System Manager/Custodian. The individual who protects, operates, and/or maintains an AIS in accordance with a service agreement with the system owner. In some instances, system management responsibilities may be shared.

b. Abbreviations

ADP	Automated Data Processing
AIS	Automated Information System
DOI	Department of the Interior
MIS	Management Information Systems Division
OSM	Office of Surface Mining

3. Policy/Procedures

a. Policy

Each OSM application shall be assigned a system owner and system manager. In the case of major information system applications (as defined by DOI), the system owner and manager shall not be the same individual.

b. Procedures

Upon initiation of new application development or acquisition, system owners and managers shall be appointed and reported in accordance with policies and procedures found in section III.D, IRM Resource Inventories, and section II.C, IRM Planning.

c. Responsibilities

1) The MIS Division Chief is responsible for ensuring that system owners and managers are assigned responsibility for and are held properly accountable for the efficiency and effectiveness of their application systems.

2) Assistant Directors are responsible for:

a) Ensuring that system owners and managers are appointed for each application.

b) Ensuring that system owners and managers are aware of their responsibilities and are held accountable for meeting those responsibilities.

c) Ensuring that system owners and managers are reported in accordance with section III.D, IRM Resource Inventories.

3) The System Owner is responsible and accountable for the products of the AIS. The responsibilities of the System Owner include:

a) Defining the system's functional requirements.

b) Providing functional oversight.

c) Conducting a periodic review of system requirements in order to determine whether the requirements continue to exist and the system continues to meet, in an efficient and cost-effective manner, the purposes for which it was developed.

d) Securing required information systems support for the AIS.

e) Ensuring that a Continuity of Operations Plan is developed for the AIS.

f) Establishing formal, written standards for program changes (both scheduled and emergency) and authorizing all scheduled program changes.

g) Ensuring that internal controls and operating policies that address the functionality of the AIS are implemented as required.

h) Certifying the AIS to ensure that it satisfies its defined functional and quality requirements.

4) The System Manager is responsible for:

a) Assisting the system owner in defining system requirements.

b) Coordinating with OSM records managers regarding retention periods and disposal standards applicable to the various types of data and storage media.

c) Ensuring that internal control reviews, as outlined in the DOI Automated Application System Control Evaluation Guideline, are conducted as required.

d) Coordinating with the MIS Information Resources Security Administrator to determine appropriate security requirements before the AIS is acquired or developed and certifying before implementation that the AIS satisfies applicable security regulations, policies, and standards and that its security safeguards are adequate.

e) Providing operations and/or maintenance support.

f) Ensuring that all program changes meet formal, written standards and notifying the system owner when emergency program changes are made.

g) Forecasting development, implementation, and operational costs of the AIS.

4. Reporting Requirements

Updates to the hardware, software, and application inventories will be provided to the MIS Division Chief semiannually (at the end of the second and fourth quarters) in the electronic format specified by the MIS Division Chief.

5. References

Department of the Interior Departmental Manual, Part 376 DM 13, ADP—Automated Information Systems Management Accountability.

Department of the Interior Departmental Manual, Part 375 DM 4, IRM Strategic Planning.

Department of the Interior Departmental Manual, Part 375 DM 7, Economic Analysis in Support of IRM Decision Making.

Department of the Interior Departmental Manual, Part 375 DM 19, Information Resources Security Program.

Department of the Interior Departmental Manual, Part 376 DM 10, Life-Cycle Management of AIS.

Department of the Interior Departmental Manual, Part 382 DM 11, Managing Records in Electronic Form.

Department of the Interior Departmental Manual, Part 383 DM 1-12, Management and Safeguarding of Privacy Act Records.

Department of the Interior, Project Manager's Guide to Applications Systems Life-Cycle Management.

Automated Application System Internal Control Guideline.

Office of Management and Budget, OMB Circular No. A-123, Internal Control Systems.

Office of Management and Budget, OMB Circular No. A-130, Management of Federal Information Resources.

Office of Management and Budget, OMB Circular No. A-127, Financial Management Systems.

Federal Managers Financial Integrity Act.

Paperwork Reduction Act of 1980 (Public Law 96-511).

Paperwork Reduction Reauthorization Act of 1986 (Public Law 99–500).

Computer Security Act of 1987 (Public Law 100–235).

Federal Information Processing Standards (FIPS).

6. Effect on Other Documents

None

7. Effective Date

Upon issuance

8. Contact

MIS Division Chief

This page intentionally blank

Chapter IV

TELECOMMUNICATIONS

TELECOMMUNICATIONS

1. Purpose

This section explains Office of Surface Mining policies and procedures for identification and use of telecommunications systems.

2. Definitions

a. Terms

Telecommunications Facilities. Equipment used for telephone, telegraph, teletype, data, facsimile, telephotograph, video, and audio transmissions, and such corollary items as distribution systems and communications security facilities.

Telecommunications Service. The transmission, emission, or reception of signals, signs, writing, images, sounds, or intelligence of any nature, by wire, radio, visual, or other electrical, electromagnetic, or acoustically coupled means.

b. Abbreviations

ADP	Automated Data Processing
DOI	Department of the Interior
FTS	Federal Telephone System
MIS	Management Information Systems Division
OSM	Office of Surface Mining

3. Policy/Procedures

a. Policy

OSM telecommunications decisions will be made in accordance with Federal and DOI standards and guidance.

b. Procedures

1) Acquisition of telecommunications facilities and services should be made in accordance with the policies outlined in section III.A, ADP Acquisition.

2) OSM will participate in the FTS 2000 Data Communications Coordination Council, which serves as a forum for the exchange of information on FTS 2000 matters. The council is involved in general planning for DOI's use of FTS 2000 data services and ensuring that those services are used efficiently and cost-effectively. The council also coordinates activities related to implementation of

FTS 2000 data communications services and identifies opportunities for the bureaus to share technical expertise, resources, and access to FTS 2000 services.

3) Telecommunications requirements should be satisfied through equipment and software that meets Federal, DOI, and OSM standards.

Detailed information regarding specific telecommunications topics may be found in DOI telecommunications handbooks (see references).

c. Responsibilities

1) The MIS Division Chief is responsible for:

a) Ensuring OSM-wide compliance with Federal, DOI, and OSM standards.

b) Providing guidance to Assistant Directors and other OSM organizations regarding telecommunications issues.

c) Appointing an OSM primary and alternate representative for the FTS 2000 Data Communications Coordination Council.

2) Assistant Directors are responsible for ensuring compliance with Federal, DOI, and OSM standards within the assistant directorate.

3) OSM's FTS 2000 Data Communications Coordination Council Representative is responsible for attending council meetings, presenting OSM concerns and issues, assisting in council analyses and evaluations, and keeping other OSM individuals informed with regard to progress and issues.

4. Reporting Requirements

None

5. References

Department of the Interior Departmental Manual, Part 377 DM 2, Telecommunications.

General Services Administration, Federal Information Resources Management Regulation.

General Services Administration, Glossary of Telecommunications Terms, FED STD 1037A.

Department of the Interior Telecommunications Handbooks:

Radio Communications Handbook
Telecommunications Terminology Handbook
Telephone Systems Handbook
Local Area Network Guide

DOI Mainframe Strategy, May 1988

6. Effect on Other Documents

None

7. Effective Date

Upon issuance

8. Contact
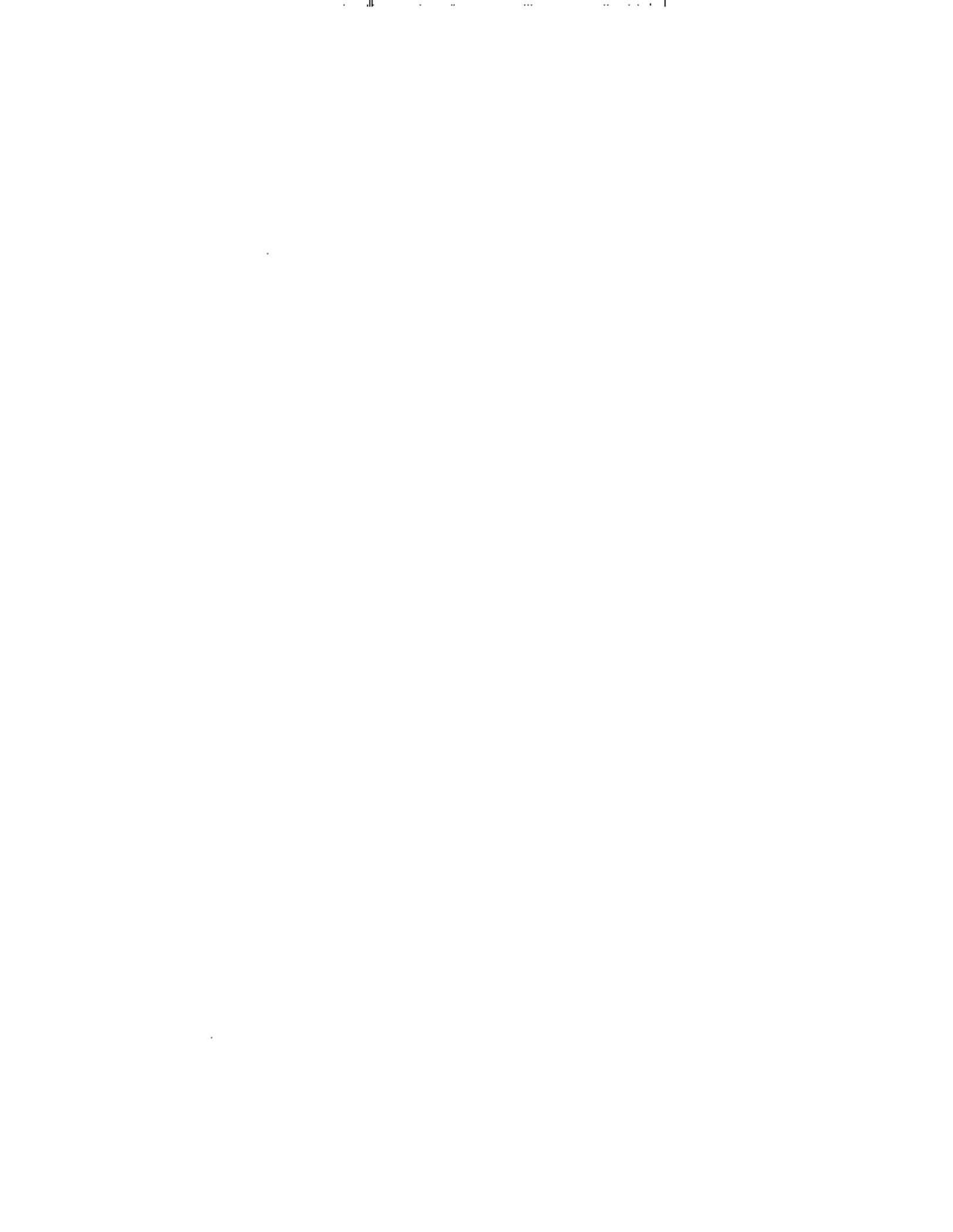
MIS Division Chief

This page intentionally blank

Chapter V

DATA ADMINISTRATION

The Office of Surface Mining Division of Management Information Systems will promulgate data administration policies at a later date.

Appendix A.

OFFICE OF SURFACE MINING
ADP DOCUMENTATION CONTENT GUIDELINES

Appendix A
OFFICE OF SURFACE MINING
ADP DOCUMENTATION CONTENT GUIDELINES

This appendix contains content guidelines for the ADP application documentation referenced in section II.C, Life Cycle Management of ADP Information Systems. Detailed explanations of the material that each document should contain are also provided.

Figure A–1 shows all Office of Surface Mining (OSM) documentation requirements as set forth in section II.C. The guidelines in this appendix are limited to Levels 1, 2, and 3 of that list, which encompass all system or application development projects except those involving major, service-wide efforts. These major development projects, which fall into Level 4 of the OSM documentation guidelines, require oversight by the U.S. Department of Interior Office of Information Resources Management. Accordingly, content guidance for Level 4 documentation is found in the DOI Project Manager's Guide to Application Systems Life Cycle Management. Figures A–2, A–3, A–4, and A–5 show the requirements for each documentation level. The following documentation is included in this appendix:

Document Title	Reference Number from OSM Documentation Requirements
Feasibility Study	1.2.5
Project Management Plan	1.2.9
Quality Assurance Plan	1.2.10
Cost/Benefit Analysis	1.2.11
Detailed Functional Requirements	2.1.2
Data Requirements	2.1.3
Unit Test Plan	2.3.1.1
Integration Test Plan	2.3.1.2
System Test Plan	2.3.1.3
Acceptance Test Plan	2.3.1.4
System/Subsystem Specification	2.3.3.1
Data Base Specification	2.3.3.2
Program Specification	2.3.3.4
Data Dictionary	2.3.3.6
Contingency Plan	2.3.5
Conversion Plan	2.4.3
User Training Plan	2.4.4
Program Maintenance Manual	2.4.6
User's Manual	2.4.8
Operations Manual	2.4.9
Data Base Administration Procedures Manual	2.4.10

The documentation is presented in the order that it is found in the OSM documentation requirements. Each document is paginated by its title and reference number from the documentation requirements list (Figure A–1) for easier reference and update. Gaps in the number scheme are the result of Level 4 documentation, which is discussed in DOI documentation guidance.

Figure A-1
COMPARISON OF MINIMUM DOCUMENTATION REQUIREMENTS

	Life-Cycle Phase/Stage/Document	Level 4	Level 3	Level 2	Level 1
1	**INITIATION PHASE**				
1.1	**Mission Analysis Stage**				
1.1.1	Project Request	Required			
1.1.2	Mission Analysis Methodology	Required			
1.1.3	Cost/Benefit Analysis	Required			
1.1.4	Project Charter	Required			
1.1.5	Organizational Model	Required			
1.1.6	Mission Processes Model	Required			
1.1.7	Information Model	Required			
1.1.8	Mission Need Statement	Required			
1.2	**Concept Development Stage**				
1.2.1	System Objectives	Optional			
1.2.2	Application System Architecture	Optional			
1.2.3	Data Architecture	Optional			
1.2.4	Data Communications Architecture	Optional			
1.2.5	Feasibility Study		Required	Required	
1.2.6	System Life-Cycle Strategy	Required			
1.2.7	System Life-Cycle Dates	Required			
1.2.8	System Life-Cycle Resources Estimate	Required			
1.2.9	Project Management Plan		Required	Required	
1.2.10	Quality Assurance Plan		Required	Required[1]	
1.2.11	Cost/Benefit Analysis	Required	Required	Required	
1.2.12	Revised Mission Need Statement	Required			
1.2.13	System Decision Paper 1	Required			

1Incorporated in Project Management Plan.

Figure A-1 (Continued)
COMPARISON OF MINIMUM DOCUMENTATION REQUIREMENTS

	Life-Cycle Phase/Stage/Document	Level 4	Level 3	Level 2	Level 1
2	**DEVELOPMENT PHASE**				
2.1	**System Analysis Stage**				
2.1.1	Current System Description	Optional	Required[2]	Required[2]	Optional[2]
2.1.2	Detailed Functional Requirements	Optional	Required	Required	Optional
2.1.3	Data Requirements	Required	Required	Required	Optional
2.2	**System Design Stage**				
2.2.1	Design Proposal	Required			
2.2.2	Detailed Cost/Benefit Analysis	Required			
2.2.3	Revised Life-Cycle Strategy	Required			
2.2.4	System Decision Paper 2	Required			
2.3	**System Construction and Acquisition Stage**				
2.3.1	Test Plans:				
2.3.1.1	Unit Test Plan		Required		
2.3.1.2	Integration Test Plan		Required		
2.3.1.3	System Test Plan	Required	Required		
2.3.1.4	Acceptance Test Plan		Required		
2.3.2	ADPE Specifications	Optional	Required[3]		
2.3.3	Application Software Documentation:				
2.3.3.1	System/Subsystem Specification	Optional	Required		
2.3.3.2	Data Base Specification	Optional	Required	Required	Optional
2.3.3.3	Detailed Process Design	Optional			
2.3.3.4	Program Specification	Optional	Required		
2.3.3.5	Test Data Design	Optional			
2.3.3.6	Data Dictionary	Optional	Required	Required	Optional
2.3.4	Control, Backup, and Security Study	Required	Required[4]	Required[4]	Required[4]
2.3.5	Contingency Plan		Required	Required	

[2]Incorporated in Detailed Functional Requirements.
[3]Incorporated in System/Subsystem Specification.
[2]Incorporated in User's Manual, Operations Manual, and Data Base Administration Procedures Manual.

Life-Cycle Phase/Stage/Document		Level 4	Level 3	Level 2	Level 1
2.4	**User Acceptance Stage**				
2.4.1	Current System Description	Required			
2.4.2	Mission Analysis Methodology	Required	Required[a]		
2.4.3	Cost/Benefit Analysis	Optional	Required		
2.4.4	User Training Plan	Optional	Required	Required	
2.4.5	Post-Implementation Review Plan	Required			
2.4.6	Program Maintenance Manual	Required	Required	Required	Optional
2.4.7	Data Processing Manual	Optional			
2.4.8	User's Manual	Optional	Required	Required	Required
2.4.9	Operations Manual	Optional	Required	Required	Required
2.4.10	Data Base Administration Procedures Manual		Required	Required	Required
2.4.11	System Decision Paper 3	Required			
3	**OPERATION AND MAINTENANCE PHASE**				
3.1	**Implementation Stage**				
3.1.1	Application Stewardship Document	Required			
3.2	**Maintenance Stage**				
3.2.1	Post-Implementation Review Report	Required			
3.2.2	System Decision Paper 4	Required			

[a]Incorporated in Conversion Plan.

Figure A-2
SUMMARY OF MINIMUM DOCUMENTATION REQUIREMENTS
AND REFERENCE NUMBERS FOR OSM LEVEL 1

INITIATION PHASE

Mission Analysis Stage	None Required
Concept Development Stage	None Required

DEVELOPMENT PHASE

System Analysis Stage

Current System Description[1] 2.1.1
Detailed Functional Requirements* 2.1.2
Data Requirements* 2.1.3

System Design Stage

None Required

System Construction and

Data Base Specification* 2.3.3.2
Data Dictionary* 2.3.3.6
Control, Backup, and Security Plan[2] 2.3.4

User Acceptance Stage

Program Maintenance Manual* 2.4.6
User's Manual 2.4.8
Operations Manual 2.4.9
Data Base Administration Procedures Manual 2.4.10

OPERATION AND MAINTENANCE PHASE

Implementation Stage	None Required
Maintenance Stage	None Required

*Optional

[1]Incorporated in Detailed Functional Requirements.

[2]Incorporated in User's Manual, Operations Manual, and Data Base Administration Procedures Manual.

Figure A–3
SUMMARY OF MINIMUM DOCUMENTATION REQUIREMENTS
AND REFERENCE NUMBERS FOR OSM LEVEL 2

INITIATION PHASE

Mission Analysis Stage	None Required	
Concept Development Stage	Feasibility Study	1.2.5
	Project Management Plan	1.2.9
	Quality Assurance Plan[1]	1.2.10
	Cost/Benefit Analysis	1.2.11

DEVELOPMENT PHASE

System Analysis Stage	Current System Description[2]	2.1.1
	Detailed Functional Requirements	2.1.2
	Data Requirements	2.1.3
System Design Stage	None Required	
System Construction and	Data Base Specification	2.3.3.2
	Data Dictionary	2.3.3.6
	Control, Backup, and Security Plan[3]	2.3.4
	Contingency Plan	2.3.5
User Acceptance Stage	User Training Plan	2.4.4
	Program Maintenance Manual	2.4.6
	User's Manual	2.4.8
	Operations Manual	2.4.9
	Data Base Administration Procedures Manual	2.4.10

OPERATION AND MAINTENANCE PHASE

Implementation Stage	None Required	
Maintenance Stage	None Required	

---

[1] Incorporated in Project Management Plan.

[2] Incorporated in Detailed Functional Requirements.

[3] Incorporated in User's Manual, Operations Manual, and Data Base Administration Procedures Manual.

Figure A-4
SUMMARY OF MINIMUM DOCUMENTATION REQUIREMENTS
AND REFERENCE NUMBERS FOR OSM LEVEL 3

INITIATION PHASE

Mission Analysis Stage	None Required	
Concept Development Stage	Feasibility Study	1.2.5
	Project Management Plan	1.2.9
	Quality Assurance Plan	1.2.10
	Cost/Benefit Analysis	1.2.11

DEVELOPMENT PHASE

System Analysis Stage	Current System Description[1]	2.1.1
	Detailed Functional Requirements	2.1.2
	Data Requirements	2.1.3
System Design Stage	None Required	
System Construction and Acquisition Stage	Unit Test Plan	2.3.1.1
	Integration Test Plan	2.3.1.2
	System Test Plan	2.3.1.3
	Acceptance Test Plan	2.3.1.4
	ADPE Specification[2]	2.3.2
	System/Subsystem Specification*	2.3.3.1
	Data Base Specification	2.3.3.2
	Program Specification	2.3.3.4
	Data Dictionary	2.3.3.6
	Control, Backup, and Security Plan[3]	2.3.4
	Contingency Plan	2.3.5
User Acceptance Stage	Implementation Plan[4]	2.4.2
	Conversion Plan	2.4.3
	User Training Plan	2.4.4
	Program Maintenance Manual	2.4.6
	User's Manual	2.4.8
	Operations Manual	2.4.9
	Data Base Administration Procedures Manual	2.4.10

[1]Incorporated in Detailed Functional Requirements.

[2]Incorporated in System/Subsystem Specification.

[3]Incorporated in User's Manual, Operations Manual, and Data Base Administration Procedures Manual.

[4]Incorporated in Conversion Plan.

Figure A–4 (Continued)
SUMMARY OF MINIMUM DOCUMENTATION REQUIREMENTS
AND REFERENCE NUMBERS FOR OSM LEVEL 3

OPERATION AND MAINTENANCE PHASE

Implementation Stage   None Required

Maintenance Stage   None Required

Figure A-5
SUMMARY OF MINIMUM DOCUMENTATION REQUIREMENTS
AND REFERENCE NUMBERS FOR OSM LEVEL 4

INITIATION PHASE

Mission Analysis Stage

Project Request 1.1.1
Mission Analysis Methodology 1.1.2
Cost/Benefit Analysis 1.1.3
Project Charter 1.1.4
Organizational Model 1.1.5
Mission Process Model 1.1.6
Information Model 1.1.7
Mission Need Statement 1.1.8

Concept Development Stage

System Objectives* 1.2.1
Application System Architecture* 1.2.2
Data Architecture* 1.2.3
Data Communications Architecture* 1.2.4
System Life-Cycle Strategy 1.2.6
System Life-Cycle Dates 1.2.7
System Life-Cycle Resources Estimate 1.2.8
Cost/Benefit Analysis 1.2.11
Revised Mission Need Statement 1.2.12
System Decision Paper 1 .... 1.2.13

DEVELOPMENT PHASE

System Analysis Stage

Current System Description* 2.1.1
Detailed Functional Requirements* 2.1.2
Data Requirements 2.1.3

System Design Stage

Design Proposal 2.2.1
Detailed Cost/Benefit Analysis 2.2.2
Revised Life-Cycle Strategy 2.2.3
System Decision Paper 2 .... 2.2.4

System Construction and
Acquisition Stage

System Test Plan 2.3.1.8
ADPE Specifications* 2.3.2
System/Subsystem Specification* 2.3.3.1
Data Base Specification* 2.3.3.2
Detailed Process Design* 2.3.3.3
Program Specification* 2.3.3.4
Test Data Design* 2.3.3.5
Data Dictionary* 2.3.3.6
Control, Backup, and Security Plan 2.3.4

*Optional

Appendix A
Documentation Content Guidelines   A–11   January 1991

Figure A-5 (Continued)
MINIMUM DOCUMENTATION REQUIREMENTS FOR OSM LEVEL 4

OPERATION AND MAINTENANCE PHASE

FEASIBILITY STUDY
(1.2.5 on OSM Documentation Requirements List)

Purpose OSM managers and the information systems staff use the information in the Feasibility Study to ensure that:

- A number of alternatives for developing a new system or an enhancement to an existing system are considered

- Requirements for the selected alternative are clearly understood and thoroughly developed

- Continued development of the system or enhancement is warranted and can be justified in terms of cost and benefits.

Content The Feasibility Study presents a conceptual design for a new system or an enhancement to an existing system. The recommended design should be the best of a number of alternatives, each of which should be discussed in the study. Considerations involved in making the recommendation include:

- A description of what the proposed system or enhancement will be required to do and how it will meet those requirements

- An analysis of the existing system or process and formulation of alternative systems or enhancements which improve that system or process

- Quantitative and qualitative evaluation criteria that lead to selection of the best alternative.

Figure A–6 summarizes the information required in the Feasibility Study by presenting the document's table of contents. Detailed explanations of the material that each section should contain are then found in the pages that follow.

The Cost/Benefit Analysis can be included as an appendix to the Feasibility Study or documented separately. Requirements for this document are discussed later in this appendix, and its table of contents is shown in Figure A–9.

Figure A-6
TABLE OF CONTENTS FOR FEASIBILITY STUDY
(1.2.5 on OSM Documentation Requirements List)

1. Introduction

    1.1 Background
    1.2 Scope
    1.3 References

2. Management Summary

    2.1 Requirements
    2.2 Objectives
    2.3 Assumptions and Constraints
    2.4 Methodology
    2.5 Evaluation Criteria
    2.6 Recommendation
    2.7 Other Alternatives Considered

3. System Requirements and Objectives

    3.1 Requirements

        3.1.1 Output
        3.1.2 Input
        3.1.3 Data Base and Files
        3.1.4 Validation
        3.1.5 Processing and Data Flow
        3.1.6 Security
        3.1.7 Information Storage and Retrieval
        3.1.8 Interface

    3.2 Objectives

4. Analysis of the Existing System

    4.1 Processing and Data Flow
    4.2 Workload
    4.3 Costs
    4.4 Personnel
    4.5 Equipment
    4.6 Limitations

5. Proposed System

    5.1 Description of Proposed System
    5.2 Improvements

Figure A-6 (Continued)
TABLE OF CONTENTS FOR FEASIBILITY STUDY
(1.2.5 on OSM Documentation Requirements List)

5.3 Impacts

  5.3.1 Equipment Impacts
  5.3.2 Software Impacts
  5.3.3 Organizational Impacts
  5.3.4 Operational Impacts
  5.3.5 Developmental Impacts
  5.3.6 Site and Facility Impacts
  5.3.7 Cost Impacts

6. Alternative Systems

  6.1 Alternative System 1

    6.1.1 Description
    6.1.2 Improvements
    6.1.3 Impacts

      6.1.3.1 Equipment Impacts
      6.1.3.2 Software Impacts
      6.1.3.3 Organizational Impacts
      6.1.3.4 Operational Impacts
      6.1.3.5 Developmental Impacts
      6.1.3.6 Site/Facility Impacts
      6.1.3.7 Cost Impacts

  6.n Alternative System n

7. Rationale for Recommendation

(Optional)
Appendix A—Cost/Benefit Analysis

Section	Title	Content
1	Introduction	Provide appropriate background and summary information.
1.1	Background	Provide a brief overview of the project and why it is being conducted.
1.2	Scope	Explain why the Feasibility Study is needed, provide a brief overview of its organization, and indicate system-related topics that have been included in the document or excluded from consideration.
1.3	References	List pertinent standards, guidance, documentation, and any other materials used to prepare the Feasibility Study. Include vendor-supplied materials; project documentation; other in-house documentation; and Federal, departmental, agency, and industry standards and guidelines.

Section	Title	Content
2	Management Summary	Summarize material presented in the study. Present evidence that the proposed system or enhancement meets requirements.
2.1	Requirements	Summarize the requirements that the new system or enhancement will fulfill. Possibilities include: • New services • Increased capacity • Legislative/policy improvements • Privacy and security • Audit controls. Show that the new system or enhancement can be available by the estimated target/completion date.
2.2	Objectives	Summarize the major performance objectives for the new system or enhancement. Possibilities include: • Reduced costs • Increased productivity • Increased processing speed • Improved management services • Improved controls • Compliance with regulations.
2.3	Assumptions and Constraints	Describe any factors that affect the conclusions of the study. Possibilities include: • Operational life of the proposed system • Period of time allowed for comparison of alternatives • Interaction of the new system or enhancement with other systems and organizations • Input, processing, and output requirements • Financial constraints • Legislative/policy constraints • Changing hardware, software, or operating environment • Availability of information and resources.

Section	Title	Content
2.4	Methodology	Provide a detailed description of how the study was conducted and how the current system or method, the proposed system or enhancement, and the alternatives were evaluated and compared. Summarize the method or strategy used (for example, survey, weighting, modeling, benchmarking, prototyping, or simulation).
2.5	Evaluation Criteria	Identify the factors that were used to arrive at the recommendations made in the study. Possibilities include cost, priority, development time, and ease of use.
2.6	Recommendation	Present the results of the study. Include the consequences of not taking action and whether delays can be tolerated.
2.7	Other Alternatives Considered	Describe each of the alternatives and explain why it was not selected.

Section	Title	Content
3	System Requirements and Objectives	Provide a high-level description of what the new system or enhancement will be required to do and how it will meet those objectives. Identify the items that are mandatory.
3.1	Requirements	Describe what the new system or enhancement will be required to do.
3.1.1	Output	Describe what the system will produce. Possibilities include reports, documents, and data. For each item, include characteristics such as how it will be used, how often it will be required, how it will relate to other products, and how it will be distributed.
3.1.2	Input	Describe the data that the new system or enhancement will use to generate the output. Include the source of the data; the type, volume, and organization of the data; and how often the data will be submitted.
3.1.3	Data Base and Files	Describe the files that the new system or enhancement will use. Include the content of each file, its purpose, how it will be used in the new system or enhancement, and how often it will need to be updated.
3.1.4	Validation	Describe the criteria that will be used to validate data in the new system or enhancement.
3.1.5	Processing and Data Flow	Explain how the new system or enhancement processes data. Provide a flow chart that shows major functions, processes, and activities and describe each in the text.
3.1.6	Security	Provide detailed requirements for security, privacy, and control of the new system or enhancement.

Section	Title	Content
3.1.7	Information Storage and Retrieval	Explain where and how the new system or enhancement will store data and how and for what purposes the data will be retrieved. Describe any additional or special requirements for information storage and retrieval.
3.1.8	Interface	Identify any other systems with which the new system or enhancement shares information or other data processing activities. Explain how the interaction is accomplished and any possible effects on either system.
3.2	Objectives	Explain the major performance objectives for the new system or enhancement in terms of the requirements stated in the previous section.

Section	Title	Content
4	Analysis of the Existing System	Provide an objective description of the system that is to be replaced or enhanced. This will provide a starting point for determining the economic and managerial advantages of the new system or enhancement.
4.1	Processing and Data Flow	Explain how the existing system processes data. Provide a flow chart that shows major functions, processes, and activities and describe each in the text.
4.2	Workload	Describe the volume of work handled by the existing system and explain how the volume of work affects the system's performance.
4.3	Costs	Provide an itemized list that shows how much it costs to operate the existing system. Include manpower, equipment, space, support services, materials, and overhead. Detailed information can be included in the Cost/Benefit Analysis. If so, summarize the information here and refer the reader to the Cost/Benefit Analysis.
4.4	Personnel	Describe the skill categories and numbers of people who operate and maintain the existing system. Include both government and contractor employees.
4.5	Equipment	Describe the equipment the existing system uses. Include system hardware, peripheral devices, and accessories.
4.6	Limitations	Explain the existing system's deficiencies. Possibilities include inadequate information or lack of timely information (as related to decision makers and others who use the information), inefficient use of resources, technical problems, and organizational or policy considerations.

Section	Title	Content
5	Proposed System	Describe how the requirements and objectives discussed in Section 3 will be met. Limit the discussion to the recommended system or enhancement only. Include any information that will enable concerned parties to determine how the system or enhancement will affect other systems.
5.1	Description of the Proposed System	Explain the concept of the new system or enhancement in terms of how it will meet the requirements discussed in Section 3. Describe how the concept was developed, including any software engineering tools or methodologies that were used, also in terms of the requirements.
5.2	Improvements	Explain how the new system or enhancement will improve functions, processes, and activities in terms of the objectives discussed in Section 3.
5.3	Impacts	Explain how the new system or enhancement will affect existing systems and operations. Include potential conversion problems.
5.3.1	Equipment Impacts	Describe any new equipment or changes to existing equipment that will be required to implement the new system or enhancement.
5.3.2	Software Impacts	Describe any additions or modifications that will be required to adapt existing applications or support software to the new system or enhancement. If a software conversion effort is required, the rationale for the effort and the proposed conversion methodology should be discussed in a separate section.
5.3.3	Organizational Impacts	Describe any changes that will be required in the organization, the personnel in the organization, or the skills of the personnel.

Section	Title	Content
5.3.4	Operational Impacts	Describe how the new system or enhancement will affect the operations of the organization. Possibilities include automation of manual procedures, improved access data, and so forth.
5.3.5	Developmental Impacts	Describe how the development of the new system or enhancement will affect the organization. Include specific activities to be performed and by whom, resources that will be required in developmental phases and in testing the system or enhancement, and security and privacy considerations.
5.3.6	Site and Facility Impacts	Describe any modifications to existing work areas that the new system or enhancement will require.
5.3.7	Cost Impacts	Describe cost or budget considerations that could affect the development, implementation, or operation of the new system or enhancement.

Section	Title	Content
6	Alternative Systems	Describe each of the alternative systems or enhancements that were considered before selecting the final recommendation. If no alternatives were considered, explain why. Include a separate subsection for each alternative, and follow the outline in Section 5. For example: 6.1 Alternative System 1 6.1.1 Description 6.1.2 Improvements 6.1.3 Impacts 6.1.3.1 Equipment Impacts 6.1.3.2 Software Impacts 6.1.3.3 Organizational Impacts 6.1.3.4 Operational Impacts 6.1.3.5 Developmental Impacts 6.1.3.6 Site/Facility Impacts 6.1.3.7 Cost Impacts 6.n Alternative System n

Section	Title	Content
7	Rationale for Recommendation	Provide the reasons that support development of the new system or enhancement over the alternatives. Explain the decision in terms of quantifiable and nonquantifiable benefits, requirements and objectives, resources required to develop and operate the new system or enhancement, possible effects of delay, and consequences of not taking action. Quantifiable benefits are those which can be described in terms of measures such as dollars, time, and speed. Nonquantifiable benefits are those which cannot be measured, such as improved service and morale, greater efficiency, and enhanced image.

PROJECT MANAGEMENT PLAN
(1.2.9 on OSM Documentation Requirements List)

Purpose
The Project Management Plan identifies what needs to be done to implement a new system or an enhancement to an existing system, when it needs to be done, and what it will take to do it. It identifies the approach to managing the project, all tasks to be performed, the schedule for completing the tasks, and the resources required to complete the tasks.

The Project Management Plan is intended to be a dynamic document and should evolve as the various milestones in the project's life cycle are completed. Each update should provide greater detail to the current and near-term tasks, as well as any changes in project direction.

Content
The Project Management Plan defines each task in terms of its purpose, dependencies, activities, staff responsibilities, and anticipated results. Where applicable, results are defined in terms of deliverable products with a formal review and approval process. Resource requirements are defined in terms of equipment and staff (both development and operations). At the project and task level, schedules are based on manpower loading and other dependencies. Cost estimates should be included for staff and operations throughout the life of the proposed new system or enhancement.

Figure A-7 summarizes the information required in the Project Management Plan by presenting the document's table of contents. Detailed explanations of the material that each section should contain are then found in the pages that follow.

Figure A-7
TABLE OF CONTENTS FOR PROJECT MANAGEMENT PLAN
(1.2.9 on OSM Documentation Requirements List)

1. Introduction

    1.1 Background
    1.2 Scope
    1.3 Assumptions and Constraints
    1.4 Summary of the Project Management Plan

        1.4.1 Milestones

    1.5 References

2. Project Organization and Management

    2.1 Organization
    2.2 Reporting Relationships
    2.3 Unit/Staff Responsibilities

3. Resources

    3.1 Personnel

        3.1.1 Skill Mix
        3.1.2 Manpower Loading
        3.1.3 In-House/Contractor Support

    3.2 ADP Equipment
    3.3 Facilities
    3.4 Other Resources

4. Project Execution (by Phase)

    4.1 Task Descriptions
    4.2 Task Dependencies
    4.3 Products To Be Delivered

5. Project Costs (by Phase)

    5.1 Equipment
    5.2 In-House Staff
    5.3 Contractor Staff
    5.4 Operations

6.   Project Execution Feedback

    6.1   Evaluating Project Execution
    6.2   Enhancement Evaluation Plan
    6.3   Configuration Management Transition Plan

Section	Title	Content
1	Introduction	Provide appropriate background and summary information.
1.1	Background	Provide a brief overview of the project and why it is being conducted.
1.2	Scope	Explain why the Project Management Plan is needed, provide a brief overview of its organization, and indicate system-related topics that have been included in the document or excluded from consideration.
1.3	Assumptions and Constraints	Describe any factors that may affect the project's organization, schedule, and resource requirements as described in the Project Management Plan.
1.4	Summary of the Project Management Plan	Provide a brief summary of the most important information in the Project Management Plan.
1.4.1	Milestones	List the major milestones in the Project Management Plan. Present this information in a Gantt chart supplemented by text.
1.5	References	List pertinent standards, guidance, documentation, and any other materials used to prepare the Project Management Plan. Include vendor-supplied materials; project documentation; other in-house documentation; and Federal, departmental, agency, and industry standards and guidelines.