meetings.....	215
2-2	Design Phase Services .....	215
2-2.1	Preconcept Design Phase .....	215
2-2.1.1	Acceptance Criteria.....	215
2-2.1.2	Submission Requirements .....	215
2-2.1.3	Preconcept Design Review Meeting .....	222
2-2.2	Concept Design Phase .....	223
2-2.2.1	General .....	223
2-2.2.2	Submission Requirements .....	223
2-2.2.3	Concept Design Review Meeting .....	232
2-2.3	Intermediate Design Phase.....	232
2-2.3.1	General .....	232
2-2.3.2	Submission Requirements .....	232
2-2.3.3	Intermediate Design Review Meeting .....	238
2-2.4	Final Design Phase .....	238
2-2.4.1	General .....	238
2-2.4.2	Submission Requirements .....	239
2-2.4.3	Final Design Review Meeting.....	242
2-2.5	Submission Checklist.....	242
2-3	Design-Build Contractor Modifications of Design.....	242

---

2-4 Additional Design Phase Services (Options) .....	245
2-4.1 Perspective Drawing .....	245
2-4.2 Supplementary Drawings .....	245
2-4.3 Mechanization Systems Description Manual .....	246
2-4.4 Roofing Consultant .....	246
2-4.5 Fire Protection Consultant .....	247
3 Construction Phase Design-Build Contractor Services .....	249
3-1 Design Services During Construction (Options).....	249
3-1.1 General .....	249
3-1.2 Design-Build Contractor Support Services .....	249
3-1.3 Submission Reviews and Approvals.....	250
3-1.3.1 Shop Drawings, Product Data, and Samples.....	251
3-1.3.2 Coordination Drawings.....	252
3-1.3.3 Schedule of Values and Progress Payments.....	252
3-1.3.4 Schedules .....	252
3-1.3.5 Spare Parts Data.....	253
3-1.3.6 Warranties and Guarantees.....	253
3-1.3.7 Operation and Maintenance Manuals .....	253
3-1.3.8 Test Reports .....	253
3-1.3.9 Change Orders and Contract Modifications.....	254
3-1.3.10 As-Built Drawings and Specifications.....	254
3-1.3.11 Electronic Format of As-Built Information .....	254
3-1.3.12 As-Built Photographs .....	254
3-1.3.13 Closeout Certificates.....	254
3-2 Modifications of Design During Construction .....	255
3-3 Field Services During Construction (Options).....	255
3-3.1 Requirement .....	255
3-3.2 General Responsibilities .....	255
3-3.3 Contract Administration.....	255
3-3.4 Field Supervision.....	256
3-3.5 Mechanization Coordination.....	257
3-3.6 Progress Meetings .....	258
3-3.7 Records.....	259
3-3.8 Construction Project File.....	259
3-3.9 Quality Control and Inspection .....	263
3-3.10 Progress Photographs .....	264
3-3.11 Schedule of Values and Payments .....	264
3-3.12 Clarifications .....	265
3-3.13 Operating Tests .....	265
3-3.14 Training .....	265
3-3.15 Guarantees and Instructions .....	265
3-3.16 Preoccupancy Safety and Health Inspection .....	266
3-3.17 Accessibility Inspection .....	266
3-3.18 Preliminary Completion Inspection .....	266

---

3-3.19 Substantial Completion Inspection.....	266
3-3.20 Final Completion Inspection.....	267
3-3.21 Final Payment Review .....	267
4 Postconstruction Phase Design-Build Contractor Services .....	269
4-1 Design Services After Construction (Options) .....	269
4-1.1 Record Drawings and Specifications .....	269
4-1.2 Contract Appeals .....	269
4-2 Field Services After Construction (Option).....	269
4-2.1 Six-Month Postoccupancy Evaluations .....	269
4-2.2 Guarantee Inspection.....	270
4-2.3 One-Year Warranty Inspection .....	270



This page intentionally left blank.



---

## Part V

# Design-Build Contracts

## 1 Predesign Phase Design-Build Contractor Services

### 1-1 Survey of Existing Facilities

---

The design-build contractor must perform all investigative survey, research, and reviews that are necessary to prepare the design. This survey must include, but is not limited to,:

- a. Analysis of the site.
- b. Analysis of availability and capacity of underground and aboveground utilities.

On existing facilities, the design-build contractor's survey must analyze their electrical, mechanical, and structural capabilities as well as review the existing drawings for critical inaccuracies. The survey must include interviewing Operations and Maintenance personnel and measuring existing conditions.

### 1-2 Additional Services (Options)

---

#### 1-2.1 Boundary and Topographic Site Survey

---

Handbook AS-503

---

The design-build contractor may be required to provide or assist the Postal Service in providing a site survey, including a site plot plan showing the site boundary and topographic information. This would also include modifying on-site utility systems, off-site utility work, drainage systems, and existing paved surfaces.

The design-build contractor prepares, reviews, and coordinates the topographic and property line surveys, including easements, setbacks, and utility locations, necessary for completing the construction documents as described in the *Boundary and Topographic Site Survey* (RETB, September 1996) found in Handbook AS-503, *Standard Design Criteria*. All available Postal Service survey information must be provided to the design-build contractor. The design-build contractor must coordinate required soil borings, quantity, locations, depth, analysis, etc., with the environmental specialist.

#### 1-2.2 Subsurface Investigation

The design-build contractor prepares, reviews, and coordinates the subsurface soil investigation as necessary for preparation of the construction documents.

---

### 1-2.3 Investigative Services for Existing Facilities

The design-build contractor must perform all field investigations, measurements, surveys, and testing of existing facilities necessary to generate "as-built" drawings for the areas and systems affected by the proposed work. Investigative tests must be the non-destructive type. The design-build contractor must visit the site, taking supporting personnel representing appropriate disciplines needed to inspect the existing conditions and to take measurements, notes, and pictures, as needed, for preparing as-built drawings for areas and systems affected by the work.

### 1-2.4 Environmental Assessment

---

Handbook RE-6

---

The design-build contractor must evaluate the appropriate requirements for environmental monitoring, assessment, and/or statements if this task is included in the contract. The design-build contractor must perform the required ecological studies, including preparation of environmental assessment and impact reports. The design-build contractor must attend public meetings and hearings as required and make presentations as necessary to governing authorities.

### 1-2.5 Wetlands Impact Study

---

Handbook RE-6

---

The design-build contractor must evaluate the impact that the proposed project will have on the wetlands at the proposed site if this task is included in the contract. The design-build contractor must provide construction guidelines and procedures required for compliance with all regulations. The design-build contractor must attend public meeting and hearings as required and make presentations as necessary to governing authorities.

### 1-2.6 Hazardous Waste Site Assessment

The design-build contractor must perform a comprehensive waste assessment of the designated site if this task is included in the contract. The design-build contractor must procure all tests necessary to complete the assessment. The design-build contractor must prepare a hazardous waste site assessment report substantiating the conclusions reached during the assessment. This report must include a detailed procedure or design for site remediations. The design-build contractor must attend public meetings and hearings as required and make presentations as necessary to governing authorities.

### 1-2.7 Traffic Impact Studies

The design-build contractor must perform a comprehensive traffic impact study if this task is included in the contract. The traffic impact study must include analyses and evaluations of the impact that the proposed construction would have on pedestrian and vehicular traffic, including public mass transportation and public parking. The traffic impact study must consider the proposed construction and also all long-term plans for future postal expansion. The traffic impact study must also address all restrictions due to traffic congestion and the cost of all necessary traffic improvements. The design-build contractor must attend public meetings and hearings as required and make presentations as necessary to local and governing authorities.

---

## Part V Design-Build Contracts

### 2 Design Phase Design-Build Contractor Services

#### 2-1 General Design Services

---

##### 2-1.1 Table of Design Phases

The following list of design phases is arranged to show the percentage of design effort completed at that phase and the purpose and location of meetings. The "cumulative percentage of total effort" may be used as a basis of payment, but is not necessarily a measurement of the completion of the construction documents; however, the progress of the construction documents should be close to this percentage.

Phase	Cumulative % of Total Effort	Purpose of Meeting or Review	Location of Meeting or Review
Preconcept	10	Value engineering review. Provide guidance in operational and functional requirements.	Office of contracting officer (CO) or as designated by CO
Concept	30	Value engineering review. Accept operational and functional requirements.	Office of contracting officer or as designated by CO
Intermediate	70	Final review for compliance with value engineering comments. Verify progress of construction documents.	Office of contracting officer or as designated by CO
Final	100	Final submission. Verify completion of construction documents.	Office of contracting officer or as designated by CO

The design-build contractor must provide the Postal Service project manager with a written response to all Postal Service comments resulting from design reviews within 7 calendar days after each review meeting.

##### 2-1.2 Transmitting Submissions

The minimum quantity of submissions is to be determined at contract negotiations. Each submission must be delivered on time and must be fully complete, containing all deliverable items described for the respective phase of the project completion. When submittals are found to be incomplete or lacking substance, the Postal Service may

---

reject the submission, and all additional information or drawings submitted, without further review until the design-build contractor resolves the deficiencies. Corrections of deficiencies or makeup of time delays is at the design-build contractor's expense and at no additional cost to the Postal Service.

To avoid unnecessary delays during the design process and any subsequent potential for causing the construction cost to escalate, it is normally expedient to use Express Mail when it is available. Use Priority Mail when mailing design submissions for Postal Service review. The design-build contractor must include the costs of mailing items in the design expense as a lump sum price.

### 2-1.3 Records Ownership

 Clause 4-7

The Postal Service may, at its option, demand and take, without additional compensation, all records relating to the services provided under this agreement. The design-build contractor must turn over all such records upon request, but may retain copies of documents produced.

### 2-1.4 Postal Service-Furnished Property

 *Building Design Standards, Master Specification 01116*

The design-build contractor is responsible for ensuring that the design includes Postal Service-furnished items, equipment, and property, as applicable. The design-build contractor must edit and modify the list of Postal Service-furnished items included in the *Master Specification*, section 01116, published on the *Building Design Standards* CD-ROM. The design-build contractor must verify all the dimensions and must accommodate the structural and the utility (electrical, mechanical, etc.) requirements for all Postal Service-furnished items. The design-build contractor must ensure that the design clearly defines the extents and limits of the items furnished by the Postal Service and clearly identifies all components necessary for a complete installation.

---

*Purchasing Manual 2.2.7*

-  Clause 2-11
-  Clause 2-12
-  Clause 2-13
-  Clause 2-14
-  Clause FB-255
-  Clause FB-234
-  Clause DB-41

### 2-1.5 Changes

Changes must be administered as follows:

- a. The design-build contractor must not undertake work that the firm considers to be a cost or schedule modification to the contract without prior written authorization from the contracting officer.
- b. Changes in the scope of work or in the initial design-build contractor contract are considered contract modifications.
- c. Modifications required before construction contract award are prepared by the design-build contractor only after the contracting officer has accepted the proposed modifications in writing.
- d. The design-build contractor must prepare the necessary design drawings and specification revisions and must fulfill all applicable services related to the modification as though they were contained in the original scope of work.
- e. The design-build contractor must furnish an estimate of how the modification would affect the project construction cost and scheduling.
- f. In accordance with the requirements outlined in the Design Approach and Economy in Design and Construction section of this handbook (Part I, 1-3), the design-

---

build contractor must incorporate into the design, without additional design fee, value engineering items that the Postal Service determines will achieve the maximum life-cycle cost benefit.

## 2-1.6 Meetings

The design-build contractor must deliver the required submittals to the Postal Service offices designated by the project manager in sufficient time to allow for review before the design review meetings. A minimum of 21 calendar days should be allowed for the Postal Service to review and schedule the review meeting.

A design-build contractor representative is to attend all local field review meetings.

## 2-2 Design Phase Services

---

### 2-2.1 Preconcept Design Phase

#### 2-2.1.1 Acceptance Criteria

When the design-build contractor's preconcept designs as submitted do not meet Postal Service functional requirements, or where additional sketches or revised development plans are required to clarify and ensure a mutual understanding of the proposed design, additional submittals or sketches may be required. Such submittals, sketches, or resubmittals necessary to continue the design development of the project are to be supplied at no cost to the Postal Service provided the scope of work remains unchanged.

The Postal Service bases its acceptance on satisfactory adherence to Postal Service programmed space allocations, the functional relationship of major building plan elements, efficient and functional site utilization, and indications of economical design, which the concept design submission must fully develop. The concept design submission requirements must be reviewed, and questions about the format will be solved at that time.

#### 2-2.1.2 Submission Requirements

The design-build contractor must submit the preconcept design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the preconcept design review meeting. The preconcept submission is normally scheduled for 30 calendar days after the contract award for major facilities and for repair and alteration projects, and 15 calendar days after the contract award for customer service projects. The preconcept design consists of the following minimum components:

- a. **Site Utilization Plan.** The site utilization plan must be prepared as a single overall plan on one sheet and must include, at a minimum, the following:
  - (1) Building.
  - (2) Property lines.
  - (3) Parking locations (by dimensions).

- 
- (4) Topography.
  - (5) Traffic flow.
  - (6) Entrances.
  - (7) Prevailing wind direction.
  - (8) Availability of utilities.
  - (9) Proposed utilities.
  - (10) Building expansion capability.
  - (11) Stormwater drainage.
  - (12) Anticipated off-site or on-site easements and construction.
  - (13) Potential problems associated with site utilization.
  - (14) Wetland delineation.
  - (15) Other pertinent information.
- b. **Site Restrictions and Improvements.** The design-build contractor must investigate and identify all site restrictions and limitations, local ordinances, and legal building requirements pertaining to the proposed facility. The design-build contractor must identify all site restrictions and improvements necessary to ensure a complete and comprehensive design for the construction and operation of the facility. The design-build contractor must include the time and cost of all items for which the permit process or construction process requires a long-lead time. The design-build contractor must be prepared to discuss this information at the pre-concept design review meeting. The design-build contractor's investigative effort must include, but not be limited to, the following:
- (1) Utilities.
  - (2) Easements.
  - (3) Rights-of-way.
  - (4) Street improvements.
  - (5) Bonds.
  - (6) Fees.
- c. **Architectural Floor Plans.** Except for medium building design standard (MSBD) drawings, building floor plans are to be drawn at a scale of 1/16 inch = 1 foot. The floor plan scales for MSBD drawings must be as specified and provided on the *Building Design Standards* CD-ROM. Lobby plan layouts, cafeteria seating plan layouts, or other areas requiring larger detail to fully explain plan concepts may be drawn at a larger scale. When a 1/16 inch = 1 foot scale building plan does not fit on a single drawing sheet, provide an additional overall building plan at a smaller scale. The floor plans provided at the preconcept design phase are single-line sketches or assemblies of MSBD modules that must, at a minimum, include the following:

- 
- (1) Location and relationship of all building spaces.
  - (2) Lookout galleries (LOGs) and closed-circuit television (CCTV) camera locations) (if applicable).
  - (3) Breakouts (if applicable).
  - (4) Fixed mechanization (if applicable).
  - (5) Major nonfixed mechanization (such as letter sorting machines; cull, face, cancel machines; and the like) (if applicable).
  - (6) Registry and key cages.
  - (7) Locations for future equipment that will require power, etc.
- d. **Elevations and Perspective Sketches.** Perspective sketches must be single-line drawings, either hard-line ruled or controlled freehand delineations in color, using watercolor marker or colored pencil (renderings generated on computer-aided design (CAD) equipment and three-dimensional (3D) modeling are acceptable). Sketches must indicate materials, finishes, fenestration, and site landscaping. The design-build contractor must prepare a minimum of three alternate perspective sketches to show the overall site development, building massing, and design concept. In addition, the design-build contractor must provide supplementary sketches showing interior and exterior features, such as customer entrances, employee entrances, and interior views, necessary to explain the design concepts.
- The design-build contractor must furnish black-and-white copies of the alternate perspective sketches with the preconcept design submission and submit the color sketches during the preconcept design review meeting. The design-build contractor must present the sketches, discuss alternates, and recommend designs, with supporting justifications, to the Postal Service during the preconcept design review meeting. All items of discussion and design direction must be noted by the design-build contractor and incorporated into the further design submission required at the concept design phase.
- e. **Mechanization.** As part of the preconcept design on projects involving mechanization, the design-build contractor must submit the following:
- (1) A single-line diagram of the conveyor system showing control elements.
  - (2) A detailed outline of Specification Section 17-7.
  - (3) A single-line plan layout to scale of the fixed mechanization showing critical building elements such as columns, aisles, and lookout galleries.
  - (4) Elevation drawings to scale of the mechanization demonstrating proper clearances between conveyors and between mechanization and building elements.
- f. **Code Analysis.** The design-build contractor must submit a complete code analysis with the preconcept design. The design-build contractor must investigate and identify all applicable governing codes, ordinances, and legal building requirements pertaining to the proposed facility. The code analysis must include the time and cost of all items for which the permit process or construction process requires a long-lead time. The code analysis must include:

- 
- (1) **Code Listing.** The code analysis must include a complete listing of all applicable codes, ordinances, and regulations, including but not limited to:
    - (a) All applicable Occupational Safety and Health Administration (OSHA) codes.
    - (b) All applicable National Fire Protection Association (NFPA) codes.
    - (c) All applicable state codes.
    - (d) All applicable local codes.
    - (e) Zoning regulations.
    - (f) Ordinances.
  - (2) **Small-Scale Floor Plan.** The code analysis must include a small-scale floor plan of the total building that shows the following:
    - (a) Locations of all required fire exits.
    - (b) Exit units.
    - (c) Rated walls and structures.
    - (d) Smoke vents.
    - (e) Smoke curtains.
    - (f) Paths of travel indicating actual distances. (Workrooms with long travel distances are often a problem and must be carefully considered.)
  - (3) **Alternatives.** The code analysis must identify conflicts with applicable codes and provide alternative solutions. For codes for which the Postal Service is the "authority having jurisdiction," which is often the case with the NFPA, the design-build contractor must submit a written request with a full justification when recommending a special ruling, equivalent or superior to the intent of the codes, the design-build contractor believes is required to provide a safe and economical design.
- g. **Building Area Tabulations.** The design-build contractor must include the following items with the building area tabulations submitted with the preconcept design:
- (1) **Single-Line Floor Plan.** The design-build contractor must submit a single-line small-scale floor plan (1/16-inch scale preferred) of the entire building for both a general mail facility (GMF) and vehicle maintenance facility (VMF). The single-line floor plan must clearly designate the number and name of each functional space and the overall building dimensions and must include the building area tabulation lists.
  - (2) **Building Area Tabulation Lists.** Building area tabulation lists must be included on the single-line floor plan and also must be submitted separately. The building area tabulation lists must include the following information:
    - (a) The location for each functional area by number and name in the order in which it appears in Form 919 or 929.
    - (b) The net area for each functional area shown on the Form 919 or 929.
    - (c) The net area provided for each functional area.

- (d) The percentage of deviation from Form 919 or 929 for each area.
  - (e) Subtotals for each group of related functional areas.
- (3) **Building Areas and Calculations.** The building areas are calculated as discussed below:
- (a) **Gross Area.** The gross area of a building is defined as the building footprint measured to the outside of exterior walls and adding mezzanine and LOG splines, calculated as 100 percent. Loading dock platform is calculated as 100 percent for both closed and open loading. Carrier loading is not included unless the loading area is completely covered. Covered carrier loading when the entire loading area, including driveways, is completely covered is calculated as 50 percent of the area under roof. Enclosed covered carrier loading is calculated as 100 percent.

The following guidelines are used to determine gross areas:

Location or Space	Included in Gross Area	Not Included in Gross Area
Full area of lookout gallery system	X	
Mezzanines	X	
Platforms enclosed by exterior walls	X	
Covered platforms outside exterior walls	X	
Necessary circulation aisles	X	
Door recesses	X	
Coat closets	X	
Fuel dispensing booths	X	
Canopied areas		X
Open wash bays		X

The gross area of the facility must be kept to a minimum and must not exceed the estimated gross area agreed upon at the negotiation meeting.

- (b) **Net Area.** The net area of a building is defined as the area within each room or space calculated from finished wall surface to finished wall surface, exclusive of canopied area and open wash bays. The following spaces must be designed no smaller than the area specified in the Form 919 or 929 and, if necessary for plan conformity, may be increased up to a maximum of 5 percent of the area specified in the Form 919 or 929:
  - i. Office spaces of 120 square feet or less.
  - ii. Postmasters' offices.
  - iii. Station or branch managers' offices.

---

Except for the three areas identified above, each large office space must be designed within plus or minus 5 percent of the area specified in Form 919 or 929. The total net area of all office space provided must be within plus or minus 5 percent of the total net area specified in the Form 919 or 929.

The workroom net area must be within plus or minus 1 percent of the area specified in the Form 919 or 929.

- (c) **Calculations.** The building area calculations must comply with those shown on the Form 919 or 929. The design-build contractor must summarize the area calculations on all submissions, including the construction proposal documents. The building area calculations must show the ratios of the gross areas over the net floor areas for each major building space (i.e., office, workroom, lobby, platform, support, mechanical, and electrical spaces) and for the total building.

If the layout or the orientation of the facility changes the site and floor plan contained in the design data, the design-build contractor must submit a detailed description of the effect of the changes on the gross area limitations and the total estimated cost of the facility. The design-build contractor must explain all changes to the program requirements with footnotes that reference the source and date of the document that authorized the change.

- h. **Building System Comparisons.** A schedule of various building systems being investigated for recommendation must be submitted during the preconcept design phase. The building system comparisons must include, at a minimum, the following:

- (1) At least three exterior wall systems with a minimum thermal mass of 70 pounds per square foot and a 0.07 maximum "U" value. (Exterior wall systems with a mass less than 70 pounds per square foot may be considered if justified by the design-build contractor, e.g., when a facility is to be located in a geographic location where the weather is extremely mild or the building may be subjected to strong earthquake forces.)
- (2) At least three roof membrane and insulation systems with a 0.05 maximum "U" value.
- (3) Alternate viable foundation systems.
- (4) Alternate roof heights (including a multiple-level versus single-level roof comparison).
- (5) The types of fuel available.
- (6) A written description of the type of analyses and calculations, including cost-effectiveness, that will accompany the concept design phase submission.
- (7) A list of building systems, including interior and exterior finishes, tentatively proposed that is the basis for the cost estimate.

The building system comparisons must show clear ceiling heights; foundations; pavements; heating, ventilation, and air-conditioning (HVAC); electrical; plumbing; and so forth.

- i. **Energy Conservation Analysis.** The design-build contractor must submit a written report identifying the active and passive features that are being considered as potentially cost-effective for the project. Handbook AS-503 and the *Building Design Standards* identify energy conservation features and systems to be considered in a building design. The active and passive features and systems identified in the preconcept design submission are to be analyzed on a life-cycle cost basis in the concept design submission. The design-build contractor must substantiate the items selected on the basis of a site-specific climatic analysis and a preliminary energy consumption analysis. The facility design must comply with the prescribed design energy budget established in the Functional Design Specifications (FDS). The design-build contractor must ensure that the design complies with the energy budget by performing an energy analysis appropriate to each stage of the design.
- a. **Postal Service Environmental Policy and Guiding Principals.** The design-build contractor must submit a report identifying the environmentally conscious products and procedures that are being considered for use on the project. The *Green Addendum to the Master Specification* identifies environmentally conscious products and procedures that are to be considered in a building design. The design-build contractor must ensure that the environmentally conscious products and procedures used are cost-effective and provide maximum energy conservation. The life-cycle costs of the environmentally conscious products and procedures identified in the preconcept design submission are to be analyzed and compared to conventional products and procedures in the concept design submission.
- b. **Cost Estimate.** The design-build contractor must submit a preliminary cost estimate with the preconcept design. This and all subsequent cost estimates must be formatted identically to allow direct comparison of the estimates as the design phases progress. This estimate should be accurate and realistic, not a "safe" (high) estimate. The cost estimate is used to monitor compliance with the budget. All cost estimates are confidential material for official Postal Service use only. The design-build contractor must not divulge cost estimates or working papers used to prepare them to any individual who does not have a need to have them for performance of services under this design-build contractor contract.

 *Building Design Standards*

The cost estimate must include information sufficient to provide evidence that the design is within the construction cost limit. Lump sum amounts for major items that cannot be readily analyzed will not be accepted. The cost estimate must reflect the construction cost that the design-build contractor anticipates on the date the work begins. The design-build contractor must ensure that the cost estimate reflects prices for work and materials, taking into account possible labor shortages that may occur because of other known proposed projects in the area, local construction conditions, complexity of the project, degree of risk, and size of the job. The cost estimate is to be categorized to show material and labor.

All estimates must use hourly labor rates not less than the rates as determined by the Secretary of Labor. The Postal Service will supply the design-build contractor with a list of wage rate determinations.

The design-build contractor must provide an overall cost estimate that summarizes all costs in a table as well as provide separate cost estimates for each mail facility building, vehicle maintenance building, other building as provided, and site work.

---

The cost estimates provided by the design-build contractor must be categorized into the following building systems:

---

<b>CSI Divisions</b>	<b>Building System</b>
1	General requirements
2	Site work
3	Concrete
4	Masonry
5	Metals
6	Wood and plastics
7	Thermal and moisture protection
8	Doors and windows
9	Finishes
10	Specialties
11	Equipment
12	Furnishings
13	Special construction
15	Mechanical
16	Electrical
17	Mechanization

---

### **2-2.1.3 Preconcept Design Review Meeting**

The preconcept design review meeting will be held at the office of the contracting officer or a location as designated by the CO. If the facility has fixed mechanization, representatives of the mechanization disciplines must also attend. At the preconcept design review meeting, the design-build contractor must be prepared to discuss the following:

- a. The control and operational concepts to be implemented in the mechanization design.
- b. The rationale to be followed in specifying and locating structural supports for mechanization.
- c. The special requirements of the project's mechanization specifications, including the requirement of the mechanization maintenance manual and considerations relating to interfacing the mechanization and building specifications.

Along with the lead project architect, the design-build contractor is to have the lead designers from each of the following disciplines present to answer any questions that may arise: civil, structural, mechanical, electrical, CCTV and communications, plumbing, fire protection, cost estimating, and others as appropriate.

---

## 2-2.2 Concept Design Phase

### 2-2.2.1 General

The concept design consists of the architectural and engineering plans, elevations, sketches, diagrams, analyses, estimates, cost benefit justifications, and other data needed to clearly describe the recommended design. The concept design phase data must be developed into a comprehensive design development presentation of the basic design for all disciplines.

All disciplines must justify using the type of building system they recommend (i.e., HVAC systems, electrical systems, lighting, fuel, structural, framing, bay spacing, mechanization, walls, roofing membrane, and insulations). The recommendations must be substantiated by detailed cost and supporting analyses. The building area tabulations, cost estimates, cost-effective energy conservation analyses, and environmental products and procedures analyses that were presented in the preconcept design must be updated and further developed in the concept design submission.

Postal Service acceptance of the concept design submission establishes the final building and site layout. Postal Service acceptance of this submission gives the design-build contractor functional and operational authorization to proceed with the design toward the final construction documents.

When concept designs as submitted do not meet Postal Service functional requirements, or when additional sketches or revised development plans are required to clarify and ensure mutual understanding of the proposed design, additional submittals or sketches may be required. The design-build contractor provides such submittals, sketches, or resubmittals necessary to continue the design development of the project at no cost to the Postal Service if the scope of work remains unchanged.

### 2-2.2.2 Submission Requirements

The design-build contractor must submit the concept design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the concept design review meeting. The concept design submission must be complete and contain all of the required material.

Building plans must be drawn at a scale of 1/16 inch = 1 foot except for MSBD drawings. If a larger plan detail is necessary to fully explain the development of the design, the drawing may be drawn at a larger scale. The design-build contractor must not anticipate the preparation of working drawings by using larger than needed drawing scales (thereby increasing the number of drawings and work effort), because the design development as represented by the concept submission may need to be further changed and refined to complete the design. Drawings must show Postal Service Data Systems (PSDS) equipment where required.

The concept design consists of the following minimum components:

- a. **Site Restrictions and Improvements.** The design-build contractor must update and refine the site restrictions and improvements information submitted at the preconcept design.
- b. **Civil Design.** The design-build contractor must provide a comprehensive civil design. The civil design must include design data and drawings identifying the following:

- 
- (1) **Stormwater.** Include the site's stormwater drainage design criteria, such as design storm frequency and duration curves, storm frequency adopted by the local jurisdiction, and all other considerations to substantiate the proposed design. Submit the site survey and subsurface investigation reports, if required, no later than the concept design submission.
  - (2) **Streets.** Show street names, directions of traffic, width and number of traffic lanes, dimensions of pavement, rights-of-way, easements, traffic lights, and traffic survey data. Provide the names of jurisdictions controlling street rights-of-way.
  - (3) **Driveways and Parkways.** Indicate the direction of traffic, dimensions of driveways, parking spaces, concrete aprons, and the number of each type of vehicle space. Identify the locations of truck, employee, official, and customer parking. Indicate buildings and other features on adjacent property that are within 10 feet of property lines. Show area requirements for future building expansion by dotted lines.
  - (4) **Pavement Design.** Justify the pavement design by design analysis and economic rationales.
  - (5) **Grades.** Establish a clear understanding of the existing and proposed site grading and surface drainage requirements.
  - (6) **Site Utilities.** Show the layout, size, and invert elevations of all sanitary and storm sewers, water and gas mains, and telephone and electrical lines available or required to serve the site.
  - (7) **Miscellaneous Features.** Show the locations and extent of site security fencing, gates, guardhouses, and lighting poles. Indicate areas to be landscaped.
  - (8) **Vicinity Map.** Provide a small inset vicinity and site location plan showing the site location with respect to major highways, airport, the business district, and the like.
  - (9) **Easements.** Show the location and extent of all required off-site and on-site easements or rights-of-way. Note fees required by local ordinances or utilities to be paid by the Postal Service before construction.
  - (10) **Legal Description.** All easements, rights-of-way, and the like must be identified at this stage by a legal description and a metes and bounds survey tied to a corner description of the Postal Service site. If an easement or permit must be acquired, the design-build contractor must notify the Postal Service no later than the concept design review meeting.
  - (11) **Off-Site Construction.** Show the location and extent of all off-site construction that is required and all easements that must be obtained.
  - (12) **Subsurface Soils Investigation Report.** If the design-build contractor is required to provide a subsurface soils investigation report as an additional pre-design phase service, the design-build contractor must submit the report, including the boring logs, along with the concept design.
- c. **Site Plan.** The design-build contractor must provide an overall site plan on one sheet showing streets, building locations, landscaping, parking, and so forth. This plan may be combined with the civil design plan if all of the required features can

---

be clearly shown. The site plan must present a table with the number and types of parking spaces. The site plan must also include the gross area tabulations for:

- (1) Building coverage.
- (2) Platform coverage.
- (3) Landscaping.
- (4) Driveways.
- (5) Parking and maneuvering areas.
- (6) Sidewalks.

d. **Architectural Floor Plans.** The design-build contractor must further develop and refine the architectural floor plans submitted at the preconcept design. Floor plans must be provided for all levels of all buildings including mezzanines and LOG locations. The level of detail provided in the architectural floor plans must include:

- (1) Show overall dimensions.
- (2) Label all rooms and spaces with name and number.
- (3) Show fixed mechanization (if applicable).
- (4) Show major nonfixed mechanization (such as letter sorting machines; cull, face, cancel machines; etc.) (if applicable).
- (5) Show registry and key cages.
- (6) Show location for future equipment requiring power, etc.

The design-build contractor must also provide an overall small-scale (1/16-inch preferred) comprehensive floor plan on one sheet.

e. **Additional Architectural Plans and Designs.** In addition to the architectural floor plans, the design-build contractor must provide the following:

- (1) **LOG Plan (if applicable).** Provide a separate composite LOG plan showing architectural, structural, and mechanical interfaces and floor elevations. Include typical details showing view points, breakouts, and ladder arrangements.
- (2) **CCTV Camera and Surveillance Plan (if applicable).** Provide a separate composite CCTV camera plan showing camera locations. The CCTV camera plan must include major structural, architectural, mechanical, and electrical elements affecting camera views. Each proposed CCTV camera location must indicate the camera's field of view.
- (3) **Lobby Plan.** Provide a separate plan showing post office box, self-service, and service lobby functional arrangements and equipment locations. Include a complete list of equipment provided by the Postal Service that is to be installed by the contractor.
- (4) **Roof Drainage Plan.** Provide a small-scale roof plan for all buildings showing roof slopes, drain locations, overflow protection, and roof-mounted equipment.

- 
- (5) **Finish Schedule.** Provide an interior finish schedule for principle types of spaces (i.e., workroom, office, lobby, support, platform, toilet, and locker rooms) and include a proposed color schedule.
- (6) **Color and Material Panel.** Provide a preliminary color and material panel showing chips of paint colors and samples of material and colors for carpets, paneling, and floor coverings proposed for interior finishes. The color and material panel must also include samples or chips of colors of exterior building finishes and materials and samples or chips of colors for fixed mechanization equipment by system, except for tray conveyors which may be the manufacturer's standard color.
- (7) **Fire Exit Plan With Code Summary.** Provide a fire exit plan that includes a code summary. The fire exit plan must conform to all national, state, and local requirements.
- (8) **List of Postal Service-Furnished Equipment.** Coordinate and confer with the Postal Service to develop a list of equipment and items that the Postal Service will furnish to the construction contractor. Provide a list of all Postal Service-furnished equipment with the concept design submittal.
- f. **Elevations and Perspective Sketches.** The design-build contractor must provide two-dimensional drawings of all proposed building elevations for the recommended final design. In addition, the design-build contractor must provide two alternate perspective sketches showing overall site development, building massing, and design concepts. The design-build contractor must also provide supplemental sketches showing interior and exterior features, such as customer and employee entrances and interior concepts, to explain the building design. Sketches must incorporate the design concepts and revisions discussed during the preconcept design review meeting.
- Perspective sketches must be single-line drawings, either hard-line ruled or controlled freehand delineations in color, using watercolor, marker, or colored pencil; CAD-prepared renderings; or 3-D models. Sketches must indicate materials, finishes, fenestration, and site landscaping. The design-build contractor must furnish black-and-white copies of the alternative perspective sketches with the concept design submission and submit the color sketches during the concept design review meeting.
- The design-build contractor must present the sketches, discuss alternatives, and recommend the most appropriate final design for the project to Postal Service senior design staff. The design-build contractor's recommendations for the final design must be justified on the bases of postal image, economics, and environmental and local design considerations.
- The Postal Service intends to establish the design upon completion of the concept design review. However, if further drawings are required to consolidate items of discussion resulting from the concept design review submission, then the design-build contractor must provide additional drawings or necessary revisions within 2 weeks at no cost to the Postal Service.
- g. **Sections and Details.** The design-build contractor must provide overall cross sections through typical parts of the building, along with typical wall sections, showing the intended construction. Sections must clearly show the proposed roof system as well as ceiling heights of all major spaces. The design-build contractor

---

must coordinate with the mechanization designer to show floor and wall openings. Details for these openings must be provided at the intermediate design phase.

- h. **Structural.** The design-build contractor must provide structural data defining the applicable building code, the occupancy and “use-group” classification, fire resistive ratings, design loads, and the design strength of materials. The design-build contractor must include a layout of a typical workroom bay for the proposed foundation and structural framing system. The design-build contractor must also evaluate the functional and economic merits of each proposed foundation system and at least three structural framing systems.
- i. **Space Conditioning.** The design-build contractor must describe the proposed heating and air-conditioning systems, including the detailed functional and economic rationale for selecting those systems. The proposed space conditioning systems must be based upon a 20-year life-cycle functional and economic evaluation. The design-build contractor must provide the following:
  - (1) Layouts of all heating and air-conditioning systems. The layout drawings must show:
    - (a) Equipment and proposed zoning and control for the entire building.
    - (b) Room identification, including room name and room number.
    - (c) Location and arrangement of all major equipment along with the space allotted for servicing and maintaining the equipment.
    - (d) Ductwork using double lines.
  - (2) In addition to the layout drawings:
    - (a) Drawings and a narrative description of the method of control for all major equipment and systems.
    - (b) A schematic flow diagram for each major system.
    - (c) A tabulation with capacity of each major piece of equipment.
    - (a) An analysis of the utility systems containing calculations and economic studies on Form 2215, *Energy and Equipment Life Cycle Cost Analysis*, and Form 2238, *Thermal Load Estimate Calculations*.
- j. **Plumbing.** The design-build contractor must provide plumbing drawings showing the locations and general arrangements of all plumbing fixtures and major plumbing equipment. The design-build contractor must also submit narrative descriptions of the types of plumbing fixtures and equipment proposed for use. The design-build contractor must base the proposed plumbing system on functional and economic considerations.
- k. **Fire Protection.** The design-build contractor must summarize applicable code requirements, including fire zone, fire resistance requirements for major components, area and height limitations, standpipe and sprinkler coverage, and hazard classification. The design-build contractor must indicate the method of operation and alarm signaling features and describe special protection features and the extent of the fire protection system. The design-build contractor must obtain and include data such as hydrant flow tests, including static pressure, flow available in gallons per minute, associated residual pressure at the point of supply, and the size of the supply main. The design-build contractor must provide basic

---

information and calculations on the water supply, including its source. The design-build contractor must take advantage of provisions in applicable building codes that permit increases in building heights and area limits when sprinkler systems are installed.

- I. **Electrical.** The design-build contractor must provide all of the following for the proposed electrical system:
- (1) The design-build contractor must provide a narrative description of the following:
    - (a) Operation of the proposed electrical distribution system.
    - (b) Wiring methods and materials.
    - (c) Details of the proposed typical lighting fixtures for:
      - i. Offices.
      - ii. Workrooms.
      - iii. Platforms.
      - iv. Lobbies.
      - v. Exterior.

Selection of the proposed system must be based on the results of preliminary calculations and economic studies, using representative areas based as block area loads.

- (2) In addition to the narrative description, the design-build contractor must provide:
  - (a) Single-line diagrams of the electrical distribution system.
  - (b) Single-line diagrams of the fire alarm system.
  - (c) Single-line diagrams of the telephone system.
  - (d) Single-line diagrams of the sound system.
  - (e) Single-line diagrams showing how the electrical and telephone systems tie in with local utilities.
  - (f) Drawings showing proposed locations of major items of electrical equipment and LOGs.
  - (g) Partial layouts of typical lighting in major areas showing proposed fixtures, spacing, and illumination levels (in foot-candles).
  - (h) Drawings showing power locations and details for Postal Service specialized equipment.
- (3) The design-build contractor must furnish written confirmation of the availability of service and the rates from the local utilities.
- (4) The workroom and platform illumination levels must be calculated and compared with and without at least two levels of daylight.

- 
- (5) The design-build contractor must perform a life-cycle cost evaluation for lighting areas by using natural light instead of man-made light.

**Note:** The electrical design (narrative and drawings) must include structured wiring information.

- m. **Other Utility Systems.** The design-build contractor must provide descriptions, locations, tables, and calculations for all miscellaneous building and VMF equipment such as compressed air systems, lifts, mechanical door operators, dock ramps, scales, and the like.
- n. **Mechanization.** The design-build contractor must update and further develop the mechanization design submittal that was included as part of the preconcept design. As part of the concept design, on projects involving mechanization the design-build contractor must provide the following:
- (1) Plan views and elevations of the mail handling system, with all mail processing equipment located dimensionally to the nearest column centerline.
  - (2) Complete drawings of building mechanization requirements, including floor openings and wall openings. Coordinate opening requirements with architectural plans. In establishing openings, indicate conveyor slopes to the nearest minute; on final elevation drawings, however, indicate conveyor slopes to the nearest degree.
  - (3) Layouts, calculations, and design studies required for the preparation of items (1) and (2) above.
  - (4) List of power panels, with the following data for each panel:
    - (a) The panel designation in the format MP-XXX, where X equals the panel number.
    - (b) The location by floor and column coordinates.
    - (c) The total connected load (horsepower and amperes).
    - (d) Total amperes and horsepower of largest motor connected to this panel.
    - (e) The number of circuit breakers required, including spares.
    - (f) A tabulation, by circuit breaker, of the conveyors and other equipment connected to each circuit breaker.
  - (5) Conveyor schedules, including conveyor numbers, conveyor width, types of mail handled, live load, approximate true conveyor length, conveyor speed, rise or drop in elevation, horsepower, diameter of pulleys, special equipment in conveyors, and information as required for the sorting machines and deflectors.
  - (6) Electrical control drawings.
  - (7) Copies in rough draft, double-spaced, of Specification Sections 17.8, 17.9, and 17.10. Section 17.8 must include all special requirements of the mechanization, including requirements for the mechanization maintenance manual. On the basis of the complexity of the mechanization, determine the applicability of USPS-STD-101B, *Preparation of Advanced Maintenance Series Handbooks (For Fielded Production Run Postal Systems and*

---

*Equipment*), or USPS-M-378B, *Preparing Maintenance Series Handbooks (For Fielded Production Run Postal Systems and Equipment)*, or portions of these standards and determine the applicability of any other special maintenance manual requirements. Include these requirements in Section 8 of the project specifications.

- (8) When applicable, include a copy of USPS-STD-101B and USPS-M-378B in the project construction set. Coordinate with the contracting officer to ensure that sufficient copies will be on hand at all times to meet construction needs.
- o. **Environmental Studies.** The Postal Service provides the design-build contractor with copies of the required environmental studies (i.e., environmental impact statement, environmental assessment, wetland impact study, floodplain impact study, hazardous waste site assessment, etc.). The design-build contractor must assess all mitigation measures identified in the environmental studies and ensure that all items identified in these studies as having an adverse environmental effect are mitigated by the concept design. The design-build contractor must ensure that all permits listed in the environmental studies as being required for the project are obtained.

The design-build contractor may be required to provide environmental studies. Environmental studies are additional services (optional) to the base design-build contractor scope of services and are further defined in section 1-2 of this part.

- p. **Code Analysis.** The design-build contractor must update the code analysis submitted during the preconcept design to justify solutions selected as being economical and meeting code requirements. The design-build contractor must provide a drawing showing the code analysis, defining the basis for design.

The design-build contractor must update the fire protection plans, providing a summary of the code provision used on the drawings.

- q. **Building Area Tabulations.** The design-build contractor must update the building area tabulations and the small-scale plans included in the preconcept design submission to reflect all changes and refinements.
- r. **Building System Comparisons.** The design-build contractor must provide comparisons of various building systems being investigated for recommendation. The building system comparisons must include:
- (1) At least three exterior wall systems with a minimum thermal mass of 70 pounds per square foot and a 0.07 maximum "U" value.
  - (2) At least three roof membrane and insulation systems with a 0.05 maximum "U" value.
  - (3) At least three structural framing systems.
  - (4) Structural bay spacing alternatives.
  - (5) Alternative viable foundation systems.
  - (6) Alternative viable roof heights (including a multiple-level versus single-level roof comparison).
  - (7) Typical sections and details of each alternative, showing clear ceiling heights, foundations, pavements, HVAC, electrical, plumbing, and so forth.

- 
- (8) Analyses and calculations of the functional use and cost for each building system.

The building system comparisons must also substantiate the selection of window types, roof colors, exterior building colors, and the like, taking into account energy savings.

- s. **Energy Conservation Analysis.** The design-build contractor must update the energy conservation analysis provided in the preconcept design submission. For each system or feature recommended, provide a life-cycle cost (LCC) analysis together with climatic and building energy consumption analyses to substantiate the recommendations. (Provide analyses for a minimum of three different systems.) The design-build contractor must also then provide an overall energy analysis, which may be accomplished with a recognized microcomputer analysis program. The report developed as a result of the analyses must be coordinated with the deliverables, including Forms 2215 and 2238, as required by Postal Service criteria.

---

Handbook AS-503,  
Module 2A, Chapter 4,  
Appendix

---

- t. **LCC Analysis.** The design-build contractor must submit a 20-year LCC analysis to justify the selection of the exterior wall system, roof membrane and insulation system, multiple- or single-level roof height, and energy-conserving features or systems. The design-build contractor must follow the National Institute of Building Sciences (NIBS) Handbook 135, *Life Cycle Cost Manual for the Federal Energy Management Program*, including its appendices. The design-build contractor must fully describe each system studied and submit all supporting calculations with the completed LCC analysis work sheets. The design-build contractor must supplement cost figures with a comparison of the system analyzed.

- a. **Specifications.** The design-build contractor must modify and edit the *Master Specification* on the *Building Design Standards* CD-ROM with the specific requirements of each project. For the concept design phase submission, the design-build contractor must provide the following:

---

Handbook AS-506,  
Part I, 3-1.1d.

---

- (1) A detailed table of contents of all the specifications (by title and number) that are to be included in the complete specifications.
- (2) A draft of all Division I, General Requirements (edited and customized from the *Master Specification, Building Design Standards*).
- (3) A complete list of Postal Service-furnished equipment.
- (4) A list and draft of all proposed supplementary conditions.
- (5) A working draft of the technical specifications, Divisions 2 through 17, in outline form, that demonstrates that the design-build contractor is in the process of editing and customizing the *Master Specification* for specific project requirements.

The design-build contractor is responsible for coordinating the contract specifications so that they do not repeat or conflict with supplemental conditions, postal provisions, or contract clauses.

- v. **Cost Estimate.** The design-build contractor must update and refine the cost estimate submitted at the preconcept design review meeting. All data necessary to fully support the cost estimate must be provided. Cost estimates must be provided for alternative systems in order to justify the economy of the selected systems such as exterior walls, structural framing, foundations, roofing, pavements, mechanical and electrical systems, and so forth. The cost estimate

---

must clearly indicate the date on which the estimate was prepared. The cost estimates must be prepared in a Construction Specifications Institute (CSI) format in a form acceptable to the Postal Service.

- w. **Project Scheduling.** The design-build contractor must comment on the construction schedule as well as the overall project schedule by reviewing the specific project requirements including materials, time of year of construction, and potential delays. In addition to the narrative schedule comments, the design-build contractor must provide a bar chart project schedule that is shown in weeks.

### 2-2.2.3 Concept Design Review Meeting

The concept design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The design-build contractor must have in attendance the same disciplines that attended the preconcept design review meeting.

The design-build contractor must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the concept design review meeting.

## 2-2.3 Intermediate Design Phase

### 2-2.3.1 General

The intermediate design consists of at least 70-percent completed working drawings and other documents, including a detailed cost estimate, complete updated design analyses and calculations, and updated energy analysis indicating compliance with the design energy budget. The intent of the intermediate design phase is to ensure that the working drawings and specifications are proceeding in a timely manner and that the requirements set forth in the design-build contractor contract documents and previous review comments are being correctly interpreted.

As stated in Part I, section 1-3.2, the Postal Service may review the design for value engineering, if deemed necessary, and will advise the design-build contractor of findings to be incorporated into the intermediate and/or final designs.

### 2-2.3.2 Submission Requirements

The design-build contractor must submit the intermediate design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the intermediate design review meeting. The intermediate design submission must be complete and contain all of the required material. The design-build contractor must continue with the development of the final documents during the Postal Service review period.

The intermediate design consists of the following minimum components:

- a. **Site Restrictions and Improvements.** The design-build contractor must finalize the site restrictions and improvements information submitted at the concept design phase. All site restrictions and improvements necessary for the project, including all necessary off-site improvements, rights-of-way, easements, permits, and the like, must have been identified by the intermediate design and must be filed with the appropriate state, city, or local authority.

---

The design-build contractor must furnish information concerning the status of all easements, permits, and so forth, at the intermediate design review. The design-build contractor must state the cost of permits (and the lead time for obtaining permits and action taken to obtain them to avoid delays during project construction).

- b. **Civil Design.** The design-build contractor must update and finalize the civil design submitted at the concept design phase, as follows:
- (1) The civil design must contain, as a minimum, all components and features from the concept design submission including:
    - (a) Stormwater.
    - (b) Streets.
    - (c) Driveways and parkways.
    - (d) Pavement design.
    - (e) Grades.
    - (f) Site utilities.
    - (g) Miscellaneous features.
    - (h) Vicinity map.
    - (i) Easements.
    - (j) Legal descriptions.
    - (k) Off-site conditions.
    - (l) Subsurface soils investigation report, including boring logs.
  - (2) The design-build contractor must submit a written statement at the completion of the intermediate design review and before the final design submission stating that:
    - (a) The scope and quality of the topographic, site data, and subsurface investigations are adequate, accurate, and up to date.
    - (b) All changed conditions are reflected in order to ensure that the latest and current information is included in the construction document.
- c. **Site Plan.** The design-build contractor must update and finalize the topographical site plan submitted at the concept design phase.
- d. **Architectural Floor Plans.** The design-build contractor must update and fully develop the floor plans submitted at the concept design phase.
- e. **Additional Architectural Plans and Designs.** In addition to the architectural floor plans, the design-build contractor must update and fully develop the following information submitted at the concept design phase:
- (1) **LOG Plan (if applicable).** The design-build contractor must obtain Postal Service approval before designing any penetrations or depressions (mechanical, electrical, plumbing, structural, mechanization, and the like) through the LOGs that would limit clear headroom to less than 6 feet, 6 inches inside.

---

The design-build contractor must show the location of all penetrations or depressions on the LOG plan and provide adequate details. The design-build contractor must note on the drawings that no other penetrations are permitted without prior approval from the contracting officer.

- (2) **CCTV Camera and Surveillance Plan (if applicable).** The design-build contractor must update and fully develop the CCTV camera and surveillance plan submitted at the concept design phase.
  - (3) **Lobby Plan.** The design-build contractor must update and fully develop the lobby plan submitted at the concept design phase.
  - (4) **Roof Drainage Plan.** The design-build contractor must update and fully develop the roof drainage plan submitted at the concept design phase, including detailing all roofing systems, roof drainage, roof penetrations, and roof-mounted equipment.
  - (5) **Finish Schedule.** The design-build contractor must update and fully develop the finish schedule submitted at the concept design phase. The finish schedule must show finishes and colors in all areas.
  - (6) **Color and Material Panel.** The design-build contractor must update and fully develop the color and material panel submitted at the concept design phase.
  - (7) **Fire Exit Plan With Code Summary.** The design-build contractor must update and fully develop the fire exit plan, including the code summary, that was submitted at the concept design phase. The design-build contractor is responsible for submitting the fire exit plan to and obtaining approval from any governing organization.
  - (8) **Casework Drawings.** The design-build contractor must prepare casework drawings and details necessary to fully define and describe the casework requirements.
  - (9) **List of Postal Service-Furnished Equipment.** The design-build contractor must update and fully develop the list of Postal Service-furnished equipment that was submitted with the concept design.
- f. **Elevations and Perspective Sketches.** The design-build contractor must provide fully developed building elevations of all views showing vertical dimensions, exterior materials, window and door openings, and the massing of the buildings.
  - g. **Sections and Details.** The design-build contractor must update and fully develop wall sections for all walls and their details to the degree that the full intent of the design is obvious.
  - h. **Structural.** The design-build contractor must fully develop all structural systems and substantiate them with appropriate calculations and economic analyses. Foundation, structural floor, and roofing framing plans and all subsurface features, such as pilings, must be developed to the extent that the full intent of the design is apparent.
  - i. **Space Conditioning.** The design-build contractor must provide a fully developed space conditioning system design including descriptions, diagrams, and sequence of operation to the following minimum extent:

- 
- (1) Provide a complete schedule of all equipment shown on the drawings.
  - (2) Provide equipment room layouts indicating all equipment, piping, duct work, and access space required for maintenance.
  - (3) Indicate zoning controls, duct sizes, and air quantities.
  - (4) Show the final version of the automated building control systems, including fire detection and alarm systems.
  - (5) Provide written confirmation from a fuel supplier of fuel availability and rates.

The design-build contractor must substantiate the designs with up-to-date calculations for all rooms, zones, and building blocks.

The design-build contractor must prepare a psychometric chart describing the thermodynamic properties of each air-handling unit.

- j. **Plumbing.** The design-build contractor must provide plumbing and fuel system drawings showing the locations and arrangements of all fixtures and equipment of the complete system. Plan and riser diagrams must show the location and size of hot and cold water piping and the waste and vent system. The design-build contractor must provide a plumbing fixture schedule which also lists the location and type of fixtures and pipe sizes.

The fuel system drawing must identify the location and arrangements of the complete system.

- k. **Fire Protection.** Generally, complete automatic sprinkler drawings need not be developed. The fire protection drawings must show the automatic sprinkler risers and fire zones and must be designated to comply with applicable codes. The fire protection drawings must also show all spaces that require fire protection.

- l. **Electrical.** The design-build contractor must update and fully develop the electrical design submitted during the concept design phase, as follows:

- (1) The electrical design must include descriptions and updated supportive calculations for all power, lighting, grounding, communications, and alarm systems.
- (2) The design-build contractor must provide site plans, elevations, schedules, and detail drawings sufficient to reflect the overall facility design and to locate all equipment.
- (3) The design-build contractor must provide final single-line diagrams of the electrical distribution and communications systems showing tie-ins with local utilities.
- (4) The electrical design must include elevations of switchboards, motor control centers, and other major equipment showing the arrangement of equipment.
- (5) The design-build contractor must provide a short-circuit and fully coordinated circuit-interrupting device summary that includes all analyses and calculations.

- m. **Other Utility Systems.** The design-build contractor must update and fully develop the following items:

- 
- (1) The design-build contractor must provide fully developed drawings and supporting calculations for all miscellaneous building and VMF equipment such as scales, automatic door operators, dock ramps, and compressed air.
  - (2) The design-build contractor must provide complete plans, riser diagrams, schedules, sizes, and locations for VMF equipment and systems.
  - (3) The design-build contractor must provide fully developed plans and elevations of LOG utility systems as applicable.
  - (4) The design-build contractor must identify and take action to obtain power, sewer, gas, or water services requiring long lead times for design or construction by others (i.e., utility companies). If permits or fees are required, the design-build contractor must identify them and obtain fees for them from the Postal Service.
- n. **Mechanization.** The design-build contractor must accomplish the following items related to the mechanization design:
- (1) The design-build contractor must revise, correct, and complete the mechanization design submitted during the concept design phase, as follows:
    - (a) Conveyor schedules.
    - (b) Conveyor plans.
    - (c) Conveyor elevations.
    - (d) Dust pan location.
    - (e) Mechanization equipment layout.
    - (f) Central drawing details.
  - (2) The design-build contractor must advise the project manager in writing of all changes made to previously submitted or accepted drawings or specifications.
  - (3) The design-build contractor must provide fully developed mechanization load drawings and maintenance walkway, loader, and motor platform drawings. Mechanization load drawings must indicate both static and dynamic loads. The design-build contractor must ensure that this information is provided to the structural designer for consideration.
  - (4) On projects requiring the optional design-build contractor services for mechanization system descriptions, at the intermediate design phase the design-build contractor must provide the following:
    - (a) A detailed, complete outline of the mechanization systems' description.
    - (b) A rough draft of the first two sections of the text (General Facilities Information and Description of Systems).
    - (c) A description of the operation of one subsystem with full-size supporting drawings and illustrations.
- o. **Code Analysis.** The design-build contractor must update the fire protection and code analysis summary submitted during the concept design phase. The code

---

analysis summary must include all components and features from the concept design submission including, but not limited to,:

- (1) Code listing.
  - (2) Small-scale floor plan.
  - (3) Alternatives.
- p. **Building Area Tabulations.** The design-build contractor must update the small-scale floor plans for the building and area tabulations that were submitted during the concept design phase to reflect all changes and refinements. The building area tabulations must include all components and features from the concept design submission including, but not limited to,:
- (1) Single-line floor plan.
  - (2) Building area tabulation lists.
  - (3) Building areas and calculations.
- q. **Energy Conservation Analysis.** The design-build contractor must update and fully develop the energy conservation analysis submitted during the concept design phase. The updated energy conservation analysis must demonstrate that it complies with the design energy budget.
- a. **Specifications.** The design-build contractor must modify and edit the *Master Specification* on the *Building Design Standards* CD-ROM for the specific requirements of each project. The intermediate design phase submission of the specifications must be developed to a degree comparable to the drawings and must reveal the full intent of the design-build contractor's design in relation to all proposed systems, materials, and special design considerations. For the intermediate design phase submission, the design-build contractor must provide the following:
- (1) A detailed table of contents of all the specifications (by title and number) that are to be included in the project specification manual.
  - (2) A final, fully developed draft of all Division I, General Requirements (edited and customized from the *Building Design Standards, Master Specification*).
  - (3) A complete list of Postal Service-furnished equipment.
  - (4) A fully developed section identifying all proposed supplemental conditions.
  - (5) A substantially complete draft of Divisions 2 through 16, Technical Specifications, developed to a degree comparable to the drawings.
  - (6) Fully developed Division 17, Mechanization Specifications, in final form.

The design-build contractor is responsible for coordinating the contract specifications so that they do not repeat or conflict with supplemental conditions or postal provisions or contract clauses.

The Postal Service is not required to obtain building inspection or occupancy permits. The design-build contractor must determine the cost of all other fees and permits (connection fees, tap fees, off-site inspection fees, special community development fees, and so forth) and include a list of all such fees and charges to be paid by the contractor in *Master Specification* section 01115, Leased Building [Design-Build] Requirements, or section 01116, General Construction.

---

The specification must state that the contractor is to pay all costs for utilities (gas, water, and electricity) used during final Postal Service tests of completely installed systems and while training Postal Service personnel.

For facilities equipped with a card access system, the submission must specify that the quantity of access cards supplied by the contractor is to be 1.5 times the number of the initial complement of postal employees scheduled to work at the facility.

- s. **Cost Estimate.** The design-build contractor must update and refine the cost estimate submitted during the concept design phase. All data necessary to fully support the cost estimate must be provided. The cost estimate must be formatted the same as the estimates submitted in the preconcept and concept design submissions to permit direct comparison.

The cost estimate must be a "material and labor quantity takeoff" type. The estimate must include separate prices for labor and material, and summary sheets listing the estimated costs for the major building systems for each building and separate costs for major systems in site work. The cost estimate must be as detailed as possible based on the design information available.

- t. **Project Scheduling.** The design-build contractor must update the project schedule provided at the concept design submission and submit all recommendations necessary for scheduling long-lead time construction or procurement items.
- u. **Small, Minority-Owned, and Woman-Owned Business Contracting Goals and Source List.** Provide recommended small, minority-owned, and woman-owned business contracting goals and the names, addresses, and specialties of such businesses located in the general area of the project.

### 2-2.3.3 Intermediate Design Review Meeting

The intermediate design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The design-build contractor must have in attendance the same disciplines that attended the concept design review meeting.

The design-build contractor must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the intermediate design review meeting.

## 2-2.4 Final Design Phase

### 2-2.4.1 General

The final design phase submission must consist of a 100-percent completed set of drawings, specifications, analyses, and calculations that are signed, sealed, and ready for completing the work. The final design is to complete, compile, and coordinate the overall design that has progressed through the previous design phases. The final design includes completing the requirements outlined in all previous design phases for each element whether or not it is specifically mentioned in this phase.

The design-build contractor is responsible for coordinating all design documents and ensuring the accuracy of the entire overall design.

---

### 2-2.4.2 Submission Requirements

The design-build contractor must submit the final design to the Postal Service offices designated by the project manager in sufficient time to allow for it to be reviewed before the final design review meeting.

The Postal Service does not sign the completed documents. The design-build contractor must submit a final design package that is complete without further review and which is expected to result in a construction contract without claims or changes. The design-build contractor is to sign and seal all documents, which certifies that the design-build contractor has fully complied with all federal legislative as well as applicable state and local code requirements.

The final design consists at a minimum of the following completed components:

- a. Site restrictions and improvements.
- b. Civil design, as follows:
  - (1) Stormwater.
  - (2) Streets.
  - (3) Driveways and parkways.
  - (4) Pavement design.
  - (5) Grades.
  - (6) Site utilities.
  - (7) Miscellaneous features.
  - (8) Vicinity map.
  - (9) Easements.
  - (10) Legal descriptions.
  - (11) Off-site conditions.
  - (12) Subsurface soils investigation report, including boring logs.
- c. Site plan.
- d. Architectural floor plans.
- e. Additional architectural plans and designs, as follows:
  - (1) LOG plan and designs (if applicable).
  - (2) CCTV camera and surveillance plan (if applicable).
  - (3) Lobby plan.
  - (4) Roof drainage plan.
  - (5) Finish schedule.

---

(1) Display panel showing chips of paint colors, samples of materials, and colors for carpets, paneling, and resilient flooring tile proposed for interior finishes of the project. See 2-2.3.2e(6).

 Clause FB-220

(1) Display panel with samples of exterior face brick, trim, and metal wall colors. See 2-2.3.2e(6).

 Clause FB-220

(2) Fire exit plan with code summary.

(3) Casework drawings.

(4) Completed list of Postal Service-furnished equipment.

The design-build contractor must furnish a separate signed statement on the firm's letterhead certifying that the facility has been designated to be in compliance with Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*.

f. Elevations and perspective sketches.

g. Sections and details.

h. Structural design.

i. Space conditioning design.

j. Plumbing design.

k. Fire protection design.

l. Electrical design, including short-circuit and fully coordinated circuit-interrupting devices study.

m. Designs for other utility systems.

n. Mechanization design, including all Postal Service-furnished drawings. When the optional design-build contractor service for a mechanization system description manual is required, a draft in final format is required with the final design phase submittal. Within 30 days after approval of the final draft or as outlined in the design-build contractor contract scope of work, the design-build contractor must provide the completed manuals and prints of all plans of the workroom floor in accordance with the scope of work.

o. Code analysis, as follows:

(1) Code listing.

(2) Small-scale floor plan.

(3) Alternatives.

p. **Building Area Tabulations.** The design-build contractor must submit the final building and site area tabulations. The design-build contractor must correct the small-scale floor plan and space summary tabulations provided with the intermediate design submission to accurately reflect the final construction documents. The design-build contractor must include a site summary showing the area of building coverage, paving for parking and maneuvering, ramps, landscaping, total site area, and separate site areas allocated for the GMF and the VMF. The areas are calculated and listed as follows:

- 
- (1) The area of the site allocated to the VMF is the sum of the following areas:
    - (a) Footprint of the VMF structure.
    - (b) Paved areas specifically allocated to the VMF, such as parking, fueling island, and maneuvering areas.
    - (c) VMF employee parking spaces located within the main employee parking lot (allocated at 300 square feet per car).
    - (d) The area of drives provided solely for the VMF and one-half of the area of drives designated for the common use of the GMF and VMF.
    - (e) A proportion of the total landscaped areas, based on the ratio of the sum of the areas from the four items above to the total used site area (excluding landscaped areas).
  - (2) The area of the site allocated to the GMF is the remainder of the entire site after the site allocated to the VMF is subtracted.
  - (3) On the site plan, include updated site area tabulations that reflect changes in Postal Service-owned land, such as land to be given to municipalities for street access, rights-of-way, easements, and so forth. Place a note on this drawing stating that all site and building area tabulations shown are for Postal Service reference only and that the contractor is responsible for calculating the quantity and area.
- q. Specifications.
- a. **Cost Estimate.** The final cost estimate must be developed as a “detailed quantity survey” type with breakdown of material and labor prices — not a readjustment of preliminary cost estimates. The design-build contractor must:
- (1) Include separate prices for labor and material, and summary sheets listing the estimated costs of the major building systems for each building and separate costs for major systems in the site work.
  - (2) Revise the final cost estimate as required based on Postal Service final review changes and comments.
  - (3) Submit the revised final estimate for Postal Service approval at least 10 days before the planned construction date.
  - (4) Provide a construction cost estimate that is within 10 percent of the probable cost.
- s. Project schedules.
- t. Small, minority-owned, and woman-owned business contracting goals and source list.
- u. List of referenced publications.
- a. Complete unabridged design computations actually used by the designers. All calculations must be legible, self-explanatory, and indexed.

 Clause FB-220

 Clause FB-220

The cover sheets of the design documents must contain the signature and registration stamps or seals of the engineer responsible for the work.

---

The design-build contractor must advise the project manager in writing of all changes to previously accepted design phase submittals.

The design-build contractor must retain the original tracings, specifications, and/or electronic media for printing the contract documents unless otherwise directed by the contracting officer.

### 2-2.4.3 Final Design Review Meeting

 Clause DB-345

The final design review meeting will be held at the office of the contracting officer or a location as designated by the contracting officer. The design-build contractor must have in attendance the same disciplines that attended the intermediate design review meeting.

The design-build contractor must mail the submission material to the Postal Service offices designated by the project manager in sufficient time to allow for it to be adequately reviewed before the final design review meeting.

### 2-2.5 Submission Checklist

The checklist in Exhibit 2-2.5 is to be completed by the Postal Service, based on the scope and the magnitude of the project, to identify the design-build contractor's scope of work. This checklist identifies the minimum design components that the design-build contractor is required to submit.

## 2-3 Design-Build Contractor Modifications of Design

---

Changes in the scope of work or Postal Service requirements not covered in the initial design-build contractor contract are considered to be contract modifications in accordance with Clause B-2, Changes, in the design-build contractor contract.

 Clause B-2

Modifications required before the award of the construction contract are prepared by the design-build contractor when the contracting officer accepts the proposed modification in writing. The design-build contractor must prepare the necessary design drawing and specification revisions and must perform all applicable services related to the modification as though they were contained in the original scope of work.

The design-build contractor must furnish an estimate of the effect the modification may have on the project construction cost and scheduling.

Fees for these services will be based on the rates negotiated and included in Clause FB-290, Design Services, at the time of design-build contractor contract award. Rates include all costs, direct and indirect, and overhead and profit.

 Clause FB-290

**Submission Checklist**

**Design Phase Submission Checklist  
Design-Build Contractor Services**

Design Submittal	Preconcept Design Phase		Concept Design Phase		Intermediate Design Phase		Final Design Phase	
	Required	Not Required	Required	Not Required	Required	Not Required	Required	Not Required
<b>PLANS/DRAWINGS</b>								
<b>Site Plans</b>								
Site Utilization								
Site Restrictions and Improvements								
Civil Design								
Site Plan								
<b>Architectural</b>								
Floor Plans								
Elevations and Perspectives								
Sections and Details								
Lookout Gallery Plan								
CCTV Camera and Surveillance								
Lobby Plan								
Roof Drainage Plan								
Finish Schedule								
Color and Material Panels								
Fire Exit Plan With Code Summary								
Casework Drawings								
Certification Letter for Compliance With Handbook RE-4								
Complete List of Postal Service-Furnished Equipment								
<b>Structural</b>								
<b>Space Conditioning (HVAC)</b>								
<b>Plumbing</b>								
<b>Fire Protection</b>								
<b>Electrical</b>								
<b>Other Utility Systems</b>								
<b>Mechanization</b>								

**Submission Checklist**

Design Submittal	Preconcept Design Phase		Concept Design Phase		Intermediate Design Phase		Final Design Phase	
	Required	Not Required	Required	Not Required	Required	Not Required	Required	Not Required
<b>ANALYSIS/TABULATIONS/ CALCULATIONS</b>								
Professional Services Estimating Sheets								
Environmental Studies								
Code Analysis Report								
Building Area Tabulations								
Building System Comparisons								
Energy Conservation Analysis								
Environmental Policy								
Life-Cycle Cost Analysis								
<b>SPECIFICATIONS</b>								
<b>COST ESTIMATES</b>								
<b>SCHEDULES</b>								
<b>SMALL, MINORITY-OWNED, &amp; WOMAN-OWNED BUSINESS CONTRACTING GOALS AND SOURCE LIST</b>								
<b>LIST OF REFERENCE PUBLICATIONS</b>								
<b>COMPLETE DESIGN COMPUTATIONS</b>								

---

## 2-4 Additional Design Phase Services (Options)

A separate cost proposal must be prepared for each service described in sections 2-4.1, 2-4.2, 2-4.3, 2-4.4, and 2-4.5, and when these additional services (options) are included in Section A, Items and Prices, of the design-build contractor contract. Each item includes all overhead, profit, and costs (direct and indirect), including design-build contractor administration and technical support costs, necessary to complete the services described. The design-build contractor will not be compensated for optional design phase services unless they are included in the design-build contractor's contract.

The optional services described in this section only apply when specific project requirements are more demanding than those covered in all the sections of 2-2, Design Phase Services. Some of the optional design-build contractor design phase services are required under the base scope of design-build contractor services to a more limited extent.

### 2-4.1 Perspective Drawing

The design-build contractor must provide a 20-inch x 30-inch perspective drawing in color showing the building to its best advantage. The drawing must be capable of being used for producing photographic prints of sufficient contrast to ensure good newsprint reproduction. Also provide a negative and six 8-inch x 10-inch glossy black-and-white prints and two 35-millimeter color slides of the design-build contractor rendering. The design-build contractor must provide the original perspective drawing and two copies that are to be matted, glazed with clear nonglare glass, framed, and prepared for hanging. The original and one copy must be forwarded to the appropriate facilities service office (FSO) or major facilities office (MFO). One copy is to be forwarded to the plant manager.

### 2-4.2 Supplementary Drawings

The design-build contractor must provide the following drawings:

- a. **Postal Service-Furnished Property.** Prepare a drawing of box and service lobbies and an elevation of the post office boxes. Show the location and number of under-counter items and self-service items, and a plan and elevation indicating the location of post office box modules. Provide a table of all property that is furnished by the Postal Service and installed by the contractor, giving the following information:

Name and Description	No.	Quantity	Misc.	*Date Required
----------------------	-----	----------	-------	----------------

\*This column is to be left blank and filled in by the Postal Service with dates furnished by the construction contractor.

A checklist of Postal Service-furnished property is provided by the Postal Service as required.

- b. **Outline Floor Plan (Grid).** Provide an outline floor plan at 1/8 inch = 1 foot square with a 1/4-inch background grid. This drawing is for Postal Service operational

---

planning. Number all rooms and spaces on this plan and show all mechanization located less than 7 feet 6 inches above the finished floor.

- c. **Major Milestone Flowchart.** Provide a major milestone flowchart for construction unless directed otherwise by the contracting officer during negotiations. Show the sequence, starting and completion dates, and duration of each major activity, including the mechanization. Scheduling must be in days, with the date of the notice to proceed as the starting date for the chart. This flowchart is intended only as a guide and an aid for Postal Service program planning.

### 2-4.3 Mechanization Systems Description Manual

 Clause DB-360

The design-build contractor must provide a systems description manual in accordance with the scope of work for fixed mechanization, "Systems Description." This service is required as determined by the Postal Service for certain projects having fixed mechanization.

### 2-4.4 Roofing Consultant

Provide the services of a roofing consultant who is thoroughly qualified in the design, construction, observation, and testing of all types of roofing systems and materials. The responsibilities of this consultant include:

- a. Reviewing specifications, drawings, and other contract documents related to roofing.
- b. Critiquing and commenting on the design, including sketches and alternative details for consideration by the design-build contractor and the Postal Service.
- c. Working with the design-build contractor in developing alternative roof system comparisons and contract documents.
- d. Assisting in conducting preconstruction roofing conferences with the contracting officer's representative and design-build contractor.
- e. Reviewing the design-build contractor's submittals and providing comments to the contracting officer.
- f. Providing full-time, on-site observation of the construction to verify that it complies with the contract documents. Subject to the approval of the contracting officer, the full-time, on-site construction observation may be carried out by an assistant to the principal consultant. Primary reviews, attendance at meetings, and periodic supervisory visits are to be carried out by the principal consultant. Specific services include, but are not limited to, the following:
  - (1) Provide daily, weekly, and final observation reports to include photographs and other data substantiating the findings.
  - (2) Assist the contracting officer to conduct all progress meetings.
  - (3) Review roofing-related quality control reports submitted by the contractor.
  - (4) For built-up roofing, supervise the contractor when samples are cut. Review and analyze the laboratory reports and submit a report evaluating the findings to the contracting officer.

- 
- (5) For elasto-plastic roofing work, test the materials and workmanship as appropriate to verify that they meet the requirements of the specifications.
  - (6) When the contractor sends notice of completion of the roofing work, conduct a final on-site inspection and advise the contracting officer in writing when the work can be accepted.
  - (7) Charge construction observation fees on an as-needed, man-day basis. The consultant must submit, as a part of this proposal, an estimated length of time for roof installation.
- g. Completing a field evaluation of the existing roof system if a project involves an addition or substantial renovation to an existing building. This evaluation includes a visual examination, limited cut samplings for visual examination, and laboratory analyses of the cut samples. The consultant must provide a separate optional price for a nondestructive evaluation of moisture in the roofing system. The consultant must submit a written report with a summary of findings, list of recommendations, cost estimates, and all background data.

#### **2-4.5 Fire Protection Consultant**

The design-build contractor must provide the consulting services of a fire protection engineer. This person must be a full member of the Society of Fire Protection Engineers and must demonstrate equivalent qualifying experience or have an applicable state registration as a fire protection engineer.

---

This page intentionally left blank

---

## Part V Design-Build Contracts

### 3 Construction Phase Design-Build Contractor Services

---

#### 3-1 Design Services During Construction (Options)

---

##### 3-1.1 General

The requirements and services in this section include time and effort both in the office and at the work site. The services are to be performed by the design-build contractor's design agent. Costs for the requirements and services in this section are to be included in Section A, Items and Prices (work sheet), of the contract and are included in the design-build contractor's guaranteed maximum price (GMP).

If the Postal Service uses the services of a construction management firm, the design-build contractor's services will be coordinated by the postal construction manager. Responsibilities and limits of the authority of the construction management firm, vis-à-vis the design-build contractor, will be delineated in writing by the Postal Service.

Design-build contractor services during construction include reviewing contractor submissions, participating in meetings, interpreting contract documents, and inspecting the site a minimal number of times during the construction period. These services include time and effort both in the office and at the work site.

##### 3-1.2 Design-Build Contractor Support Services

The design-build contractor is to provide the following support services:

- a. **Support Services.** Support services supplied by the design-build contractor are services that are necessary to assist the field office and that require a trip to the field. These include, but are not limited to, the following:
  - (1) Participating in preconstruction and progress meetings, including preparation and distribution of meeting minutes.
  - (2) Interpreting and clarifying contract documents.
  - (3) Assisting the field office in maintaining quality control.
  - (4) Observing field installation conditions and materials in support of the resident engineer.
  - (5) Providing administrative support to the field office.

 Clause FB-205  
 Clause FB-292

---

Handbook P-2, 6-1.2

---

- 
- (6) Providing technical support to the field office during construction for preparing punch lists and accepting the facility.
  - (7) Participating in prefinal, safety, final, and warranty inspections.
  - (8) Supporting small, minority-owned, and woman-owned business subcontracting program services, including, but not limited to, the following:
    - (a) Monitoring the program, giving special attention to efforts at attaining goals, the plan for developing minority-owned business participation, the completeness and accuracy of the minority-owned business subcontracting reports, and so forth.
    - (b) Assisting in locating and developing potential minority-owned business subcontractors.
    - (c) At the preconstruction conference, reviewing the initial minority-owned business reports and giving timely recommendations or assistance as required to attain the best possible program start.
    - (d) Reviewing the status of the minority-owned business program at each monthly construction meeting and reporting about it.
    - (e) Maintaining an on-site minority-owned business subcontracting file containing copies of all reports, minutes of meetings, and other pertinent information.
    - (f) Administering the submittals of quarterly reports.

- b. **Home Office Support Services.** Home office support includes field support services identified in 3-1.2a above that the design-build contractor can accomplish in the office without the need for a trip to the field.

### 3-1.3 Submission Reviews and Approvals

The design agent for the design-build contractor must review all contractor submittals for compliance with contract documents with respect to field dimensions and clearances, relation to available space, and relation to work by the Postal Service or separate contracts. The design agent must review all submittals promptly so as not to delay the construction progress. The duration of all reviews must not exceed the time frames required in the construction contracts.

The design agent must inspect contractor and subcontractor manufacturing, assembling, and warehousing facilities when required by the Postal Service. The design agent must also accomplish factory acceptance tests and accept those items of equipment that require such acceptance in the mechanization specification. The dates of such visits and inspections must be approved by the Postal Service at least 1 week in advance in order to permit the Postal Service to participate.

The design-build contractor submittals that the design agent is required to review include, but are not limited to, those discussed in the following sections.

---

### 3-1.3.1 Shop Drawings, Product Data, and Samples

The design agent must review and approve or reject, on the basis of contract documents, all design-build contractor submittals of shop drawings, product data, catalog cuts, samples, manufacturer's installation instructions, color schedules, and similar information. In addition to the normal building shop drawings, the following mechanization shop drawings and samples require approval and submittal to the Postal Service:

- a. Building loads.
- b. Computer hardware and software reports.
- c. Belting and its certification.
- d. Equipment arrangement drawings.
- e. Elevation drawings.
- f. Plan views.
- g. Electrical elementary drawings of the mechanization systems.
- h. Control panel elementary drawings.
- i. Master electrical interconnection drawings.
- j. Distribution riser diagrams.
- k. Electrical, mechanical operations, and maintenance manuals.
- l. Spare parts list.
- m. Mechanization load drawings.

The design-build contractor must inform the contracting officer of all loads for specific equipment selection that exceed the loads on the contract documents before the CO grants approval for that equipment.

The design agent must review formwork and falsework drawings and schedules for their construction submitted by the design-build contractor. The design agent must require the design-build contractor to submit for review all the design drawings associated with formwork and erection of falsework. These submissions must be reviewed to ensure that the design-build contractor's design, per contract documents, is properly executed aesthetically and structurally, including the layout of forms, ties, embedded items, expansion joints, and water stops. These submissions must contain or be supplemented by a schedule for erecting and removing falsework, placing construction loads, and doing required testing. The design agent and design-build contractor must coordinate their efforts so that the integrity of the design-build contractor's design is maintained.

Shop drawings must be submitted to the design agent for review only after they have been checked and approved by the design-build contractor. Failure to show that the submittal has been thoroughly checked may result in the submittal being returned without being reviewed. When shop drawings reach the design agent's office, they must be stamped with the date and assigned the design agent's file number and an appropriate identifying number. The process of receiving, examining, approving, and distributing shop drawings is critical. The design agent must keep a record of the handling of these drawings during review to ensure the orderly processing of this work. The language recommended to stamp shop drawings is as follows:

- a. **Approved.** If “approved” is checked, fabrication, manufacture, or construction may proceed, provided the work complies with the contract documents. This action does not authorize changes to the contract sum unless they are stated in a separate letter or change order.
- b. **Approved as Noted.** If “approved as noted” is checked, fabrication, manufacture, or construction may proceed, provided the work complies with the design-build contractor’s notations and the contract documents. This action does not authorize changes to the contract sum unless they are stated in a separate letter or change order.
- c. **Rejected; Resubmit.** If “rejected; resubmit” is checked, fabrication, manufacture, or construction may *not* proceed. The contractor must submit to the design-build contractor a new shop drawing that has been corrected as marked (no additional changes are allowed). Any submission marked “rejected; resubmit” is not permitted on the site.

The design agent’s review of samples is only to ensure their conformance with the design concept of the project and compliance with the information given in the contract documents. The design-build contractor is responsible for dimensions that are to be confirmed and correlated at the site; for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences, and procedures of construction; and for coordination of the work of all the trades. The language the design-build contractor uses in any stamp or letter pertaining to the approval of samples must parallel the language used in shop drawing approval procedures as described in this section.

### 3-1.3.2 Coordination Drawings

The design agent must provide a general review of design-build contractor-submitted coordination drawings for their conformance to contract documents.

 *Building Design Standards, Master Specification 01310*

### 3-1.3.3 Schedule of Values and Progress Payments

The design-build contractor must submit to the contracting officer’s representative (COR) for approval the contract value breakdown on the initial schedule of values. The design-build contractor must ensure that the schedule of values is not “front-end loaded.”

 Clause 1-3

Handbook P-2, 6.4.5

### 3-1.3.4 Schedules

The design-build contractor is required to submit a construction progress schedule to the contracting officer. The form and complexity of the required schedule may vary depending on the size of the project. The design-build contractor must submit the initial progress schedule as well as the monthly schedule with the partial payment requests. The design-build contractor’s schedules must, at a minimum:

 Clause FB-246

 Clause B-59

Handbook P-2, 6.2.3

- a. Show the complete sequence of construction by activity, with dates for beginning and completing each element of construction.
- b. Identify each item by specification section number.
- c. Identify work of separate stages and other logically grouped activities.
- d. Provide subschedules to define critical portions of the entire schedule.

- e. Include conferences and meetings in the schedule.
- f. Show the accumulated percentage of completion of each item and total percentage of work completed as of the first day of each month.
- g. Provide a separate schedule of submittal dates for shop drawings, product data, and samples, including Postal Service-furnished products, and the dates that reviewed submittals will be required from the contracting officer as specified in Section 01330, Submittal Procedures.
- a. Coordinate the content with the schedule of values.

 Clause B-40

### 3-1.3.5 Spare Parts Data

The design agent must review the spare parts data to ensure that it complies with the contract documents and to ensure that the design-build contractor provides all necessary spare parts.

 Clause B-58

 *Building Design Standards, Master Specification 07180*

### 3-1.3.6 Warranties and Guarantees

The design agent must review all warranties and guarantees to ensure their compliance with the contract documents and to ensure that the design-build contractor provides all special warranties and guarantees that are required by the contract.

 Clause B-61

 *Building Design Standards, Master Specification 07180*

Handbook P-2, 6.3

### 3-1.3.7 Operation and Maintenance Manuals

The design-build contractor must assemble, coordinate, and index operation and maintenance (O&M) manuals for each utility system and major component of building equipment and maintenance manuals for the mechanization system. The design agent must ensure that the design-build contractor submits this material in sufficient time for review and approval, not less than 90 days prior to occupancy for the building manuals and as specified by USPS-M-5000 for the mechanization manuals. When it is determined during design that the facility is to be incrementally or partially occupied, the design-build contractor must supply O&M manuals for training and spare parts on-site in a timely manner for the affected areas. Training cannot begin until O&M manuals have been approved.

 *Building Design Standards, Master Specification 07180*

Handbook P-2, 6.3

The design agent must review the manuals for completeness and accuracy and recommend to the contracting officer whether or not to approve them. After Postal Service approval, the design-build contractor must prepare and deliver eight copies of all building manuals to the COR before the start of training. After Postal Service approval, the design-build contractor must deliver 20 copies of the mechanization maintenance manuals to the COR.

### 3-1.3.8 Test Reports

The design agent must review all test reports to ensure that they comply with the contract documents.

 *Building Design Standards, Master Specification 01450*

Handbook P-2, 6.3.1

The design agent must ensure that all required tests are completed at the proper time. The scheduling of the mechanization operational tests must be coordinated with the Postal Service at least 3 weeks in advance. The resident engineer or the mechanization resident engineer must be present for all tests.

---

### 3-1.3.9 Change Orders and Contract Modifications

The COR reviews, negotiates, and issues all contract modifications directed by the contracting officer. The design agent must :

- a. Review field conditions and prepare the necessary design drawings, specifications and revisions, and cost estimates.
- b. Upon Postal Service acceptance of the design-build contractor's cost proposal, prepare a contract modification on the Postal Service-provided form and submit it to the COR complete with all backup material and Form 4211, *Facility and Fixed Mechanization Project Contract*.
- c. Upon receipt of a signed copy of modifications, ensure that the design-build contractor's work is in accordance with the changed scope of work.

 Clause B-10  
 Clause B-21  
 Clause B-37

---

Handbook P-2, 6.5

---

### 3-1.3.10 As-Built Drawings and Specifications

The construction contract documents require the design-build contractor to provide drawings and specifications incorporating the revisions and changes made during construction up to acceptance of the project. The design-build contractor must revise the original contract documents to indicate as-built conditions, including revisions in site and building area tabulations.

The design-build contractor must furnish the Postal Service with a set of reproducible record drawings (as-built drawings) showing changes made during the construction process, based on the marked-up prints, drawings, and other data.

 Clause B-57

### 3-1.3.11 Electronic Format of As-Built Information

The design-build contractor must provide all record drawings (as-built drawings) to the Postal Service in electronic format that is compatible with design documents.

### 3-1.3.12 As-Built Photographs

When construction is completed, the design-build contractor must provide two color 8-inch x 10-inch photographs, six exterior views, and 20 exterior and interior views, including views that show the accessibility features of the building, to be submitted in digital format as directed by the CO. Coordinate the selection and location of these views with the contracting officer.

### 3-1.3.13 Closeout Certificates

The design-build contractor must provide the following certificates to the Postal Service:

- a. Handicapped accessibility.
- b. Lead-based paint.
- c. Asbestos-containing materials.

---

## 3-2 Modifications of Design During Construction

---

 Clause B-2

Changes in the scope of work or Postal Service requirements not covered in the initial design-build contractor contract are considered to be contract modifications in accordance with Clause B-2, Changes, in the design-build contractor's contract.

## 3-3 Field Services During Construction (Options)

---

 Clause FB-293

 Clause FB-206

### 3-3.1 Requirement

The requirements of this section apply if the contract includes in Section A, Items and Prices, an option for the design-build contractor to provide field support services to supervise and administer the project. The cost for these services is to be included in the GMP.

### 3-3.2 General Responsibilities

---

Handbook P-2, 6-1

---

The Postal Service must forward letters of current authorities and limitations to the Postal Service representatives who are involved in administering the contract to the design-build contractor. A Postal Service decision and signature are required for all contractual actions and must be accompanied by a written detailed justification and a specific recommendation by the construction administrator. The authorized representative (i.e., the construction administrator) is not authorized to revoke, alter, enlarge, relax, or release any requirements of the project drawings or specifications; to approve or accept any portion of the work; or to issue instructions (oral or written) that would be contrary to the contract documents. All dealings in terms of the contract must be made with the design-build contractor's representative and not with a subcontractor.

### 3-3.3 Contract Administration

Contract administration responsibilities are as follows:

- a. The design-build contractor is responsible for administering the contract. The design agent's duties, responsibilities, and limits of authority are shown below and in Sections G and H, Clauses, of the design-build contractor's contract. The design agent's representatives must discharge this responsibility by:
  - (1) Interpreting the contract documents and all changes made to them.
  - (2) Establishing the standards of workmanship.
  - (3) Judging the performance of the contractor (i.e., progress of the project as constructed) compared with that of the project as planned.
  - (4) Inspecting the work to determine the date of substantial completion.
  - (5) Informing the Postal Service about the status of the project relative to the above points.
  - (6) Conducting monthly progress meetings with the contractor and Postal Service representatives to evaluate progress of the work and to resolve problems related to contract compliance.

- 
- (7) Submitting the following reports to the COR:
- (a) The daily log each week.
  - (b) A weekly summary of progress of the work, problems noted, and actions taken.
  - (c) Minutes of the monthly progress meetings.
  - (d) A monthly status of modifications, along with the contractor's monthly payment requests, with the construction administrator's recommendation to the contracting officer.
  - (e) Quarterly minority-owned business reports.
  - (f) Monthly progress reports.
  - (g) Updated submittal log.
  - (h) Updated request for information (RFI) logs.
  - (i) Updated request for proposal (RFP) logs.
- (8) Processing construction modifications for the contracting officer's signature.
- b. The design agent is responsible for guarding against defects and deficiencies in the work. The design agent may reject work as failing to conform to the contract documents, a failure that will keep the building or any portion of it from having the intended appearance or being capable of full use in the manner and for the purpose for which it was intended.
  - c. The design-build contractor's construction administrator, who is assigned full-time to projects with a construction cost greater than \$8 million, must be responsible for directing the overall technical and managerial efforts during construction.
  - d. The design-build contractor must observe the progress of the work.
  - e. The design-build contractor must use due care and exercise reasonable skill and competence in observing the progress of the work and endeavoring to determine if it is proceeding in accordance with the requirements of the contract documents.
  - f. The design-build contractor must accomplish other activities as required by the COR.
  - g. A Postal Service decision or signature is required for all actions that could result in a modification or change to the contract, and must be accompanied with a written detailed justification and a specific recommendation by the design-build contractor.

### 3-3.4 Field Supervision

Field supervision responsibilities are as follows:

- a. **Field Office Staff.** The field staff must consist of personnel capable of supervising and observing the contractor's effort. The field staff must be located at the construction site. The number of field personnel, therefore, may vary according to the status of the construction and is subject to Postal Service approval.

- 
- b. **Field Office.** The physical space, furniture, utilities, and telephones are provided by the contractor as noted in Division 1, General Requirements, of the contract.
  - c. **Contractor Superintendence.** The design-build contractor is responsible for the supervision required to assemble materials and accomplish the labor to complete the project. The contractor is responsible for delivering to the Postal Service a project constructed in full conformance with the contract documents. The contractor's duty is to manage the construction progress so that contract requirements are met efficiently, expeditiously, and accurately.
  - d. **Safety and Security.** The design agent must review and monitor the design-build contractor's safety plan and security program. Safety precautions, programs, and requirements are specified in various safety codes or regulations.

### 3-3.5 Mechanization Coordination

On projects with fixed mechanization, the design-build contractor must provide the services of a mechanization resident engineer to provide specialized coordination, as follows:

- a. The design-build contractor must submit the resume of a fully qualified mechanization resident engineer to the contracting officer for approval, along with the resident engineer resumes, at the completion of the intermediate design review. It is anticipated that the following workdays will be required of the mechanization resident engineer:
  - (1) Projects with fixed mechanization valued up to \$500,000 should have a mechanization resident engineer on board a total of 6 days a month during the installation period.
  - (2) Projects with fixed mechanization valued between \$500,000 and \$1 million should have a mechanization resident engineer on board 12 days a month during the installation period.
  - (3) Projects with fixed mechanization valued in excess of \$1 million should have a mechanization resident engineer on board on a full-time basis during the installation period.
- b. The mechanization resident engineer must perform the following tasks:
  - (1) Continually monitor, observe, and evaluate the construction to ensure compliance with the specifications.
  - (2) Maintain, at the site, a copy of all shop drawings submitted for the record only and all approved shop drawings.
  - (3) Examine equipment as it arrives at the site. If it does not conform to specifications, inform the contractor that the equipment must not be installed until nonconformance is corrected.
  - (4) Maintain a list of equipment and systems that have been installed, e.g., conveyors, A-1, A-2, and so forth, or G series.
  - (5) Provide the COR with a copy of the monthly estimate of the completed mechanization, shown as a percentage of the total mechanization.

- 
- (6) When an item that does not conform (i.e., a defect) is discovered, record it on a punch list. When the same defect is repeated on more than one item of equipment, make only one notation that is referenced to all applicable equipment on the punch list.

The punch list must contain all construction defects noted by the mechanization resident engineer. Use a consistent format that includes at least the item number, defect description, date, and initials of the mechanization resident engineer or representative who certifies that the equipment has been corrected. Group the mechanization punch list items by discipline (e.g., mechanical and electrical controls).

Provide a copy of the current punch list to the COR at the time the contractor is notified to take corrective action. If a punch list item has already been corrected when the punch list is transmitted, the punch list must bear an appropriate notation or correction. The mechanization resident engineer must also keep a current copy of the punch list at the construction site for Postal Service inspection.

- (7) During construction, advise the contractor about questionable items being installed. In addition, when necessary coordinate with the COR to obtain technical support relating to questions that arise during construction.
- (8) Evaluate all contractor-originated change requests, proposals, requests for substitutions, and so forth. The mechanization resident engineer must transmit these with a recommendation to the COR as quickly as possible. The relative urgency of resolving the items must also be noted on these documents.
- (9) Notify the COR in advance when construction milestones will be achieved (when subsystems are installed and operational). Also notify the construction manager of all changes in test and construction milestones.
- (10) Arrange for participation in and report on all operational tests concerning the mechanization. Coordinate all observation and operational test dates with the COR.
- (11) Develop a final list of equipment defects during the final acceptance inspection.
- (12) As required, continue to monitor and evaluate the contractor's work through correction of all equipment defects.

### 3-3.6 Progress Meetings

The design-build contractor schedules and chairs all monthly progress meetings and other required project meetings and forwards the minutes of all meetings to the COR within 5 working days after each meeting. Before the monthly progress meeting, the design-build contractor must review compliance with contract requirements for labor standards, equal employment opportunity (EEO) policies, minority-owned business participation, payrolls, and safety. The findings must be reviewed at the progress meeting and included in the minutes of the meeting.

 *Building Design Standards, Master Specification 01310*

---

### 3-3.7 Records

A daily log must be maintained by the design-build contractor. This log must be neatly and accurately recorded. Enter the following items every day from the start to the completion of the project:

- a. **Progress Work.** Status for work in progress, new work started, and current and anticipated problems of scheduling and coordination.
- b. **Workforce.** The number of foremen and mechanics for each trade at the site.
- c. **Weather.** The high and low temperatures, precipitation, and a general description of the 24-hour weather conditions.
- d. **Telephone Calls.** All pertinent conversations.
- e. **Site Inspections.** The names, titles, and official capacity of all persons, with times and purposes of inspections noted. For Postal Service payment to be approved, design-build contractor personnel making authorized site inspections must sign in at the site.
- f. **Miscellaneous Items.** The design-build contractor must note all work or material in place that does not correspond with drawings or specifications, as well as all other problems or abnormal occurrences that have arisen during each day. Include notations of any particular lack of activity. Note corrective actions taken.
- g. **Accidents.** For all accidents involving bodily injury, lost time, or property damage, the design-build contractor must record the names of the injured and witnesses, conditions, extent of injury or damage, and time lost.

### 3-3.8 Construction Project File

The design-build contractor must maintain a construction project file, at the project site, that contains all appropriate and necessary records that document the execution of the construction contract. The field construction project file must consist of copies of the original documents, not the original documents. The field file must include, but is not limited to, the following categories (when applicable):

- a. **Initial submittals for approval:**
  - Schedule of values.
  - Construction schedule.
  - System construction estimate breakdown.
  - List of subcontractors.
  - Qualifications of testing agencies and project personnel.
  - Shop drawings submittal log.
- b. **Correspondence:**
  - Correspondence.

---

c. **Meeting minutes:**

- Preconstruction conference.
- Monthly progress meetings.
- Coordination meetings.

d. **Job Drawings:**

- Contract drawings.
- Supplemental clarification drawings.
- Drawings containing changes.
- Coordination drawings.

e. **Shop Drawings:**

- Shop drawings (those that have been reviewed and approved as final).
- Shop drawings log.
- Samples.

f. **Test reports:**

- Testing log.
- Tests.

g. **Substitution request:**

- Justification and determination, including:
  - Contracting officer's decision.

h. **RFI log:**

- RFI log.
- General contractor-initiated requests.

i. **Schedules:**

- Construction progress schedule.
- Equipment and procurement schedules.
- Submittal schedule.
- O&M training schedule.
- Occupancy schedule.

j. **Requisitions:**

- Approved requisitions for payment.

k. **Certified payrolls:**

- Certified payrolls.

l. **Monthly and quarterly submittals:**

- General contractor progress synopsis.
- Labor standards interview.
- Employee utilization report.

- 
- Stored material log and invoices.
  - Updated submittal log.
  - Subcontractor minority business enterprise (MBE) form.
  - Schedule of values.
- m. **Daily construction log:**
- Inspector's daily construction log.
  - Contractor's daily construction log.
- n. **Photos:**
- Photographs.
- o. **Modifications and/or change orders:**
- Form 4909, *Findings of Fact for Contract Modifications*.
  - Scope of modification.
  - Request for proposal, including:
    - Contractor's cost proposal.
    - Subcontractor's cost breakdown.
  - Estimate.
  - Reconciliation of estimates and proposal.
  - Analysis of schedules.
  - Negotiation record.
- p. **Claims:**
- Claims log.
  - Claims:
    - Estimate of claim.
    - Reconciliation of estimates and claim.
    - Analysis of schedules.
    - Negotiation record.
    - Contracting officer's final decision.
- q. **Small, minority, and woman-owned business subcontracting:**
- Initial subcontracting plan.
  - Reports.
  - Meeting minutes.
- r. **Construction reports:**
- Employee wages.
  - Progress.
  - Prefinal.
  - Final.

---

s. **Closeout documents and documentation:**

- Punch lists:
  - Prefinal punch list.
  - Final punch list.
- Final inspection and acceptance:
  - Contractor's request for inspection.
  - Prefinal inspection.
  - Final inspection report.
- Certificates:
  - Certification of Asbestos and Lead Paint Usage.
  - Certificate of lead-free water.
  - Certificate of Accessibility and Architectural Barriers Survey.
- Closeout:
  - Form 1233, *Project Financial Change/Completion Report*.
  - Inventory sheet.
  - Form 1233-A, *Project Completion Report (Mechanization Identification and Cost Allocation)*.
  - Form 1233-B, *Project Completion Report (Personal Property Identification and Cost Allocation)*.
  - Form 4209, *Project Authorization*.
  - Form 7307, *Contractor's Release*.
  - Notification to surety, project acceptance, and total contract amount.

t. **Project acceptance letter:**

- Project acceptance letter.

u. **O&M manuals:**

- List of required operations and maintenance manuals.
- One copy of each manual.
- List of attendees at operations and maintenance training.

v. **Warranties and guarantees:**

- Warranty and guarantee log.
- Warranties and guarantees.

w. **Performance evaluation:**

- Form 5002, *Construction Contractor Performance Evaluation*.

x. **As-built drawings:**

- Final contract drawings.
- Final shop drawings.

y. **One-year warranty inspection:**

- Inspection report.

---

z. **Postoccupancy evaluation and review:**

- List of warranty items.
- Resolution of inspection items.
- Notification letter.

aa. **Administration miscellaneous:**

- Cure notice (issue at any time performance is jeopardized except within 10 days of completion).
- Show cause letter.
- Termination for default.

### 3-3.9 Quality Control and Inspection

The design-build contractor must observe the construction, materials, and workmanship daily to ensure that they comply with plans, specifications, and other contract documents. The following must be observed at suitable times during the progress of the work. Items requiring observation and/or inspection include, but are not limited to,:

- a. Benchmarks and building layout.
- b. Dimensions and grades.
- c. Excavations.
- d. Soil under footings.
- e. Public utility connections.
- f. Foundation sizes and reinforcing.
- g. Pile driving.
- h. Caisson work.
- i. Concrete forms.
- j. Concrete tests.
- k. Concrete reinforcing.
- l. Structural frames.
- m. Floor openings, sleeves, and hangers.
- n. Quality and placing of concrete.
- o. Weather precautions.
- p. Masonry layout, materials, bonding, anchorage, and flashings.
- q. Setting of frames and prefabricated elements.
- r. Partition layout.
- s. Temporary enclosures, heat, and light.
- t. Protection of finished work and roofing.

 Clause B-33

---

Handbook P-2, 6.3.1

 Clause DB-394

- 
- u. Setting of doorframes.
  - v. Partition construction.
  - w. Plaster work.
  - x. Tile work.
  - y. Electrical work.
  - z. Mechanical work.
  - aa. Special equipment.
  - bb. Elevators.
  - cc. Furring and lathing.
  - dd. Plumbing work.
  - ee. Cabinet work.
  - ff. Finishes.
  - gg. Painting and papering.
  - hh. Hardware.
  - ii. Inspection and tests.

### 3-3.10 Progress Photographs

The design-build contractor must provide photographs during construction in the manner indicated below:

- a. Pictures are to be taken each month during construction. If there is a VMF or other ancillary building on the site, four additional pictures must be taken of that building each month. In all cases, the location of the pictures must be approved by the contracting officer. The number of views, normally one each month, are to be determined to highlight the work completed and in progress each month.
- b. Two 8-inch x 10-inch color prints are to be made of each picture. Include the name of the project, city, state, date taken, photographer's name, and the negative number on the back of each photograph. Photographs are to be delivered to the contracting officer.
- c. In addition, at the discretion of the contracting officer, up to six aerial photographic flights may be conducted before and during construction. Approximately four pictures will be taken during each flight. Provide two mounted color prints, preferably 20-inch x 24-inch, of each picture.

 Clause DB-348

### 3-3.11 Schedule of Values and Payments

The design-build contractor must submit to the COR for approval the contract value breakdown on the initial schedule of values. The design-build contractor must ensure that the schedule of values is not "front-end loaded."

 Clause 1-3

---

Handbook P-2, 6.4.5

---

The design-build contractor is responsible for certifying Form 4211-B, *Invoice and Payment Authorization (Facility and Fixed Mechanization Contract)*, which is submitted monthly by the contractor. This form, which certifies the accuracy of the progress payments, must be signed by a designated representative of the design-build contractor firm and forwarded to the contracting officer for signature.

### 3-3.12 Clarifications

The design agent must furnish written interpretations and drawings necessary for the proper execution of the work with reasonable promptness so that the contractor can execute the work without delay. All interpretations and decisions must be consistent with the intent of the contract documents. These interpretations must not cause changes in the time or money required to execute the construction contract.

### 3-3.13 Operating Tests

The design-build contractor must ensure that all required tests are executed at the proper time. The scheduling of the mechanization operational tests must be coordinated with the Postal Service at least 3 weeks in advance. The resident engineer or the mechanization resident engineer must be present for all tests.

 *Building Design Standards, Master Specification 01450*

---

Handbook P-2, 6.3.1

### 3-3.14 Training

Training furnished by the design-build contractor must be coordinated with the Postal Service. The design-build contractor must ensure that all maintenance and operational training is scheduled and provided to Postal Service personnel as required by the solicitation documents, and that the operation of the systems is in accordance with the intent of the design, particularly with regard to energy conservation operation procedures.

Training must not be scheduled or conducted until after all testing has been satisfactorily completed and until after the Postal Service trainees have had ample time to review the approved operation and maintenance manuals.

### 3-3.15 Guarantees and Instructions

As the design-build contractor completes the work, he or she must submit the following items to the COR for approval:

- a. All required operating instructions.
- b. The schedule of training on the operation and maintenance of the various systems and equipment.
- c. Complete keying schedule with master, submaster, room, and special keys. All keys must be properly marked or tagged.
- d. All required guarantees, certificates of inspection, and bonds.
- e. Certified air balance reports, with a cover letter stating that HVAC systems satisfy the contract requirements.

---

### 3-3.16 Preoccupancy Safety and Health Inspection

Handbook P-2, 6.3.1-15

When construction is between 90 percent and 100 percent complete, an on-site Postal Service team, which includes the design-build contractor, must inspect the construction work and report to the CO any deficiencies noted during the inspection. The inspection must be conducted in accordance with Management Instruction AS-510-87-3, *Compliance With OSHA Standards — Facility Construction Program*.

### 3-3.17 Accessibility Inspection

Handbook P-2, 6.3.1-16

Before the Postal Service accepts the facility, the COR, the design-build contractor, and the CM (if any) must inspect the facility, and the designer of record or the construction monitor must furnish a signed statement certifying that the facility has been constructed to be in compliance with Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped*.

The design-build contractor must provide a Certificate of Accessibility prior to contract closeout.

Handbook P-2, 6.3.2-30

### 3-3.18 Preliminary Completion Inspection

Handbook P-2, 6.3.2-13

To expedite closeout procedures, a preliminary completion inspection may be conducted jointly with the preoccupancy safety and health inspection. The COR, design-build contractor, or CM conducts the inspection and assembles a list of work items remaining to be completed or corrected. This is a “preliminary punch list” that is provided to the design-build contractor to assist the contractor in expeditiously completing the work.

The design-build contractor should have available at the preliminary inspection all O&M manuals, instructions, and equipment warranties and guarantees required by the contract specifications. O&M manuals, instructions, and equipment warranties and guarantees not available at the preliminary inspection should be identified on the preliminary punch list and must be submitted by the contractor prior to the substantial completion inspection.

### 3-3.19 Substantial Completion Inspection

Handbook P-2,  
6.3.2-14 thru 6.3.2-152

A substantial completion inspection must be conducted on every construction project to accomplish all the following purposes:

- a. Determine whether or not the work is substantially complete.
- b. Prepare a punch list of work items that must be completed and corrected in order to conform to the requirements of the construction contract and achieve final completion.
- c. Receive final approval submittals from the contractor.

The substantial completion inspection should be conducted by the COR and the design-build contractor and/or CM accompanied by representatives of the occupying organization. This inspection team should include the same persons who participated in the preliminary inspection and environmental professionals as appropriate.

---

The inspection team must review the facility for compliance with the contract documents, surveying the facility room by room and ensuring that all equipment is in good working order. All items listed on the preliminary punch list must be reinspected, and all tests originally listed as unacceptable must be executed again. The inspection team must proceed with the inspection in order to prepare a substantial completion punch list of all remaining defects and omissions. The list must be precise, giving all information necessary to locate and correct deficient items. By the time the inspection is completed, the COR must recommend whether or not the project is substantially complete.

The COR must make it clear to the design-build contractor that the Postal Service will not conduct special inspections to determine substantial completion until there is sufficient evidence to indicate that this condition may have been attained.

The design-build contractor must ensure that if the following items have not been previously submitted, they must be submitted at the substantial completion inspection for transfer to appropriate parties, as the contract may require:

- a. A complete set of as-built drawings annotated to show all authorized changes and variations from the original contract drawings.
- b. All outstanding operation and maintenance manuals and instructions for equipment items.
- c. All environmental operating permits, manifests, etc.
- d. All outstanding equipment warranties and guarantees.
- e. Keys.
- f. Spare parts.
- g. Occupancy permit (for leased facilities) and inspection certificates.

### **3-3.20 Final Completion Inspection**

Handbook P-2, 6.3.2-16

Upon receipt of notice from the design-build contractor that the substantial completion inspection punch list items have been completed or corrected, the design agent and the designated postal representatives must inspect these items by comparing them to the punch list and must confirm their completion in writing when appropriate. This may be done by sending a confirming letter to the contractor or by checking off, annotating, and initialing a copy of the substantial completion inspection punch list for each party. When it has been confirmed that the contractor has completed all the items on the substantial completion inspection punch list, final completion of the contract has been achieved.

### **3-3.21 Final Payment Review**

The design-build contractor must apply for final payment on Form 4211-B, as in the case of the progress payments, and must attach a completed Form 7307.

---

This page intentionally left blank

---

## Part V Design-Build Contracts

### 4 Postconstruction Phase Design-Build Contractor Services

---

#### 4-1 Design Services After Construction (Options)

---

##### 4-1.1 Record Drawings and Specifications

The construction contract documents require the design-build contractor to provide the design agent with drawings and specifications incorporating the revisions and changes made during construction up to acceptance of the project. The design-build contractor must, during the progress of the work, keep a master set of prints at the job site, on which is kept a careful and neat record of all deviations from the contract drawings prepared by the design agent that have been made during the course of the work.

Upon completion of the project, these as-built prints must be certified as to their correctness by the signature of the design-build contractor and turned over to the design agent for use in preparing a permanent set of as-built record drawings. The design-build contractor must revise the original contract documents to indicate as-built conditions, including revisions in site and building area tabulations.

##### 4-1.2 Contract Appeals

Appeals made by the design-build contractor may be heard by the Postal Service Board of Contract Appeals or the Claims Court. The resident engineer or other professionals having knowledge of the dispute may be required to support the Postal Service during appeal hearings.

---

#### 4-2 Field Services After Construction (Option)

---

##### 4-2.1 Six-Month Postoccupancy Evaluations

The purpose of the postoccupancy evaluations is to provide feedback to the Postal Service that is necessary for improving the design standards. The design-build contractor, at the direction of the CO, may be required to participate in and/or review and provide an analysis of postoccupancy evaluations. There are two different levels of postoccupancy evaluations:

- a. **Level One Postoccupancy Evaluation.** A level one postoccupancy evaluation is to be conducted on all types of newly completed facilities, as follows:

 Clause B-57

 *Building Design Standards, Master Specification 01780*

---

*Purchasing Manual 6.8.3*

---

 Clause B-293

 *Building Design Standards*

- 
- (1) The level one postoccupancy evaluation is accomplished by completing the Postoccupancy Evaluation Questionnaire. This is completed by the postmaster or facility manager and the manager of the Administrative Support unit.
  - (2) The Postoccupancy Evaluation Questionnaire is to be completed between 4 and 6 months after the facility has been occupied.
  - (3) The manager of Design and Construction at the FSO must send one copy of the Postoccupancy Evaluation Questionnaire to the postmaster or facility manager and another copy to the manager of the Administrative Support unit.
  - (4) The completed questionnaire is to be returned to the manager of Design and Construction for review and comments.
- b. **Level Two Postoccupancy Evaluation.** Headquarters, with a specialized consultant, will conduct a site visit and a more extensive evaluation for selected facilities using the following tools:
- (1) **Employee Questionnaire.** The consultant conducts these questionnaire interviews during the site visit.
  - (2) **Customer Interview.** The consultant conducts interviews with customers during the site visit.

The consultant prepares a narrative report with engineering studies of the findings from the employee and customer interviews.

#### 4-2.2 Guarantee Inspection

If defects become evident during the guarantee period, the Postal Service may authorize the design-build contractor to investigate and report on them.

#### 4-2.3 One-Year Warranty Inspection

The purpose of the one-year warranty inspection is to identify construction warranty and/or guarantee defects before the end of the 1-year warranty period for new construction and major repairs. At least 4 weeks before expiration of the warranty date, the project manager or COR will schedule and conduct the final one-year warranty inspection. Participants in the inspection will be the CO, the design-build contractor, the local postal official, and the COR or designee. Before the one-year warranty inspection is conducted, all earlier noted deficiencies not corrected should be listed.

The warranty log prepared at final acceptance is to be used as a checklist for each warranted item to be inspected to ensure that it is performing satisfactorily. All warranty deficiencies noted during the inspection must be listed, and a "draft" copy of the deficiency list must be given to the design-build contractor at the end of the inspection. The CO will formally transmit the deficiency list to the design-build contractor via a letter.

The local postal official will monitor the correction of warranty defects until such time as all defects are corrected. The local postal official will also inform the COR as to the status of uncorrected warranty deficiencies. The CO will notify the design-build contractor's surety company if the contractor does not respond in a timely manner.

---

**Part VI**  
**Attachments**

**Contents**

1 Professional Services Estimate Work Sheets..... 273  
2 Background Information ..... 283  
    2-1 Information Provided by the Postal Service ..... 283  
    2-2 Additional Information ..... 283  
3 A/E Services Checklists ..... 285

---

This page intentionally left blank

---

**Part VI**  
**Attachments**

**1 Professional Services Estimate Work  
Sheets**

Exhibit 1 consists of eight work sheets. The first page of the work sheets provides information about the specific project and then summarizes the costs computed on the remaining work sheets.

**Professional Services Estimate Work Sheets**

**Project Summary Sheet**

**Project** \_\_\_\_\_

**Location** \_\_\_\_\_

**A/E Firm** \_\_\_\_\_

**A. Cost Estimate Summary**

Services	Subtotal \$	Total Fee \$
Predesign Phase Services		
a. Direct Labor		
b. Expenses		
Design Phase Services		
a. Direct Labor		
b. Expenses		

Additional A/E Services (Options)	Subtotal \$	Subtotal \$	Total Fee \$
Predesign Phase Optional Services			
Design Phase Optional Services			
Construction Phase Optional Services			
a. Design Services			
1. Direct Labor			
2. Expenses			
b. Field Services			
Postconstruction Phase Optional Services			

**B. Project Data Summary**

Project Data	Total
Construction cost limit (\$)	
Design duration (weeks)	
Construction duration (weeks)	
Building area (square foot) (gross)	
Building area (square foot) (net)	

\_\_\_\_\_  
A/E Signature

\_\_\_\_\_  
Date

**Professional Services Estimate Work Sheets**

**Pre-design Phase Services**

**A. Direct Labor**

Discipline	Rate \$/Hour	Hours	Cost \$
Project Manager			
Architect			
Architect, Jr.			
Civil Engineer			
Civil Engineer, Jr.			
Electrical Engineer			
Electrical Engineer, Jr.			
Mechanical Engineer			
Mechanical Engineer, Jr.			
Structural Engineer			
Structural Engineer, Jr.			
Mechanization Engineer			
Designer			
Draftsperson			
Cost Estimator			
Specification Writer			
Other			
<b>Subtotal</b>			
Overhead ( ___ %)			
<b>Total Direct Labor (TDL) + Overhead (OH)</b>			
a. Profit Allowance ( ___ %)			
<b>b. Total Direct Labor</b>			

**B. Expenses**

Item	Quantity	Units	Unit \$	Total \$
Travel		Trips		
Per Diem		Days		
Reproduction		Drawings		
Reproduction		Pages		
Telephone		Calls		
Postage		Packages		
<b>Total Expenses:</b>				

**Professional Services Estimate Work Sheets**

**Design Phase Services**

**A. Direct Labor**

<b>Discipline</b>	<b>Rate \$/Hour</b>	<b>Hours</b>	<b>Cost \$</b>
Project Manager			
Architect			
Architect, Jr.			
Civil Engineer			
Civil Engineer, Jr.			
Electrical Engineer			
Electrical Engineer, Jr.			
Mechanical Engineer			
Mechanical Engineer, Jr.			
Structural Engineer			
Structural Engineer, Jr.			
Mechanization Engineer			
Designer			
Draftsperson			
Cost Estimator			
Specification Writer			
Other			
<b>Subtotal</b>			
Overhead ( ___ %)			
<b>Total Direct Labor (TDL) + Overhead (OH)</b>			
a. Profit Allowance ( ___ %)			
b. Total Direct Labor			

**B. Expenses**

<b>Item</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit \$</b>	<b>Total \$</b>
Travel		Trips		
Per Diem		Days		
Reproduction		Drawings		
Reproduction		Pages		
Telephone		Calls		
Postage		Packages		
<b>Total Expenses:</b>				

**Professional Services Estimate Work Sheets**

**A/E Additional Predesign Phase Services (Options)**

Fees shown indicate all costs, both direct and indirect, including overhead and profit.

<b>Service</b>	<b>Cost \$</b>
Boundary and Topographic Site Survey	
Subsurface Investigation	
Investigative Services for Existing Facilities	
Environmental Assessment	
Wetlands Impact Study	
Hazardous Waste Site Assessment	
Traffic Impact Study	
Total:	

When sufficient information is not available at the time of contract negotiations, fees for services under this price section may be submitted at a later date as separate proposals.

Comments:

**Professional Services Estimate Work Sheets**

**A/E Additional Design Phase Services (Options)**

---

Fees shown indicate all costs, both direct and indirect, including overhead and profit.

<b>Service</b>	<b>Cost \$</b>
Perspective Drawings	
Supplemental Drawings	
Mechanization Systems Descriptions	
Roofing Consultant	
Fire Protection Consultant	
Total:	

When sufficient information is not available at the time of contract negotiations, fees for services under this price section may be submitted at a later date as separate proposals.

---

Comments:

**Professional Services Estimate Work Sheets**

**A/E Services During Construction Phase (Options)**

Fees for all services included in this section indicate all costs, both direct and indirect, including overhead and profit. All services are to be paid on a fixed-fee basis.

**A. Direct Labor**

<b>Discipline</b>	<b>Rate \$/Hour</b>	<b>Hours</b>	<b>Cost \$</b>
Project Manager			
Architect			
Architect, Jr.			
Civil Engineer			
Civil Engineer, Jr.			
Electrical Engineer			
Electrical Engineer, Jr.			
Mechanical Engineer			
Mechanical Engineer, Jr.			
Structural Engineer			
Structural Engineer, Jr.			
Mechanization Engineer			
Designer			
Draftsperson			
Cost Estimator			
Specification Writer			
Other			
Subtotal			
Overhead ( ___ %)			
Total Direct Labor (TDL) + Overhead (OH)			
a. Profit Allowance ( ___ %)			
b. Total Direct Labor			

**B. Expenses**

<b>Item</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit \$</b>	<b>Total \$</b>
Travel		Trips		
Per Diem		Days		
Reproduction		Drawings		
Reproduction		Pages		
Telephone		Calls		
Postage		Packages		
Total Expenses:				

**Professional Services Estimate Work Sheets**

**A/E Field Services During Construction Phase (Option)**

Fees shown indicate all costs, both direct and indirect, including overhead and profit. Payment is to be made for days worked.

<b>No. of Days</b>		<b>Calendar</b>	<b>Working</b>
Estimated Construction Duration			
<b>Service</b>	<b>\$/Day</b>	<b>No. Days</b>	<b>Cost \$</b>
Construction Administrator			
Project Manager			
Construction Inspector			
Scheduler			
Resident Engineer (RE)			
Assistant RE (ARE)			
Mechanization RE			
Roofing ARE			
Clerk-Typist			
Acoustical ARE			
Fire Protection ARE			
Total Services:			
<b>Service</b>	<b>No. Photos</b>	<b>\$/Photo</b>	<b>Cost \$</b>
Progress Photos			
Total All Costs:			

Comments:

**Professional Services Estimate Work Sheets**

**A/E Postconstruction Phase Services (Options)**

**Six-Month Postoccupancy Evaluations**

<b>Personnel</b>	<b>Rate \$/Hour</b>	<b>OH \$</b>	<b>Profit</b>	<b>Total Rate \$/Hour</b>
Project Manager				
Architect				
Engineer				
Cost Estimator				
Technical Writer				
Draftsperson				
Clerk-Typist				



This page intentionally left blank.

---

## Part VI

# Attachments

## 2 Background Information

### 2-1 Information Provided by the Postal Service

---

The Postal Service is to attach the following listed items to the solicitation package if they are applicable. A check mark in the box indicates that the item is attached.

a. **Environmental Studies:**

- Environmental Assessment.
- Wetlands Impact Study.
- Hazardous Waste Site Assessment.
- Asbestos-Free Certification.
- Certification on Asbestos-Containing Material in a Building.

b. **Site Engineering:**

- Boundary and Topographical Survey.
- Report on Soils Exploration.

c. **Planning Design:**

- Functional Design Specification (FDS), if applicable.
- Computerized Facility Planning Concept for Small Standard Building Designs, if applicable.
- Form 919, *Facility Planning Data*, if applicable.
- Form 929, *Major Facility Planning Data*, if applicable.
- Operational Space Layout (OSL), if applicable.

### 2-2 Additional Information

---

The A/E is responsible for obtaining and for using and implementing the following documentation (most current version in effect):

- a. **Division I, General Requirements.** These are included in the *Master Specification* found on the *Building Design Standards* CD-ROM.
- b. **Design Standards.** The following design standards are to be used:
- (1) *Building Design Standards* (CD-ROM):
    - (a) Handbook AS-503, *Standard Design Criteria*.
    - (b) *Standard Detail Library*.

- 
- (c) *Standard Building Designs.*
  - (d) *Master Specification.*
  - (e) *Green Addendum* (when applicable).
  - (f) *Modular Post Office Standards* (when applicable).
  - (g) *Medium Standard Building Designs Project Manager's Manual.*
- (2) Handbook RE-4, *Standards for Facility Accessibility by the Physically Handicapped.*
  - (3) Handbook RE-5, *Building and Site Security Requirements.*
  - (4) Handbook AS-819, *Universal Wiring Standards.*
  - (5) Publication 500-D, *Exterior Signage: Graphics Guidelines.*
  - (6) Handbook RE-6, *Facilities Environmental Guide.*
  - (7) Handbook AS-504, *Space Requirements.*
  - (8) Management Instruction AS-620-94-1, *Safety Inspection of Heating Boilers, Unfired Pressure Vessels, Elevators, Escalators, and Dumbwaiters.*
  - (9) Handbook AS-556, *Asbestos Management Guide.*
  - (10) Management Instruction EL-810-98-1, *Asbestos-Containing Building Materials Control Program.*
  - (11) Management Instruction AS-550-92-7, *Stormwater Management*
  - (12) Handbook AS-551, *Clear Air Act Compliance Guide.*
  - (13) Management Instruction AS-550-95-18, *Clean Air Act Compliance.*
  - (14) Specification Number USPS-M-5000, *Specification Standards for Mechanized Mail Processing Systems.*
  - (15) Handbook AS-558, *Facility Energy Management Guide.*

## Part VI Attachments

### 3 A/E Services Checklists

Exhibits 3a through 3d, the A/E services checklists, identify the potential A/E services that are described in Parts II through V, Chapters 1 through 4, of this handbook. Other A/E services not identified in this handbook may be required depending on the size, complexity, or unique requirements for each specific project.

These checklists are intended to aid the Postal Service in preparing solicitations and contracts for A/E services. These checklists may also be used for monitoring and verifying A/E performance and submissions over the course of a project.

Exhibit 3a  
**A/E Services Checklist — Predesign Phase**

<b>Predesign Phase (Chapter 1)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Predesign Services</b>	1	1	1	1
<input type="checkbox"/> Survey of Existing Facilities	1-1	1-1	1-1	1-1
<input type="checkbox"/> Additional Services (Options)	1-2	1-2	1-2	1-2
<input type="checkbox"/> Boundary and Topographic Site Survey	1-2.1	1-2.1	1-2.1	1-2.1
<input type="checkbox"/> Subsurface Investigation	1-2.2	1-2.2	1-2.2	1-2.2
<input type="checkbox"/> Investigative Services for Existing Facilities	1-2.3	1-2.3	1-2.3	1-2.3
<input type="checkbox"/> Environmental Assessment	1-2.4	1-2.4	n/a	1-2.4
<input type="checkbox"/> Wetlands Impact Study	1-2.5	n/a	n/a	1-2.5
<input type="checkbox"/> Hazardous Waste Site Assessment	1-2.6	1-2.5	n/a	1-2.6
<input type="checkbox"/> Traffic Impact Studies	1-2.7	1-2.6	1-2.4	1-2.7

**A/E Services Checklist — Design Phase**

<b>Design Phase (Chapter 2)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Prenegotiation Orientation and Negotiations</b>	2-2.1	2-2.1	n/a	n/a
<input type="checkbox"/> Professional Services Estimating Sheets	2-2.1.2	2-2.1.2	n/a	n/a
<input type="checkbox"/> Prenegotiation Orientation and Negotiation Meeting	2-2.1.4	2-2.1.4	n/a	n/a
<input type="checkbox"/> Construction Cost Limit	2-2.1.5	2-2.1.5	n/a	n/a
<b>Preconcept Design Phase</b>	2-2.2	2-2.2	n/a	2-2.1
<input type="checkbox"/> Site Utilization Plan	2-2.2.2a	2-2.2.2a	n/a	2-2.1.2a
<input type="checkbox"/> Site Restrictions and Improvements	2-2.2.2b	2-2.2.2b	n/a	2-2.1.2b
<input type="checkbox"/> Architectural Floor Plans	2-2.2.2c	2-2.2.2c	n/a	2-2.1.2c
<input type="checkbox"/> Elevations and Perspective Sketches	2-2.2.2d	2-2.2.2d	n/a	2-2.1.2d
<input type="checkbox"/> Mechanization	2-2.2.2e	n/a	n/a	2-2.1.2e
<input type="checkbox"/> Code Analysis	2-2.2.2f	2-2.2.2e	n/a	2-2.1.2f
<input type="checkbox"/> Code Listing	2-2.2.2f(1)	2-2.2.2e(1)	n/a	2-2.1.2f(1)
<input type="checkbox"/> Small-Scale Floor Plan	2-2.2.2f(2)	2-2.2.2e(2)	n/a	2-2.1.2f(2)
<input type="checkbox"/> Alternatives	2-2.2.2f(3)	2-2.2.2e(3)	n/a	2-2.1.2f(3)
<input type="checkbox"/> Building Area Tabulations	2-2.2.2g	2-2.2.2f	n/a	2-2.1.2g
<input type="checkbox"/> Single-Line Floor Plan	2-2.2.2g(1)	2-2.2.2f(1)	n/a	2-2.1.2g(1)
<input type="checkbox"/> Building Area Tabulation Lists	2-2.2.2g(2)	2-2.2.2f(2)	n/a	2-2.1.2g(2)
<input type="checkbox"/> Building Areas and Calculations	2-2.2.2g(3)	2-2.2.2f(3)	n/a	2-2.1.2g(3)
<input type="checkbox"/> Gross Area	2-2.2.2g(3)(a)	2-2.2.2f(3)(a)	n/a	2-2.1.2g(3)(a)
<input type="checkbox"/> Net Area	2-2.2.2g(3)(b)	2-2.2.2f(3)(b)	n/a	2-2.1.2g(3)(b)
<input type="checkbox"/> Calculations	2-2.2.2g(3)(c)	2-2.2.2f(3)(c)	n/a	2-2.1.2g(3)(c)
<input type="checkbox"/> Building System Comparisons	2-2.2.2h	2-2.2.2g	n/a	2-2.1.2h
<input type="checkbox"/> Energy Conservation Analysis	2-2.2.2i	2-2.2.2h	n/a	2-2.1.2i
<input type="checkbox"/> Postal Service Environmental Policy and Guiding Principals	2-2.2.2j	2-2.2.2i	n/a	2-2.1.2j
<input type="checkbox"/> Cost Estimate	2-2.2.2k	2-2.2.2j	n/a	2-2.1.2k
<input type="checkbox"/> Preconcept Design Review Meeting	2-2.2.3	2-2.2.3	n/a	2-2.1.3

**A/E Services Checklist — Design Phase**

<b>Design Phase (Chapter 2)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Concept Design Phase</b>	2-2.3	2-2.3	2-2.1	2-2.2
<input type="checkbox"/> Site Utilization Plan	2-2.3.2a	2-2.3.2a	2-2.1.2a	n/a
<input type="checkbox"/> Site Restrictions and Improvements	2-2.3.2b	2-2.3.2b	2-2.1.2b	2-2.2.2a
<input type="checkbox"/> Civil Design	2-2.3.2c	2-2.3.2c	2-2.1.2c	2-2.2.2b
<input type="checkbox"/> Stormwater	2-2.3.2c(1)	2-2.3.2c(1)	2-2.1.2c(1)	2-2.2.2b(1)
<input type="checkbox"/> Streets	2-2.3.2c(2)	2-2.3.2c(2)	2-2.1.2c(2)	2-2.2.2b(2)
<input type="checkbox"/> Driveways and Parkways	2-2.3.2c(3)	2-2.3.2c(3)	2-2.1.2c(3)	2-2.2.2b(3)
<input type="checkbox"/> Pavement Design	2-2.3.2c(4)	2-2.3.2c(4)	2-2.1.2c(4)	2-2.2.2b(4)
<input type="checkbox"/> Grades	2-2.3.2c(5)	2-2.3.2c(5)	2-2.1.2c(5)	2-2.2.2b(5)
<input type="checkbox"/> Site Utilities	2-2.3.2c(6)	2-2.3.2c(6)	2-2.1.2c(6)	2-2.2.2b(6)
<input type="checkbox"/> Miscellaneous Features	2-2.3.2c(7)	2-2.3.2c(7)	2-2.1.2c(7)	2-2.2.2b(7)
<input type="checkbox"/> Vicinity Map	2-2.3.2c(8)	2-2.3.2c(8)	2-2.1.2c(8)	2-2.2.2b(8)
<input type="checkbox"/> Easements	2-2.3.2c(9)	2-2.3.2c(9)	2-2.1.2c(9)	2-2.2.2b(9)
<input type="checkbox"/> Legal Description	2-2.3.2c(10)	2-2.3.2c(10)	2-2.1.2c(10)	2-2.2.2b(10)
<input type="checkbox"/> Off-Site Construction	2-2.3.2c(11)	2-2.3.2c(11)	2-2.1.2c(11)	2-2.2.2b(11)
<input type="checkbox"/> Subsurface Soils Investigation Report (Including Boring Logs)	2-2.3.2c(12)	2-2.3.2c(12)	2-2.1.2c(12)	2-2.2.2b(12)
<input type="checkbox"/> Site Plan	2-2.3.2d	2-2.3.2d	2-2.1.2d	2-2.2.2c
<input type="checkbox"/> Architectural Floor Plans	2-2.3.2e	2-2.3.2e	2-2.1.2e	2-2.2.2d
<input type="checkbox"/> Additional Architectural Plans and Designs	2-2.3.2f	2-2.3.2f	2-2.1.2f	2-2.2.2e
<input type="checkbox"/> LOG Plan	2-2.3.2f(1)	2-2.3.2f(1)	2-2.1.2f(1)	2-2.2.2e(1)
<input type="checkbox"/> CCTV Camera and Surveillance Plan	2-2.3.2f(2)	2-2.3.2f(2)	2-2.1.2f(2)	2-2.2.2e(2)
<input type="checkbox"/> Lobby Plan	2-2.3.2f(3)	2-2.3.2f(3)	2-2.1.2f(3)	2-2.2.2e(3)
<input type="checkbox"/> Roof Drainage Plan	2-2.3.2f(4)	2-2.3.2f(4)	2-2.1.2f(4)	2-2.2.2e(4)
<input type="checkbox"/> Finish Schedule	2-2.3.2f(5)	2-2.3.2f(5)	2-2.1.2f(5)	2-2.2.2e(5)
<input type="checkbox"/> Color and Material Panel	2-2.3.2f(6)	2-2.3.2f(6)	2-2.1.2f(6)	2-2.2.2e(6)
<input type="checkbox"/> Fire Exit Plan With Code Summary	2-2.3.2f(7)	2-2.3.2f(7)	2-2.1.2f(7)	2-2.2.2e(7)
<input type="checkbox"/> List of Postal Service-Furnished Equipment	2-2.3.2f(8)	2-2.3.2f(8)	2-2.1.2f(8)	2-2.2.2e(8)
<input type="checkbox"/> Elevations and Perspective Sketches	2-2.3.2g	2-2.3.2g	2-2.1.2g	2-2.2.2f
<input type="checkbox"/> Sections and Details	2-2.3.2h	2-2.3.2h	2-2.1.2h	2-2.2.2g
<input type="checkbox"/> Structural	2-2.3.2i	2-2.3.2i	2-2.1.2i	2-2.2.2h
<input type="checkbox"/> Space Conditioning	2-2.3.2j	2-2.3.2j	2-2.1.2j	2-2.2.2i
<input type="checkbox"/> Plumbing	2-2.3.2k	2-2.3.2k	2-2.1.2k	2-2.2.2j
<input type="checkbox"/> Fire Protection	2-2.3.2l	2-2.3.2l	2-2.1.2l	2-2.2.2k
<input type="checkbox"/> Electrical	2-2.3.2m	2-2.3.2m	2-2.1.2m	2-2.2.2l

**A/E Services Checklist — Design Phase**

<b>Design Phase (Chapter 2)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Concept Design Phase (continued)</b>				
<input type="checkbox"/> Other Utility Systems	2-2.3.2n	2-2.3.2n	2-2.1.2n	2-2.2.2m
<input type="checkbox"/> Mechanization	2-2.3.2o	n/a	n/a	2-2.2.2n
<input type="checkbox"/> Environmental Studies	2-2.3.2p	2-2.3.2o	2-2.1.2o	2-2.2.2o
<input type="checkbox"/> Code Analysis	2-2.3.2q	2-2.3.2p	2-2.1.2p	2-2.2.2p
<input type="checkbox"/> Code Listing			2-2.1.2p(1)	
<input type="checkbox"/> Small-Scale Floor Plan			2-2.1.2p(2)	
<input type="checkbox"/> Alternatives			2-2.1.2p(3)	
<input type="checkbox"/> Building Area Tabulations	2-2.3.2r	2-2.3.2q	2-2.1.2q	2-2.2.2q
<input type="checkbox"/> Single-Line Floor Plan			2-2.1.2q(1)	
<input type="checkbox"/> Building Area Tabulation Lists			2-2.1.2q(2)	
<input type="checkbox"/> Building Areas and Calculations			2-2.1.2q(3)	
<input type="checkbox"/> Gross Area			2-2.1.2q(3)(a)	
<input type="checkbox"/> Net Area			2-2.1.2q(3)(b)	
<input type="checkbox"/> Calculations			2-2.1.2q(3)(c)	
<input type="checkbox"/> Building System Comparisons	2-2.3.2s	2-2.3.2r	2-2.1.2r	2-2.2.2r
<input type="checkbox"/> Energy Conservation Analysis	2-2.3.2t	2-2.3.2s	2-2.1.2s	2-2.2.2s
<input type="checkbox"/> Life-Cycle Cost (LCC) Analysis	2-2.3.2u	2-2.3.2t	2-2.1.2t	2-2.2.2t
<input type="checkbox"/> Postal Service Environmental Policy and Guiding Principals	n/a	n/a	2-2.1.2u	n/a
<input type="checkbox"/> Specifications	2-2.3.2v	2-2.3.2u	2-2.1.2v	2-2.2.2u
<input type="checkbox"/> Cost Estimate	2-2.3.2w	2-2.3.2v	2-2.1.2w	2-2.2.2v
<input type="checkbox"/> Project Scheduling	2-2.3.2x	2-2.3.2w	2-2.1.2x	2-2.2.2w
<input type="checkbox"/> Concept Design Review Meeting	2-2.3.3	2-2.3.3	2-2.1.3	2-2.2.3

**A/E Services Checklist — Design Phase**

<b>Design Phase (Chapter 2)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Intermediate Design Phase</b>	2-2.4	n/a	n/a	2-2.3
<input type="checkbox"/> Site Utilization Plan	2-2.4.2a	n/a	n/a	n/a
<input type="checkbox"/> Site Restrictions and Improvements	2-2.4.2b	n/a	n/a	2-2.3.2a
<input type="checkbox"/> Civil Design	2-2.4.2c	n/a	n/a	2-2.3.2b
<input type="checkbox"/> Stormwater	2-2.4.2c(1)(a)	n/a	n/a	2-2.3.2b(1)(a)
<input type="checkbox"/> Streets	2-2.4.2c(1)(b)	n/a	n/a	2-2.3.2b(1)(b)
<input type="checkbox"/> Driveways and Parkways	2-2.4.2c(1)(c)	n/a	n/a	2-2.3.2b(1)(c)
<input type="checkbox"/> Pavement Design	2-2.4.2c(1)(d)	n/a	n/a	2-2.3.2b(1)(d)
<input type="checkbox"/> Grades	2-2.4.2c(1)(e)	n/a	n/a	2-2.3.2b(1)(e)
<input type="checkbox"/> Site Utilities	2-2.4.2c(1)(f)	n/a	n/a	2-2.3.2b(1)(f)
<input type="checkbox"/> Miscellaneous Features	2-2.4.2c(1)(g)	n/a	n/a	2-2.3.2b(1)(g)
<input type="checkbox"/> Vicinity Map	2-2.4.2c(1)(h)	n/a	n/a	2-2.3.2b(1)(h)
<input type="checkbox"/> Easements	2-2.4.2c(1)(i)	n/a	n/a	2-2.3.2b(1)(i)
<input type="checkbox"/> Legal Description	2-2.4.2c(1)(j)	n/a	n/a	2-2.3.2b(1)(j)
<input type="checkbox"/> Off-Site Conditions	2-2.4.2c(1)(k)	n/a	n/a	2-2.3.2b(1)(k)
<input type="checkbox"/> Subsurface Soils Investigation Report (Including Boring Logs)	2-2.4.2c(1)(l)	n/a	n/a	2-2.3.2b(1)(l)
<input type="checkbox"/> Site Plan	2-2.4.2d	n/a	n/a	2-2.3.2c
<input type="checkbox"/> Architectural Floor Plans	2-2.4.2e	n/a	n/a	2-2.3.2d
<input type="checkbox"/> Additional Architectural Floor Plans and Designs	2-2.4.2f	n/a	n/a	2-2.3.2e
<input type="checkbox"/> LOG Plan	2-2.4.2f(1)	n/a	n/a	2-2.3.2e(1)
<input type="checkbox"/> CCTV Camera and Surveillance Plan	2-2.4.2f(2)	n/a	n/a	2-2.3.2e(2)
<input type="checkbox"/> Lobby Plan	2-2.4.2f(3)	n/a	n/a	2-2.3.2e(3)
<input type="checkbox"/> Roof Drainage Plan	2-2.4.2f(4)	n/a	n/a	2-2.3.2e(4)
<input type="checkbox"/> Finish Schedule	2-2.4.2f(5)	n/a	n/a	2-2.3.2e(5)
<input type="checkbox"/> Color and Material Panel	2-2.4.2f(6)	n/a	n/a	2-2.3.2e(6)
<input type="checkbox"/> Fire Exit Plan With Code Summary	2-2.4.2f(7)	n/a	n/a	2-2.3.2e(7)
<input type="checkbox"/> Casework Drawings	2-2.4.2f(8)	n/a	n/a	2-2.3.2e(8)
<input type="checkbox"/> List of Postal Service-Furnished Equipment	2-2.4.2f(9)	n/a	n/a	2-2.3.2e(9)
<input type="checkbox"/> Elevations and Perspective Sketches	2-2.4.2g	n/a	n/a	2-2.3.2f
<input type="checkbox"/> Sections and Details	2-2.4.2h	n/a	n/a	2-2.3.2g
<input type="checkbox"/> Structural	2-2.4.2i	n/a	n/a	2-2.3.2h
<input type="checkbox"/> Space Conditioning	2-2.4.2j	n/a	n/a	2-2.3.2i
<input type="checkbox"/> Plumbing	2-2.4.2k	n/a	n/a	2-2.3.2j
<input type="checkbox"/> Fire Protection	2-2.4.2l	n/a	n/a	2-2.3.2k

**A/E Services Checklist — Design Phase**

<b>Design Phase (Chapter 2)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Intermediate Design Phase (continued)</b>				
<input type="checkbox"/> Electrical	2-2.4.2m	n/a	n/a	2-2.3.2l
<input type="checkbox"/> Short-Circuit and Fully Coordinated Circuit-Interrupting Device Summary	2-2.4.2m(5)	n/a	n/a	2-2.3.2l(5)
<input type="checkbox"/> Other Utility Systems	2-2.4.2n	n/a	n/a	2-2.3.2m
<input type="checkbox"/> Mechanization	2-2.4.2o	n/a	n/a	2-2.3.2n
<input type="checkbox"/> Code Analysis	2-2.4.2p	n/a	n/a	2-2.3.2o
<input type="checkbox"/> Code Listing		n/a	n/a	
<input type="checkbox"/> Small-Scale Floor Plan		n/a	n/a	
<input type="checkbox"/> Alternatives		n/a	n/a	
<input type="checkbox"/> Building Area Tabulations	2-2.4.2q	n/a	n/a	2-2.3.2p
<input type="checkbox"/> Single-Line Floor Plan		n/a	n/a	
<input type="checkbox"/> Building Area Tabulation Lists		n/a	n/a	
<input type="checkbox"/> Building Areas and Calculations		n/a	n/a	
<input type="checkbox"/> Gross Area		n/a	n/a	
<input type="checkbox"/> Net Area		n/a	n/a	
<input type="checkbox"/> Calculations		n/a	n/a	
<input type="checkbox"/> Energy Conservation Analysis	2-2.4.2r	n/a	n/a	2-2.3.2q
<input type="checkbox"/> Specifications	2-2.4.2s	n/a	n/a	2-2.3.2r
<input type="checkbox"/> Cost Estimate	2-2.4.2t	n/a	n/a	2-2.3.2s
<input type="checkbox"/> Project Scheduling	2-2.4.2u	n/a	n/a	2-2.3.2t
<input type="checkbox"/> Small, Minority-Owned, and Woman- Owned Business Contracting Goals and Source List	2-2.4.2v	n/a	n/a	2-2.3.2u
<input type="checkbox"/> Intermediate Design Review Meeting	2-2.4.3	n/a	n/a	2-2.3.3

**A/E Services Checklist — Design Phase**

<b>Design Phase (Chapter 2)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Final Design Phase</b>	2-2.5	2-2.4	2-2.2	2-2.4
<input type="checkbox"/> Site Utilization Plan	2-2.5.2a	2-2.4.2a	n/a	n/a
<input type="checkbox"/> Site Restrictions and Improvements	2-2.5.2b	2-2.4.2b	2-2.2.2a	2-2.4.2a
<input type="checkbox"/> Civil Design	2-2.5.2c	2-2.4.2c	2-2.2.2b	2-2.4.2b
<input type="checkbox"/> Stormwater	2-2.5.2c(1)	2-2.4.2c(1)(a)	2-2.2.2b(1)(a)	2-2.4.2b(1)
<input type="checkbox"/> Streets	2-2.5.2c(2)	2-2.4.2c(1)(b)	2-2.2.2b(1)(b)	2-2.4.2b(2)
<input type="checkbox"/> Driveways and Parkways	2-2.5.2c(3)	2-2.4.2c(1)(c)	2-2.2.2b(1)(c)	2-2.4.2b(3)
<input type="checkbox"/> Pavement Design	2-2.5.2c(4)	2-2.4.2c(1)(d)	2-2.2.2b(1)(d)	2-2.4.2b(4)
<input type="checkbox"/> Grades	2-2.5.2c(5)	2-2.4.2c(1)(e)	2-2.2.2b(1)(e)	2-2.4.2b(5)
<input type="checkbox"/> Site Utilities	2-2.5.2c(6)	2-2.4.2c(1)(f)	2-2.2.2b(1)(f)	2-2.4.2b(6)
<input type="checkbox"/> Miscellaneous Features	2-2.5.2c(7)	2-2.4.2c(1)(g)	2-2.2.2b(1)(g)	2-2.4.2b(7)
<input type="checkbox"/> Vicinity Map	2-2.5.2c(8)	2-2.4.2c(1)(h)	2-2.2.2b(1)(h)	2-2.4.2b(8)
<input type="checkbox"/> Easements	2-2.5.2c(9)	2-2.4.2c(1)(i)	2-2.2.2b(1)(i)	2-2.4.2b(9)
<input type="checkbox"/> Legal Description	2-2.5.2c(10)	2-2.4.2c(1)(j)	2-2.2.2b(1)(j)	2-2.4.2b(10)
<input type="checkbox"/> Off-Site Conditions	2-2.5.2c(11)	2-2.4.2c(1)(k)	2-2.2.2b(1)(k)	2-2.4.2b(11)
<input type="checkbox"/> Subsurface Soils Investigation Report (Including Boring Logs)	2-2.5.2c(12)	2-2.4.2c(1)(l)	2-2.2.2b(1)(l)	2-2.4.2b(12)
<input type="checkbox"/> Site Plan	2-2.5.2d	2-2.4.2d	2-2.2.2c	2-2.4.2c
<input type="checkbox"/> Architectural Floor Plans	2-2.5.2e	2-2.4.2e	2-2.2.2d	2-2.4.2d
<input type="checkbox"/> Additional Architectural Plans and Designs	2-2.5.2f	2-2.4.2f	2-2.2.2e	2-2.4.2e
<input type="checkbox"/> LOG Plan	2-2.5.2f(1)	2-2.4.2f(1)	2-2.2.2e(1)	2-2.4.2e(1)
<input type="checkbox"/> CCTV Camera and Surveillance Plan	2-2.5.2f(2)	2-2.4.2f(2)	2-2.2.2e(2)	2-2.4.2e(2)
<input type="checkbox"/> Lobby Plan	2-2.5.2f(3)	2-2.4.2f(3)	2-2.2.2e(3)	2-2.4.2e(3)
<input type="checkbox"/> Roof Drainage Plan	2-2.5.2f(4)	2-2.4.2f(4)	2-2.2.2e(4)	2-2.4.2e(4)
<input type="checkbox"/> Finish Schedule	2-2.5.2f(5)	2-2.4.2f(5)	2-2.2.2e(5)	2-2.4.2e(5)
<input type="checkbox"/> Color and Material Panel	2-2.5.2f(6),(7)	2-2.4.2f(6)	2-2.2.2e(6)	2-2.4.2e(6),(7)
<input type="checkbox"/> Fire Exit Plan With Code Summary	2-2.5.2f(8)	2-2.4.2f(7)	2-2.2.2e(7)	2-2.4.2e(8)
<input type="checkbox"/> Casework Drawings	2-2.5.2f(9)	2-2.4.2f(8)	2-2.2.2e(8)	2-2.4.2e(9)
<input type="checkbox"/> List of Postal Service-Furnished Equipment	2-2.5.2f(10)	2-2.4.2f(9)	2-2.2.2e(9)	2-2.4.2e(10)
<input type="checkbox"/> Elevations and Perspective Sketches	2-2.5.2g	2-2.4.2g	2-2.2.2f	2-2.4.2f
<input type="checkbox"/> Sections and Details	2-2.5.2h	2-2.4.2h	2-2.2.2g	2-2.4.2g
<input type="checkbox"/> Structural	2-2.5.2i	2-2.4.2i	2-2.2.2h	2-2.4.2h
<input type="checkbox"/> Space Conditioning	2-2.5.2j	2-2.4.2j	2-2.2.2i	2-2.4.2i
<input type="checkbox"/> Plumbing	2-2.5.2k	2-2.4.2k	2-2.2.2j	2-2.4.2j
<input type="checkbox"/> Fire Protection	2-2.5.2l	2-2.4.2l	2-2.2.2k	2-2.4.2k

**A/E Services Checklist — Design Phase**

<b>Design Phase (Chapter 2)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Final Design Phase (continued)</b>				
<input type="checkbox"/> Electrical	2-2.5.2m	2-2.4.2m	2-2.2.2l	2-2.4.2l
<input type="checkbox"/> Short-Circuit and Fully Coordinated Circuit-Interrupting Device Summary	2-2.5.2m(5)	2-2.4.2m(5)	2-2.2.2l(5)	
<input type="checkbox"/> Other Utility Systems	2-2.5.2n	2-2.4.2n	2-2.2.2m	2-2.4.2m
<input type="checkbox"/> Mechanization	2-2.5.2o	n/a	n/a	2-2.4.2n
<input type="checkbox"/> Code Analysis	2-2.5.2p	2-2.4.2o	2-2.2.2n	2-2.4.2o
<input type="checkbox"/> Code Listing				
<input type="checkbox"/> Small-Scale Floor Plan				
<input type="checkbox"/> Alternatives				
<input type="checkbox"/> Building Area Tabulations	2-2.5.2q	2-2.4.2p	2-2.2.2o	2-2.4.2p
<input type="checkbox"/> Single-Line Floor Plan				
<input type="checkbox"/> Building Area Tabulation Lists				
<input type="checkbox"/> Building Areas and Calculations				
<input type="checkbox"/> Gross Area				
<input type="checkbox"/> Net Area				
<input type="checkbox"/> Calculations				
<input type="checkbox"/> Specifications	2-2.5.2r	2-2.4.2q	2-2.2.2p	2-2.4.2q
<input type="checkbox"/> Cost Estimate	2-2.5.2s	2-2.4.2r	2-2.2.2q	2-2.4.2r
<input type="checkbox"/> Schedules	2-2.5.2t	2-2.4.2s	2-2.2.2r	2-2.4.2s
<input type="checkbox"/> Small, Minority-Owned, and Woman- Owned Business Contracting Goals and Source List	2-2.5.2u	2-2.4.2t	2-2.2.2s	2-2.4.2t
<input type="checkbox"/> List of Referenced Publications	2-2.5.2v	2-2.4.2u	2-2.2.2t	2-2.4.2u
<input type="checkbox"/> Complete Set of Design Calculations	2-2.5.2w	2-2.4.2v	2-2.2.2u	2-2.4.2v
<input type="checkbox"/> Final Design Review Meeting	2-2.5.3	2-2.4.3	2-2.2.3	2-2.4.3

**A/E Services Checklist — Design Phase**

<b>Design Phase (Chapter 2)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Additional Design Phase Services (Options)</b>	2-4	2-4	2-4	2-4
<input type="checkbox"/> Perspective Drawing	2-4.1	2-4.1	2-4.1	2-4.1
<input type="checkbox"/> Supplementary Drawings	2-4.2	2-4.2	2-4.2	2-4.2
<input type="checkbox"/> Postal-Service Furnished Property	2-4.2a	2-4.2a	2-4.2a	2-4.2a
<input type="checkbox"/> Outline Floor Plan (Grid)	2-4.2b	2-4.2b	2-4.2b	2-4.2b
<input type="checkbox"/> Major Milestone Flowchart	2-4.2c	2-4.2c	2-4.2c	2-4.2c
<input type="checkbox"/> Mechanization Systems Description Manual	2-4.3	n/a	n/a	2-4.3
<input type="checkbox"/> Roofing Consultant	2-4.4	2-4.3	2-4.3	2-4.4
<input type="checkbox"/> Fire Protection Consultant	2-4.5	2-4.4	2-4.4	2-4.5
<b>Solicitation Phase</b>	2-2.6	2-2.5	2-2.3	n/a
<input type="checkbox"/> Solicitation Documents	2-2.6a	2-2.5a	2-2.3a	n/a
<input type="checkbox"/> Reproduction Costs	2-2.6a(1)	2-2.5a(1)	2-2.3a(1)	n/a
<input type="checkbox"/> Distribution of Solicitation Documents	2-2.6a(3)	2-2.5a(3)	2-2.3a(3)	n/a
<input type="checkbox"/> Requests for Information and Questions	2-2.6b	2-2.5b	2-2.3b	n/a
<input type="checkbox"/> Addendum	2-2.6c	2-2.5c	2-2.3c	n/a
<input type="checkbox"/> Preproposal Meetings	2-2.6d	2-2.5d	2-2.3d	n/a
<input type="checkbox"/> Technical Proposal Evaluations	2-2.6e	2-2.5e	2-2.3e	n/a

**A/E Services Checklist — Construction Phase**

<b>Construction Phase (Chapter 3)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Design Services During Construction (Options)</b>	3-1	3-1	3-1	3-1
<input type="checkbox"/> Support Services	3-1.2	3-1.2	3-1.2	3-1.2
<input type="checkbox"/> Preconstruction Meetings	3-1.2a(1)	3-1.2a(1)	3-1.2a(1)	3-1.2a(1)
<input type="checkbox"/> Interpretations and Clarifications	3-1.2a(2)	3-1.2a(2)	3-1.2a(2)	3-1.2a(2)
<input type="checkbox"/> Assistance to Field Office for Maintaining Quality Control	3-1.2a(3)	3-1.2a(3)	3-1.2a(3)	3-1.2a(3)
<input type="checkbox"/> Observation of Field Installations and Tests	3-1.2a(4)	3-1.2a(4)	3-1.2a(4)	3-1.2a(4)
<input type="checkbox"/> Administrative Support to the Field Office	3-1.2a(5)	3-1.2a(5)	3-1.2a(5)	3-1.2a(5)
<input type="checkbox"/> Technical Support to the Field Office	3-1.2a(6)	3-1.2a(6)	3-1.2a(6)	3-1.2a(6)
<input type="checkbox"/> Preparation of Punchlists				
<input type="checkbox"/> Closeout and Completion Inspections	3-1.2a(7)	3-1.2a(7)	3-1.2a(7)	3-1.2a(7)
<input type="checkbox"/> Small, Minority-Owned, and Woman-Owned Business Subcontracting Program Services	3-1.2a(8)	3-1.2a(8)	3-1.2a(8)	3-1.2a(8)
<input type="checkbox"/> Other				
<input type="checkbox"/> Submission Reviews and Approvals	3-1.3	3-1.3	3-1.3	3-1.3
<input type="checkbox"/> Shop Drawings, Product Data, and Samples	3-1.3.1	3-1.3.1	3-1.3.1	3-1.3.1
<input type="checkbox"/> Coordination Drawings	3-1.3.2	3-1.3.2	3-1.3.2	3-1.3.2
<input type="checkbox"/> Schedule of Values and Progress Payments	3-1.3.3	3-1.3.3	3-1.3.3	3-1.3.3
<input type="checkbox"/> Schedules	3-1.3.4	3-1.3.4	3-1.3.4	3-1.3.4
<input type="checkbox"/> Spare Parts Data	3-1.3.5	3-1.3.5	3-1.3.5	3-1.3.5
<input type="checkbox"/> Warranties and Guarantees	3-1.3.6	3-1.3.6	3-1.3.6	3-1.3.6
<input type="checkbox"/> Operation and Maintenance Manuals	3-1.3.7	3-1.3.7	3-1.3.7	3-1.3.7
<input type="checkbox"/> Test Reports	3-1.3.8	3-1.3.8	3-1.3.8	3-1.3.8
<input type="checkbox"/> Change Orders and Contract Modifications	3-1.3.9	3-1.3.9	3-1.3.9	3-1.3.9
<input type="checkbox"/> As-Built Drawings and Specifications	3-1.3.10	3-1.3.10	3-1.3.10	3-1.3.10
<input type="checkbox"/> Electronic Format of As-Built Information	3-1.3.11	3-1.3.11	3-1.3.11	3-1.3.11
<input type="checkbox"/> As-Built Photographs	3-1.3.12	3-1.3.12	3-1.3.12	3-1.3.12

**A/E Services Checklist — Construction Phase**

<b>Construction Phase (Chapter 3)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Field Services During Construction (Options)</b>	3-3	3-3	3-3	3-3
<input type="checkbox"/> Contract Administration	3-3.3	3-3.3	3-3.3	3-3.3
<input type="checkbox"/> Progress Meetings	3-3.6	3-3.5	3-3.5	3-3.6
<input type="checkbox"/> Records	3-3.7	3-3.6	3-3.6	3-3.7
<input type="checkbox"/> Construction Project File	3-3.8	3-3.7	3-3.7	3-3.8
<input type="checkbox"/> Schedule of Values and Payments	3-3.11	3-3.10	3-3.10	3-3.11
<input type="checkbox"/> Clarifications	3-3.12	3-3.11	3-3.11	3-3.12
<input type="checkbox"/> Progress Photographs	3-3.10	3-3.9	3-3.9	3-3.10
<input type="checkbox"/> Training	3-3.14	3-3.13	3-3.13	3-3.14
<input type="checkbox"/> Guarantees and Instructions	3-3.15	3-3.14	3-3.14	3-3.15
<input type="checkbox"/> Preoccupancy Safety and Health Inspection	3-3.16	3-3.15	3-3.15	3-3.16
<input type="checkbox"/> Accessibility Inspection	3-3.17	3-3.16	3-3.16	3-3.17
<input type="checkbox"/> Preliminary Completion Inspection	3-3.18	3-3.17	3-3.17	3-3.18
<input type="checkbox"/> Substantial Completion Inspection	3-3.19	3-3.18	3-3.18	3-3.19
<input type="checkbox"/> Final Completion Inspection	3-3.20	3-3.19	3-3.19	3-3.20
<input type="checkbox"/> Final Payment Review	3-3.21	3-3.20	3-3.20	3-3.21
<input type="checkbox"/> Field Supervision	3-3.4	3-3.4	3-3.4	3-3.4
<input type="checkbox"/> Field Office Staff	3-3.4a	n/a	3-3.4a	3-3.4a
<input type="checkbox"/> Field Office	3-3.4b	n/a	3-3.4b	3-3.4b
<input type="checkbox"/> Contractor Superintendence	3-3.4c	n/a	3-3.4c	3-3.4c
<input type="checkbox"/> Safety and Security	3-3.4d	3-3.4c	3-3.4d	3-3.4d
<input type="checkbox"/> Mechanization Coordination	3-3.5	n/a	n/a	3-3.5
<input type="checkbox"/> Quality Control and Inspection	3-3.9	3-3.8	3-3.8	3-3.9
<input type="checkbox"/> Operating Tests	3-3.13	3-3.12	3-3.12	3-3.13

**A/E Services Checklist — Postconstruction Phase**

<b>Postconstruction Phase (Chapter 4)</b>	<b>Reference to Part II</b>	<b>Reference to Part III</b>	<b>Reference to Part IV</b>	<b>Reference to Part V</b>
<b>Design Services After Construction (Options)</b>	4-1	4-1	4-1	4-1
<input type="checkbox"/> Record Drawings and Specifications	4-1.1	4-1.1	4-1.1	4-1.1
<input type="checkbox"/> Contract Appeals	4-1.2	4-1.2	4-1.2	4-1.2
<b>Field Services After Construction (Options)</b>	4-2	4-2	4-2	4-2
<input type="checkbox"/> Six-Month Postoccupancy Evaluations	4-2.1	4-2.1	4-2.1	4-2.1
<input type="checkbox"/> Guarantee Inspection	4-2.2	4-2.2	4-2.2	4-2.2
<input type="checkbox"/> One-Year Warranty Inspection	4-2.3	4-2.3	4-2.3	4-2.3