



DETAIL-LEVEL DATA REQUIREMENTS DOCUMENT - FINAL

*HUD Integrated Financial Management Improvement
Project*

U.S. Department of Housing and Urban Development

August 23, 2005



Revision Sheet

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DATA REQUIREMENTS DOCUMENT

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1.0 GENERAL INFORMATION

1.0 GENERAL INFORMATION

The Department of Housing and Urban Development (HUD) is in the process of modernizing its financial management systems in accordance with a vision of financial management consistent with modern business practices, customer service, legislation and technology. The overall initiative to implement the financial management vision is the HUD Integrated Financial Management Improvement Project (HIFMIP). Within HIFMIP, several implementation phases have been defined to provide a manageable method of moving from the current state to the desired financial management environment. The HIFMIP Preliminary Roadmap document, dated June 6, 2005, provides an overview of these phases and describes in more detail the implementation of core financials phase (Phase II).

Phase I is organizational preparation for the upcoming financial systems implementation. Phase II is the implementation of a new HUD-wide financial management system. The new Integrated Core Financial System (ICFS) will provide the first building block to enable later integration with other desired management improvements such as integrated financial performance management. HUD describes the end result as the Integrated Financial Management Solution (IFMS), of which ICFS is one key component. HUD is currently preparing to select and implement the ICFS using a Center of Excellence (COE) approach as described in the document developed by HUD, HIFMIP Plan to Implement an Integrated Financial Management System at HUD – January 1, 2005 (revised April 6, 2005).

The HUD Vision is to implement an integrated financial management system that will include all HUD organizations, including FHA, Ginnie Mae and OFHEO. The transition from the “as is” to the “to be” will require a comprehensive multi-year project plan and strategy that will be completed in phases. The initial stage will support four separate financial system modernization efforts; however, representatives from each of the four CFO organizations will work to standardize their systems, processes and procedures to support eventual migration to a single system. The decision whether to finally transition to a single system will be based on the level of consolidation and integration required to meet the financial information requirements for all HUD stakeholders, and also will consider the software, hardware and support available to HUD. The final decision whether to maintain more than one core financial system will be based on the alternative that is most cost effective and efficient for HUD.

The information presented in this document as well as the requirements identified in the other HIFMIP requirements deliverables will be used to assist HUD in ensuring that the package selected meets all of HUD’s requirements.

1.1 Purpose

The purpose of this Detail-level Data Requirements Document (DRD) is to describe specific data characteristics that correspond to the specific system and user requirements within the scope of HIFMIP for the proposed ICFS. This detail-level document contains the results of the SDM Define Stage Project Team’s analysis of the systems and business processes within the scope of the HIFMIP project. The systems analyzed here are: HUDCAPS, LOCCS, PAS, Hyperion, the Financial Data Mart, MACOLA, FHA Subsidiary Ledger, OFHEO’s Financial Information Management System and the internal and external interfaces to/from these systems.

1.2 Scope

This Detail-level DRD describes the proposed system environment for the new ICFS to include data inputs and outputs, data collection procedures, and other attributes of ICFS data. As mentioned

previously, the systems analyzed here are: HUDCAPS, LOCCS, PAS, Hyperion, Financial Data Mart, MACOLA, FHA Subsidiary Ledger, OFHEO's Financial Information and Management System and the internal and external interfaces to/from these systems. The initial phase will have OCFO select and implement a new COTS certified financial system that will be the single core financial system for the Department.

1.3 System Overview

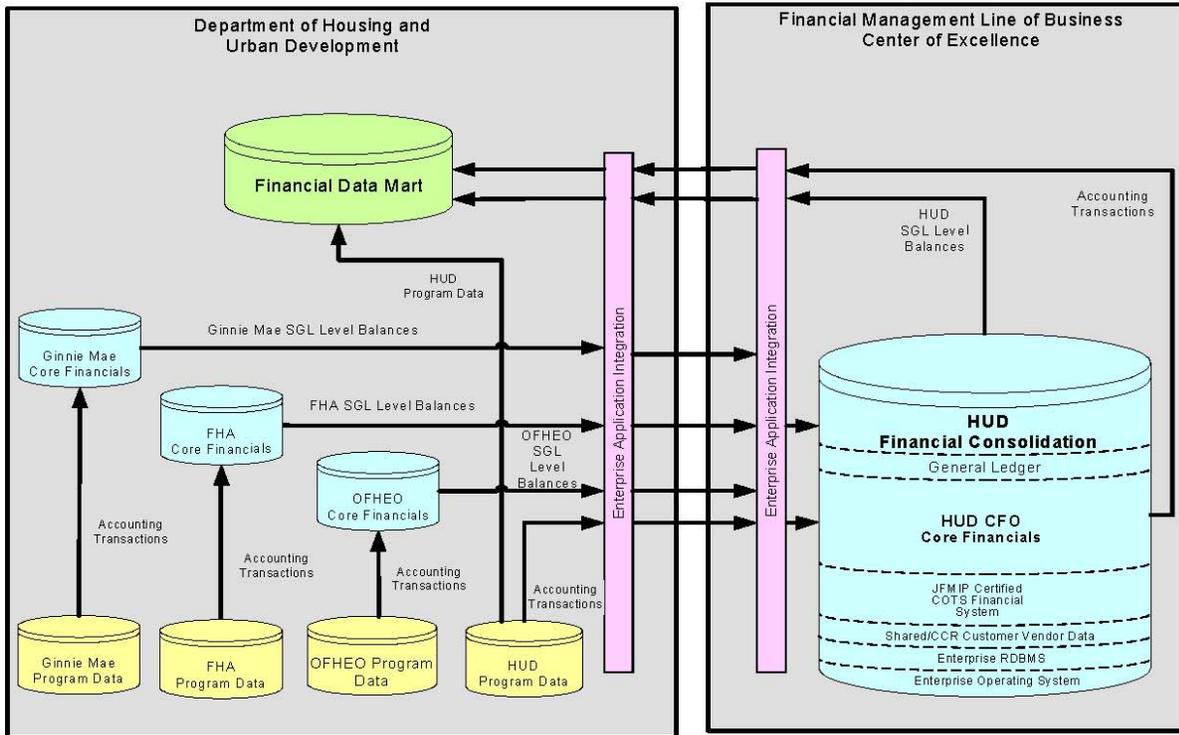
ICFS involves the full implementation of an end-to-end integrated financial system that includes core financial and other functions such as general ledger, accounts payable, accounts receivable, budget execution (funds control), asset management, cost management, reporting, obligation processing, expenditure tracking, acquisition, cash management, cost accounting, financial reporting, workflow automation and federal financial assistance reporting including grants, subsidies and loans. The interfaces will include eTravel, Treasury, payroll, bankcard, and program systems, e.g. IDIS, TRACS. Temporary interfaces until transition to an integrated financial system include FHA Subsidiary Ledger, Ginnie Mae subsidiary general ledger, and OFHEO's Financial Information and Management System (FIMS). The end state broad requirement for HIFMIP is to replace HUDCAPS, PAS, and LOCCS with a modern, compliant, integrated core financial system that will summarize financial data, control funds, prepare annual financial statements, and meet all internal and external reporting requirements across the agency.

Table 1-1 ICFS System Overview

| | |
|--|--|
| Responsible organization | Office of the Chief Financial Officer (OCFO), HUD |
| System name or title | Integrated Core Financial System (ICFS) |
| System code | N/A |
| System category | Major Financial Application |
| Operational status | Under Development (Define Phase of SDM) |
| System environment and special conditions | The system must transmit and receive data from a large number of HUD programmatic systems and must interact with Treasury and other federal agencies. The system must support and integrate with e-government initiatives. |

The separate lines of business will be supported in the future state by a single instance of the core financial system running at a Center of Excellence (COE). Figure 1-1 illustrates the ICFS High Level Systems Architecture for the initial phase. The left side of the diagram details the proposed system architecture for ICFS as managed in a HUD computing environment. The right side of the diagram represents the government-wide initiative to host and manage core financial management functions in a Center of Excellence (COE) environment.

Figure 1-1 ICFS High Level Systems Architecture Initial Stage



1.4 Project References

In the preparation of this DRD, many references were used as specified below. They include documentation developed during the Initiate phase of the HUD Integrated Financial Management Improvement Project (HIFMIP), external resources, and several documents from HUD’s Software Development Methodology (SDM).

Table 1-2 HIFMIP Detail-level DRD Reference Material

| HIFMIP Initiate Phase Documentation | |
|---|--|
| HUD Financial Management Vision | |
| HUD Financial Systems Flow Chart Discussion Paper | |
| Financial Event Information Flow Diagrams and Discussion Paper | |
| HIFMIP Interview Notes Highlights | |
| HIFMIP Plan to Implement an Integrated Financial Management System at HUD | |
| HUD Standards Documentation | |
| The Budget and Accounting Handbook Policies and Procedures (available on www.hudclips.org) | |
| Department of Housing and Urban Development: Status of Efforts to Implement an Integrated Financial Management System (GAO-03-447R) | |
| Draft HUD CFO BPR Reconciliation of Subsidiary Ledger to General Ledger | |
| Ginnie Mae 2003 Annual Report | |
| FHA FY 2004 Congressional Budget Justification | |
| HUD’s Performance and Accountability Report 2004 | |
| The 2005 Proposed Budget for HUD submitted to Congress | |

| |
|---|
| HUD Intranet, http://hudweb.hud.gov |
| HUD Internet website, http://www.hud.gov |
| Inventory of Automated Systems |
| OFHEO FY2003 Annual Report to Congress |
| Memorandum on OFHEO Financial System Requirements |
| OFHEO Integrated Financial and Administrative System presentation |
| OFHEO Financial Information and Management System presentation |
| External Resources Documentation |
| GAO Core Financial System Requirements Checklist for Reviewing Systems under the FFMIA |
| Joint Financial Management Improvement Program, Core Financial System Requirements |
| Joint Financial Management Improvement Program, Grant Financial System Requirements |
| Joint Financial Management Improvement Program, Guaranteed Loan System Requirements |
| Office of Management and Budget Circular A-127, Financial Management Systems – revised December 2004. |

1.5 Acronyms and Abbreviations

A list of acronyms and abbreviations used in this document and the meaning of each is provided below in Table 1-3 Detail-level DRD Acronyms.

Table 1-3 Detail-level DRD Acronyms

| Acronym/Abbreviation | Definition |
|-----------------------------|---|
| ACFO | Assistant Chief Financial Officer |
| ACH | Automated Clearing House |
| APO | Accountable Property Officers |
| BONDMAPPER | Bond Payment |
| BOSS | Section 8 Budget Outlay Support System |
| CCARS | Cash Control Accounting and Reporting System |
| CCR | Central Contractor Registration |
| CFOAC | Chief Financial Officer Accounting Center |
| CLAIMS | Single Family Insurance Claims Subsystem |
| CMB | Cash Management Branch |
| COE | Center of Excellence |
| CPD | Community Planning and Development |
| DARTS | Departmental Accounts Receivable Tracking/Collection System |
| DCAMS | Title I Notes Servicing |
| DGMS | Departmental Grants Management System |
| DMS | Default Management System |
| ECS | Electronic Certification System |
| EFT | Electronic Funds Transfer |
| EZB | EZ Budget Formulation System |
| FAADS | Federal Assistance Award Data System |
| FAR | Federal Acquisition Regulations |
| FEDWIRE | Treasury, FEDWIRE Deposit System |
| FEMIS | Furniture and Equipment Management Information System |
| FFB | Federal Financing Bank |

| Acronym/Abbreviation | Definition |
|-----------------------------|--|
| FRB - Richmond | Federal Reserve Bank - Richmond |
| FIMS | Financial Information and Management System |
| FHA | Federal Housing Administration |
| FHA-SL | FHA Subsidiary Ledger |
| FHEO | Fair Housing and Equal Opportunity |
| Financial-DM | Financial Data Mart |
| FRD | Functional Requirements Document |
| FSMD | Financial Systems Maintenance and Development |
| GAO | Government Accountability Office |
| GFITS | Government Financial Information Tracking System |
| Ginnie Mae | Government National Mortgage Association |
| GOALS | Government On-line Accounting Link System |
| GSA | General Services Administration |
| GTM | Government Technical Manager |
| GTR | Government Technical Representative |
| HCSS | HUD's Consolidated Financial Statement System (Hyperion) |
| HECM | Home Equity Conversion Mortgages |
| HH & LHC | Healthy Homes and Lead Hazard Control |
| HIFMIP | HUD Integrated Financial Management Improvement Project |
| HPS | HUD Procurement System |
| HPS/SPS | HPS-Small Purchase System |
| HTMS | HUD Travel Management System |
| HUDCAPS | HUD's Central Accounting and Program System |
| ICFS | Integrated Core Financial System |
| IDIS | Integrated Disbursement & Information System |
| IG | Inspector General |
| IPAC | Intra-governmental Payment and Collection System |
| JFMIP | Joint Financial Management Improvement Project |
| LAS | Loan Accounting System |
| LOCCS | Line of Credit Control System |
| MASS | Macola Accounting Software System |
| MDDR | Multifamily Default and Delinquency Reporting |
| MFIC | Multifamily Insurance and Claims System |
| MFIS | Multifamily Insurance |
| MFPMS | Multifamily Payment Management System |
| MIP | Mortgage Insurance Premium |
| NFC | National Finance Center |
| OCFO | Office of the Chief Financial Officer |
| OCIO | Office of the Chief Information Officer |
| OFFM | Office of Federal Financial Management (formerly Joint Financial Management Improvement Project (JFMIP)) |
| OFHEO | Office of Federal Housing and Enterprise Oversight |
| OH | Office of Housing |
| OIG | Office of Inspector General |

| Acronym/Abbreviation | Definition |
|-----------------------|---|
| OMB | Office of Management and Budget |
| OPAC | On-Line Payment and Collection System |
| PAS | Program Accounting System |
| PC-TARE | Personnel Computer Time & Attendance Remote Entry System |
| PD&R | Policy, Development and Research |
| PIH | Public and Indian Housing |
| PMS | Property Management System |
| PSCRS | Personal Service Cost Report Subsystem |
| RC/EZ/EC PERMS | Renewal Community/Empowerment Zones/Enterprise Communities Performance Measurement System |
| REMS | Real Estate Management System |
| SAMS | Single Family Acquired Asset Management System |
| SATO | Scheduled Airline Traffic Office |
| SAVE | Section 235 Automated Validation and Editing |
| SDED | System Development and Evaluation Division |
| SDM | System Development Methodology |
| SFIS | Single Family Insurance System |
| SFMNS/IFS | Single Family Mortgage Notes Servicing |
| SFPCS-P | Single Family Premium Collection System-Periodic |
| SFPCS | Single Family Upfront Premium Collection System |
| SME | Subject Matter Expert |
| TFCS | Treasury Financial Communication System |
| TIIS | Title I Insurance and Claims |
| TRACS | Tenant Rental Assistance Certification System |
| US SGL | United States Standard General Ledger |
| UPB | Unpaid Principal Balance |
| VRS | Voice Response System |
| WCF | Working Capital Fund |

1.6 Points of Contact

Government and contractual contacts for the HIFMIP project are listed below.

1.6.1 Information

Table 1-4 HIFMIP HUD Points of Contact below lists the points of organizational contact (POCs) that may be needed by the document user for informational and troubleshooting purposes for the HIFMIP Project. The table further identifies the type of contact, contact name, department, telephone number, and e-mail address.

Table 1-4 HIFMIP HUD Points of Contact

| Type of Contact | Name | Dept. | Telephone | Email |
|----------------------|-----------------|-------|-------------------------|----------------------------|
| Government Technical | Kenneth Traylor | OCFO | (202) 708-1757 x6241 | Kenneth_J._Traylor@hud.gov |

| Type of Contact | Name | Dept. | Telephone | Email |
|---|---------------------|---|-------------------------|--------------------------------|
| Representative | | | | |
| Government Technical Monitor | Virginia Shaker | OCFO | (202) 708-1136 x3805 | Virginia_A._Shaker@hud.gov |
| Project Manager | Mary Kohlmeier | OCFO | (202) 708-0614 x3853 | Mary_L._Kohlmeier@hud.gov |
| Business Subject Matter Expert – OCFO Systems | Gail Dise | OCFO | (202) 708-1757 x3749 | Gail_B._Dise@hud.gov |
| Business Subject Matter Expert – Ginnie Mae | Michael Najjum | Ginnie Mae - OCFO | (202) 708-1020 x2344 | Michael_J._Najjum@hud.gov |
| Business Subject Matter Expert – FHA | Ronald Crupi | Housing-Office of Financial Analysis & Reporting | (202) 401-0450 x3371 | Ronald_E._Crupi@hud.gov |
| Macola Project Manager | Wesley Jones | Ginnie Mae Comptroller's Division | (202) 708-4100 x3908 | Wesley_E._Jones@hud.gov |
| FHA-SL Project Manager | William Fuentevilla | Housing-FHA Comptroller's Office | (202) 708-1020 x2344 | William_F._Fuentevilla@hud.gov |
| Business Subject Matter Expert | Barbara Dorf | Grants Policy | (202) 708-0667 x4637 | Barbara_Dorf@hud.gov |
| Business Subject Matter Expert - CPD | Laura Marin | Director, Office of Technical Assistance and Management | (202) 708-4604 x4432 | Laura_M._Marin@hud.gov |
| Business Subject Matter Expert - OH | Ronald Spraker | Director, Office of Budget and Field Resources (OH) | (202) 708-8975 x6851 | Ronald_Y._Spraker@hud.gov |
| Business Subject Matter Expert – PIH | Paul Scott | Director, Budget Office (PIH) | (202) 708-0920 x2354 | Paul_A._Scott@hud.gov |
| Business Subject Matter Expert – PD&R | Patrick Tewey | Director, Budget Office (PD&R) | (202) 708-1796 x4098 | Patrick_J._Tewey@hud.gov |
| Business Subject Matter Expert – | Michael Hill | Deputy Director (OHHLHC) | (202) 708-0310 | Michael_F._Hill@hud.gov |

| Type of Contact | Name | Dept. | Telephone | Email |
|---------------------------------------|----------------|--|----------------------|---------------------------|
| OHLHC | | | | |
| Business Subject Matter Expert – FHEO | Paul Christian | Director, Office of Management and Planning (FHEO) | (202) 708-1009 | Paul_T._Christian@hud.gov |
| Advisory | Hanh Do | IG | (202) 708-0344 x8147 | Hanh_T._Do@hud.gov |

The MIL Corporation points of contact are contained below in Table 1-5 The MIL Corporation Points of Contact:

Table 1-5 The MIL Corporation Points of Contact

| Type of Contact | Name | Telephone | Email |
|----------------------------|--------------|----------------------|---------------------|
| Operational Vice President | Linda Glasco | (202) 708-1136 x3814 | lglasco@milcorp.com |
| Project Manager | Karen McGee | (202) 708-1136 x3727 | kmcgee@milcorp.com |

1.6.2 Coordination

The SDM Define Stage team coordinated and participated in Information Exchange Meetings with the following organizations for the development of the High-level and Detail-level Data Requirements Documents. Table 1-6 Information Exchange Meeting Participants appears below:

Table 1-6 Information Exchange Meeting Participants

| Name | Corr Code | Office |
|------------------|-----------|---|
| Allen, Dot | LA | OHLHC: Budget and Admin Services Division |
| Allen, Ennis | PD | PIH: Office of Budget/CFO |
| Allen, Pamela | PG | PIH: Grants Management Center |
| Allison, Sandra | HW | Housing: Deputy Assistant Secretary for Finance and Budget |
| Angradi, Doug | DOTB | CPD: ODAS/O, OTAM, Budget Division |
| Avery, Stephanie | PX | PIH: Departmental Real Estate Center |
| Bacon, Cuttie | FOA | CFO Budget |
| Brever, Robert | DOTD | CPD: ODAS/O, OTAM, System Development Evaluation Division |
| Brown, Carolyn | FYM | CFO: Accounting Monitoring Analysis Division |
| Bullard, Kathy | 6AF | CFO: Accounting Center |
| Byrd, Yolanda | EGPB | FHEO: ODAS/OM, OAS, Budget Division |
| Callahan, Rufus | FBD | CFO: Accounting Monitoring Analysis Division |
| Chapman, Rebecca | FBD | CFO: Accounting Monitoring Analysis Division |
| Christian, Paul | EGP | FHEO, ODAS/OM, Office of Management and Planning |
| Crupi, Ronald | HWAA | Housing: Office of Financial Analysis and Reporting |
| Cullom, Alice | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Davies, Chris | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Der, Virginia | RB | PD&R: Budget, Contract and Program Control Division |
| Donzell, Keith | FBI | CFO: OACFO/OA, Financial Reporting Division |

1.0 General Information

| Name | Corr Code | Office |
|----------------------|------------|---|
| Fuentevilla, William | HWA | Housing: FHA Comptroller |
| Garner, Wally | FBD | CFO: Accounting Monitoring Analysis Division |
| Gayton, Carl | FYM | CFO:OACFO/OS, Financial Systems Maintenance and Development Division |
| Greene, Bryan | EC | FHEO: Office of Policy, Legislative Initiatives and Outreach |
| Hall, Michelle | LA | OHHLHC: Budget and Admin Services Division |
| Harris, Virgie | PG | PIH: Grants Management Center |
| Holmes, Deborah | TNI | Ginnie Mae OMO, Information Management Division |
| Hutchinson, Iredia | PG | PIH: Grants Management Center |
| Hylton, Lanier | HTC | Housing: Office of Housing Assistance Contract Admin Oversight |
| Jackson, Sandy | PDA | PIH: OB/CFO, Budget Administration Division |
| James, Haven | FBD | CFO: Accounting Monitoring Analysis Division |
| Jones, Otis | 6AF | CFO: Accounting Center |
| Jones, Wesley | TFC | Ginnie Mae: Comptroller's Division |
| Kahn, Barry | FBT | CFO Travel |
| Lincoln, Vince | FOB | CFO Budget |
| Linn, Larry | Contractor | Contractor: Delta Solutions |
| Mancuso, Tricia | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Marin, Laura | DOT | CPD: ODAS/O, Office of Technical Assistance and Management |
| McGill, Regina | PI | PIH: Office of Public Housing Investments |
| McGinnis, Alvin | FBDA | CFO: Monitoring and Analysis Branch |
| McKinney, Rudy | FBD | CFO: Accounting Monitoring Analysis Division |
| Najjum, Michael | TF | Ginnie Mae: Office of Finance |
| Naylor, Gregory | ACCP | CPO: Policy and Field Operations Division |
| Newry, Myron | EDPF | FHEO:FHIP/FHAP Division |
| Owens, Cheryl | TN | Ginnie Mae: Office of Management Operations |
| Parker, Sheron | AYK | ADMIN: OCIO |
| Patton, Debra | 6AF | CFO: Accounting Center |
| Press, Rhonda | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Redder, Rita | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Reid, Garland | FOB | CFO: OB, Budget Management and Systems Division |
| Roberts, June | FBOW | CFO: WCF Accounting |
| Sarkis, Bill | FBI | CFO: OACFO/OA, Financial Reporting Division |
| Scott, Paul | PD | PIH: Office of Budget/CFO |
| Simmons, Michael | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Spraker, Ronald | HWR | Housing: Office of Budget and Field Resources |
| Stutzman, Kevin | AYK | ADMIN: OCIO |
| Tewey, Patrick | RB | PD&R: Budget, Contract and Program Control Division |
| Toately, Eric | HWRF | Housing: Funding Control Division |
| Trapani, Joseph | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Treadwell, Angela | FBD | CFO: Accounting Monitoring Analysis Division |
| Uebe, Will | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Wang, Pauline | FBD | CFO: Accounting Monitoring Analysis Division |

1.0 General Information

| Name | Corr Code | Office |
|--------------------|------------------|---|
| Webster, Paul | DGBF | CPD: Financial Management Division |
| Wenstrup, Karen | FYMS | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |
| Williams, Emily E. | LH | OHHLHC: Healthy Homes Division |
| Williams, Jackie | DED | CPD: ODAS/ED |
| Zahner, Keith | FYM | CFO: OACFO/OS, Financial Systems Maintenance and Development Division |

2.0 DATA DESCRIPTION

2.0 DATA DESCRIPTION

This chapter describes the data to be captured in the ICFS.

2.1 Logical Database Design

ICFS will be based on a commercial-off-the-shelf software package (COTS). The COTS packages have pre-defined data models and entities. The SDM Define Stage Team documented the ICFS logical database design in the *HIFMIP Data Model with Entity and Attribute Definitions Document (CDR #14)* last updated on July 22, 2005. The *HIFMIP Data Model with Entity and Attribute Definitions Document* describes the data that supports HUD's system functions by identifying and describing logical data entities and entity relationships. Additionally, the *HIFMIP Data Model with Entity and Attribute Definitions Document* illustrates the relationships among the logical entities using entity relationship diagrams (ERDs). Business rules relevant to the data model are also included in the data model document.

2.2 Data Characteristics and Categorization

Data elements are the smallest unit of data that can be used to do work in a system. A data element cannot be logically divided any further without losing its meaning or context. In the ICFS, each data element has certain characteristics (such as name, type, format, definition, etc.) that make it unique to the system. These characteristics are documented in Appendix A – ICFS Metadata. Appendix A lists the metadata characteristics for all ICFS data elements by entity. The metadata characteristics include: the data element name, data type (alphanumeric, numeric, or precision decimal), definition, format, range of values, unit of measure, precision, update frequency and any security rules that are associated with the specific data element.

In this section the data elements are grouped as Static Data, Dynamic Input Data, Dynamic Output Data, and Internally Generated Data.

2.2.1 Static Data

Static data is data primarily used for reference purposes. This data type is typically entered once a year with updates on an as needed basis. ICFS static data represents values that are primarily used to validate the accuracy of data elements at the point of transaction entry.

For example, an order for an item or contract award requires the association of an object class on the accounting transaction. The object class categorizes the intended purpose of the obligation. The Office of Management and Budget (OMB) publishes a standardized list of object classes in Circular A-11. The standardized list of object classes represents the static data that would be generated or loaded prior to recording any accounting entries into ICFS. However, the object class is dynamically input at the point of transaction creation to accurately report the characteristics of the purchase order.

Table 2-1 ICFS Static Data documents the entities and corresponding data elements that capture ICFS static data.

Table 2-1 ICFS Static Data

| Entity Name | Data Element Name |
|--|---|
| ACCOUNTING PERIOD | Business Unit Indicator Closed Or Open Period Indicator Fiscal Month Fiscal Month Name Fiscal Year Fiscal Quarter Year End Adjustment Period Indicator |
| APPROVAL SECURITY DEFINITION (BY DOCUMENT) | Approval Level 1 Indicator Approval Level 2 Indicator Approval Level 3 Indicator Approval Level 4 Indicator Transaction Identification Type Transaction Type Name |
| APPROVALS APPLIED AUDIT LOG | Date Processed Line Amount System Date Time Stamp Total Amount Transaction Identification Number Transaction Identification Number Line Number Transaction Identification Type User Identification Number Vendor Code – Main Designation Vendor Code – Sub Designation |
| AUTOMATIC DOCUMENT NUMBERING COUNTER | Business Unit Indicator Date Last Number Used Last Transaction Identification Number Used Organization Time Last Number Used Transaction Identification Type |
| BUDGET OBJECT CODE HIERARCHY AND REFERENCE INFORMATION | Budget Object Code Budget Object Code Description Budget Object Hierarchy Level 1 Budget Object Hierarchy Level 1 Description Budget Object Hierarchy Level 1 Rollup Budget Object Hierarchy Level 2 Budget Object Hierarchy Level 2 Description Budget Object Hierarchy Level 2 Rollup Budget Object Hierarchy Level 3 Budget Object Hierarchy Level 3 Description Budget Object Hierarchy Level 3 Rollup Business Unit Indicator Fiscal Year Subject To Budget Object Code Posting |

| Entity Name | Data Element Name |
|--------------------------------|---|
| DISBURSEMENT RULES | Business Unit Indicator Current Value of Funds Rate Default ALC Location Indicator Default Discount Lost Reason Code For Prompt Pay Default Discount Lost Transaction Type For General Ledger Posting Default Discount Taken Transaction Type For General Ledger Posting Default Group Disbursement Indicator Default Interest Reason Code For Prompt Pay Default Prompt Payment Type Disbursing Lag Days Minimum Number of Payments Per Disbursement Cycle Minimum TFCs Amount Payment Limit Amount Per Disbursement Take Credit If Not Grouping Indicator Take Partial Credits Against Payments Indicator |
| DISBURSING ENTITY DEFINITION | Agency Bureau Code Agency Location Code Business Unit Indicator Disbursing Address Line 1 Disbursing Address Line 2 Disbursing Address Line 3 Disbursing Office Name Disbursing Office Telephone Number |
| ERROR MESSAGE DEFINITION | Error Code Error Message Long Error Message Short Suggested Problem Resolution |
| FISCAL YEAR/BUDGET FISCAL YEAR | Budget Fiscal Year Indicator Close Year Indicator Fiscal Year End Date Fiscal Year Name Number of Periods |
| FUND GROUP HIERARCHY | Beginning Budget Fiscal Year Ending Budget Fiscal Year Fund Category Fund Category Name Fund Class Fund Class Name Fund Group Fund Group Name |
| FUND REFERENCE INFORMATION | Agency Agency Location Code |

| Entity Name | Data Element Name |
|-------------------------------|--|
| | Agency Name Allow Un-obligated Expended Against Expired Beginning Budget Fiscal Year Budget Category A or B Beginning Budget Fiscal Year Ending Budget Fiscal Year Bureau Code Carryover Indicator Ending Budget Fiscal Year Fund Balance Control Option Fund Category Fund Class Fund Code Fund Description Long Fund Description Short Fund Group Fund Name Fund Type No Year Indicator Treasury Symbol |
| GENERAL LEDGER POSTING MODELS | Accounting Entry Identifier Automatic Journal Reversal Indicator Budget Object Code Business Unit Indicator Credit Account Debit Account Description Fiscal Year Increase Line D/C Journal Type Identifier Line Amount Subject To Budget Object Code Posting Subject To Fund Category Posting Subject To Project Code Posting Subject To Project Posting Subject To Prompt Pay Posting Subject To Vendor Posting Transaction Identification Number Transaction Identification Number Line Number Transaction Type Identifier Vendor Code – Main Designation Vendor Code – Sub Designation |
| HUD PROJECT NUMBER | Business Unit Indicator HUD Project Name HUD Project Number |

| Entity Name | Data Element Name |
|---|--|
| | HUD Project Type HUD Project Type Sub Inception To Date Expended Amount Inception To Date Obligated Amount Inception To Date Reserved Amount Year To Date Expended Amount Year To Date Obligated Amount Year To Date Reserved Amount |
| ORGANIZATION HIERARCHY | Budget Organization Level 1 Budget Organization Level 1 Long Description Budget Organization Level 1 Short Description Budget Organization Level 2 Budget Organization Level 2 Long Description Budget Organization Level 2 Short Description Budget Organization Level 3 Budget Organization Level 3 Long Description Budget Organization Level 3 Short Description Budget/Cost Organization Indicator Business Unit Indicator Organization Status Indicator |
| PROGRAM CODE HIERARCHY REFERENCE INFORMATION | Program Code Level 1 Program Code Level 1 Long Description Program Code Level 1 Short Description Program Code Level 1 Owner Program Code Level 2 Program Code Level 2 Long Description Program Code Level 2 Short Description Program Code Level 2 Owner Program Code Level 3 Program Code Level 3 Long Description Program Code Level 3 Short Description Program Code Level 3 Owner Budget/Cost Organization Indicator Business Unit Indicator |
| PROJECT COST CODE REFERENCE HIERARCHY (PROJECT AND SUB PROJECT) | Project Active or Inactive Status Allotment Holder Beginning Budget Fiscal Year Cost Accumulation Budget Organization Cost Accumulation Division Cost Accumulation Job Number Cost Accumulation Program Cost Accumulation Reporting Category Beginning Budget Fiscal Year Ending Budget Fiscal Year |

| Entity Name | Data Element Name |
|---------------------------------|---|
| | Budget Organization Business Unit Indicator Ending Budget Fiscal Year Appropriation Identifier Installation Wide Project Last Activity Date Last Distribution of Cost Allocation Date Project Description Project Type Start Date |
| SECURITY BY USER | Actions Allowed Approval Action Business Unit Indicator Correct Action Delete Action Edit Offline Action Edit Online Action Enter Action Hold Action Offline Action Override Indicator Scan Action Security Group Security Information Security Role Definition User First Name User Identification User Last Name User Title |
| SECURITY ROLE DEFINITIONS | Actions Allowed Approval Action Approvals Business Unit Indicator Correct Action Delete Action Edit Online Action Enter Action Hold Action Offline Action Override Indicator Scan Action Security Group Security Information Update Wait Action |
| STANDARD GENERAL LEDGER ACCOUNT | Business Unit Indicator |

| Entity Name | Data Element Name |
|----------------------------------|---|
| LISTING | USSGL Account Level 1 Rollup USSGL Account Level 2 Rollup USSGL Account Level 3 Rollup USSGL Account Number |
| SYSTEM DATE REFERENCE DEFINITION | Application Date Application Period Application Year Business Unit Indicator Current Accounting Period Current Date Current Month Name Current Year Name Dates Table Transaction Code Fiscal Year Year Name |
| TREASURY SYMBOL | Business Unit Indicator Fiscal Year Lapse Indicator Pre-closing Unexpended Balance Reporting Treasury Symbol Reporting Treasury Symbol Type Treasury Symbol Treasury Symbol Description Treasury Symbol Type |

2.2.2 Dynamic Input Data

Dynamic input data includes all data that is recorded into ICFS during the normal process of financial management execution. This data can be entered either manually or via an interface file from feeder systems. Dynamically input data is often validated against reference data to ensure accuracy and correctness of the information that is entered.

2.2.3 Dynamic Output Data

Dynamic output data elements include the data that is altered or calculated in accordance with normal system execution or online operation. As the system processes inputs, dynamic outputs are generated. Such dynamic outputs can serve as input to other processes within the system, input to other systems, or additional information for users of the system.

2.2.4 Internally Generated Data

Internally generated data is created as a result of program calculations or other program manipulations, such as transaction identification numbers. The application generates a unique identification number that is associated with each transaction and subsequent entries that are also generated as a result of committing a transaction to the database. For example, a user records a purchase order (PO) with a PO number of

1234. The ICFS application will generate a unique, internal ID number (e.g., 012987599) that follows the PO transaction throughout the spending chain.

Table 2-2 ICFS Data Categorization lists the data categorization of the ICFS data by entity and data element. Data categories are dynamic input (DI), dynamic output (DO), and internally generated (IG).

Table 2-2 ICFS Data Categorization

| Entity Name | Attribute Name | Category |
|---------------------------------------|---|----------|
| 1099 PAYMENT ACCUMULATION SUMMARY | Business Unit Indicator | DI |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| | Calendar Year 1 Amount Reported To IRS | DO |
| | Calendar Year 1 Date Reported To IRS | DO |
| | Calendar Year 2 Amount Reported To IRS | DO |
| | Calendar Year 2 Date Reported To IRS | DO |
| | Calendar Year 3 Amount Reported To IRS | DO |
| | Calendar Year 3 Date Reported To IRS | DO |
| | Calendar Year 4 Amount Reported To IRS | DO |
| | Calendar Year 4 Date Reported To IRS | DO |
| | Calendar Year 5 Amount Reported To IRS | DO |
| | Calendar Year 5 Date Reported To IRS | DO |
| | Calendar Year 6 Amount Reported To IRS | DO |
| | Calendar Year 6 Date Reported To IRS | DO |
| | Calendar Year 7 Amount Reported To IRS | DO |
| Calendar Year 7 Date Reported To IRS | DO | |
| Current Year Amount Unreported To IRS | DO | |
| 1099 PAYMENT ACCUMULATION DETAIL | Business Unit Indicator | DI |
| | Calendar Year | DI |
| | Date Processed | DO |
| | Line Amount | DO |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| ACCOUNTS RECEIVABLE BILL SUMMARY | Business Unit Indicator | DI |
| | Accounting Period | DI |
| | Contract Type | DI |
| | Invoice Due Date | DI |
| | Date Processed | DO |
| | HUD Project Number | DI |
| | Total Amount | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Type | DI |
| | User Identification Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |

| Entity Name | Attribute Name | Category |
|---------------------------------|--|----------|
| ACCOUNTS RECEIVABLE BILL DETAIL | Allotment Holder | DI |
| | Beginning Budget Fiscal Year | DI |
| | Accounting Period | DI |
| | Bill Description | DI |
| | Bill Type | DI |
| | Bill Amount | DI |
| | Bill Change Date | IG |
| | Bill Date | DI |
| | Bill Number | DI |
| | Bill Status | DO |
| | Budget Object Code | DI |
| | Contract Type | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Ending Budget Fiscal Year | DI |
| | Grant Number | DI |
| | HUD Project Number | DI |
| | Interest Rate | DI |
| | Job Number | DI |
| | Last Billing Amount | IG |
| | Last Billing Date | IG |
| | Line Amount | DI |
| | Overdue Date | DO |
| | Overdue Status Code | DI |
| | Overdue Amount | DO |
| | Penalty Amount | DO |
| | Penalty Applied Date | DI |
| | Program | DI |
| | Proration Identifier | IG |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line | IG |
| | Transaction Identification Type | IG |
| | User Identification Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| | Waiver Expired Date | DI |
| | Waiver Denial Date | DI |
| | Waiver Identifier | IG |
| Waiver Status Code | DI | |
| Write Off Amount | DI | |
| Write Off Date | DO | |

| Entity Name | Attribute Name | Category | |
|-------------------------------|--|----------------------------------|----|
| ADDRESS | Alternate Email Address | DI | |
| | Alternate Fax Number | DI | |
| | Alternate Point of Contact | DI | |
| | Alternate Telephone Number And Extension | DI | |
| | Business Unit Indicator | DI | |
| | CCR Registration Valid Until Date | DI | |
| | Company Division URL | DI | |
| | Doing Business As Name | DI | |
| | DUNS +4 | DI | |
| | EFT Address | DI | |
| | Legal Business Name | DI | |
| | Mailing City | DI | |
| | Mailing Country | DI | |
| | Mailing State Code | DI | |
| | Mailing Vendor Customer Address Line1 | DI | |
| | Mailing Vendor Customer Address Line2 | DI | |
| | Mailing Vendor Customer Address Line3 | DI | |
| | Mailing Zip + 4 | DI | |
| | Physical City | DI | |
| | Physical Country | DI | |
| | Physical State Code | DI | |
| | Physical Vendor Customer Address Line1 | DI | |
| | Physical Vendor Customer Address Line2 | DI | |
| | Physical Vendor Customer Address Line3 | DI | |
| | Physical Zip + 4 | DI | |
| | POC Email Address | DI | |
| | POC Fax Number | DI | |
| | POC Point of Contact | DI | |
| | POC Telephone Number And Extension | DI | |
| | Vendor Code – Main Designation and Sub | DI | |
| | AGENCY LOCATION CODE | ALC Active or Inactive Indicator | DI |
| | | Agency Location Code Number | DI |
| Agency Location Description | | DI | |
| Business Unit Indicator | | DI | |
| ALLOTMENT LINE ITEM – LEVEL 4 | Allotment Holder | DI | |
| | Allotment Line Item Available Amount | DO | |
| | Allotment Line Item Committed Amount | DO | |
| | Allotment Line Item Expended Amount | DO | |
| | Allotment Line Item Obligated Amount | DO | |
| | Appropriation Identifier | DI | |
| | Accounting Period | DI | |
| | Beginning Budget Fiscal Year | DI | |
| | Budget Object Code | DI | |
| | Budget Organization | DI | |
| | Business Unit Indicator | DI | |

| Entity Name | Attribute Name | Category |
|---------------------------|---|----------|
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Estimated Reimbursement Amount | DO |
| | Program | DI |
| | Qtr1 Allotment Line Item Amount | DI |
| | Qtr1 Pending Allotment Line Item Amount | DI |
| | Qtr2 Allotment Line Item Amount | DI |
| | Qtr2 Pending Allotment Line Item Amount | DI |
| | Qtr3 Allotment Line Item Amount | DI |
| | Qtr3 Pending Allotment Line Item Amount | DI |
| | Qtr4 Allotment Line Item Amount | DI |
| | Qtr4 Pending Allotment Line Item Amount | DI |
| | Source Year | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Type | IG |
| | User Identification Number | IG |
| ALLOTMENT TOTAL – LEVEL 3 | Allotment Holder | DI |
| | Allotment Total Available Amount | DO |
| | Allotment Total Committed Amount | DO |
| | Allotment Total Expended Amount | DO |
| | Allotment Total Obligated Amount | DO |
| | Accounting Period | DI |
| | Appropriation Identifier | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Estimated Reimbursement Amount | DO |
| | Program | DI |
| | Qtr1 Allotment Total Amount | DI |
| | Qtr1 Pending Allotment Total Amount | DI |
| | Qtr2 Allotment Total Amount | DI |
| | Qtr2 Pending Allotment Total Amount | DI |
| | Qtr3 Allotment Total Amount | DI |
| | Qtr3 Pending Allotment Total Amount | DI |
| | Qtr4 Allotment Total Amount | DI |
| | Qtr4 Pending Allotment Total Amount | DI |
| | Source Year | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Type | IG |
| | User Identification Number | IG |
| APPORTIONMENT – LEVEL 2 | Apportionment Available Amount | DO |
| | Apportionment Committed Amount | DO |

| Entity Name | Attribute Name | Category |
|------------------------------|-----------------------------------|----------|
| | Apportionment Expended Amount | DO |
| | Apportionment Obligated Amount | DO |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Business Unit Indicator | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Estimated Reimbursement Amount | DO |
| | Qtr1 Apportionment Amount | DI |
| | Qtr1 Pending Apportionment Amount | DI |
| | Qtr2 Apportionment Amount | DI |
| | Qtr2 Pending Apportionment Amount | DI |
| | Qtr3 Apportionment Amount | DI |
| | Qtr3 Pending Apportionment Amount | DI |
| | Qtr4 Apportionment Amount | DI |
| | Qtr4 Pending Apportionment Amount | DI |
| | Source Year | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Type | IG |
| | User Identification Number | IG |
| APPROPRIATION – LEVEL 1 | Appropriation Available Amount | DO |
| | Appropriation Committed Amount | DO |
| | Appropriation Expended Amount | DO |
| | Appropriation Identifier | DI |
| | Appropriation Obligated Amount | DO |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Business Unit Indicator | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Estimated Reimbursement Amount | DO |
| | Qtr1 Appropriation Amount | DI |
| | Qtr1 Pending Appropriation Amount | DI |
| | Qtr2 Appropriation Amount | DI |
| | Qtr2 Pending Appropriation Amount | DI |
| | Qtr3 Appropriation Amount | DI |
| | Qtr3 Pending Appropriation Amount | DI |
| | Qtr4 Appropriation Amount | DI |
| | Qtr4 Pending Appropriation Amount | DI |
| | Source Year | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Type | IG |
| | User Identification Number | IG |
| ASSIGNMENT TO ORGANIZATION – | Allotment Holder | DI |

| Entity Name | Attribute Name | Category |
|--------------------------------|--|----------|
| LEVEL 6 | Appropriation Identifier | DI |
| | Assignment To Organization Total Available Amount | DO |
| | Assignment To Organization Total Committed Amount | DO |
| | Assignment To Organization Total Expended Amount | DO |
| | Assignment To Organization Total Obligated Amount | DO |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Estimated Reimbursement Amount | DO |
| | Program | DI |
| | Qtr1 Assignment To Organization Total Amount | DI |
| | Qtr1 Pending Assignment To Organization Total Amount | DI |
| | Qtr2 Assignment To Organization Total Amount | DI |
| | Qtr2 Pending Assignment To Organization Total Amount | DI |
| | Qtr3 Assignment To Organization Total Amount | DI |
| | Qtr3 Pending Assignment To Organization Total Amount | DI |
| | Qtr4 Assignment To Organization Total Amount | DI |
| | Qtr4 Pending Assignment To Organization Total Amount | DI |
| | Source Year | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Type | IG |
| | User Identification Number | IG |
| BANK ACCOUNT INFORMATION | Bank ABA Number | DI |
| | Bank Account Number | DI |
| | Bank Account Type | DI |
| | Bank City | DI |
| | Bank Name | DI |
| | Bank State Code | DI |
| | Bank Zip Code | DI |
| | Business Unit Indicator | DI |
| Vendor Code – Main Designation | DI | |

| Entity Name | Attribute Name | Category |
|-----------------------|---|----------|
| | Vendor Code – Sub Designation | DI |
| CASH RECEIPTS SUMMARY | Accounting Period | DI |
| | Business Unit Indicator | DI |
| | Date Processed | DO |
| | Payment Identification Number | DI |
| | Total Amount | DI |
| | Transaction Identification Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| CASH RECEIPTS DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Date Processed | DO |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | HUD Project Number | DI |
| | Job Number | DI |
| | Line Amount | DI |
| | Payment Identification Number | DI |
| | Program | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| COST ALLOCATION | Accumulated Amount | DO |
| | Active Flag | DI |
| | Allocated Amount | DO |
| | Allotment Holder | DI |
| | Amount To Be Distributed | DI |
| | Appropriation Identifier | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Cost Code Base Identifier | DI |
| | Date of Last Allocation | IG |
| | Ending Budget Fiscal Year | DI |

| Entity Name | Attribute Name | Category |
|----------------------|---|----------|
| | Fiscal Year | DI |
| | Forward Reference Identifier | IG |
| | HUD Project Number | DI |
| | Job Number | DI |
| | Pool or Base Indicator | DI |
| | Program | DI |
| | Reporting Category | DI |
| CUSTOMER AGREEMENT | Agreement Number | DI |
| | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Beginning Budget Fiscal Year | DI |
| | Billed Amount | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | HUD Project Number | DI |
| | Job Number | DI |
| | Max Amount | DI |
| | Program | DI |
| | Reporting Category | DI |
| DEFAULT PAYMENT TEXT | Business Unit Indicator | DI |
| | Text Line 001 (Up To 999 Lines Of Text) | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| DISBURSEMENT SUMMARY | Business Unit Indicator | DI |
| | Date Disbursement Made By Disbursing Agency | DI |
| | Accounting Period | DI |
| | Contract Type | DI |
| | Date Disbursement Sent To Disbursing Agency | DO |
| | Disbursement Schedule Number | DO |
| | Disbursement Tracking Number | DO |
| | Disbursing Entity | DI |
| | Method of Disbursement | DI |
| | Number of Disbursements Per Schedule | DO |
| | Payment Transaction Identification Number | DI |
| | Type of Disbursement | DI |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| DISBURSEMENT DETAIL | Accounting Period | DI |

| Entity Name | Attribute Name | Category |
|-----------------------------------|---|----------|
| | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Contract Type | DI |
| | Date Processed | DO |
| | Disbursement Schedule Number | DI |
| | Disbursement Schedule Number Sequence Number | DI |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | HUD Project Number | DI |
| | Job Number | DI |
| | Line Amount | DI |
| | Program | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Total Amount | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Transaction Identification Type | IG |
| | Treasury Disbursement Tracking Number | DI |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| DISBURSEMENT SCHEDULES | Business Unit Indicator | DI |
| | Fiscal Year | DI |
| | Schedule Number To Be Used (Will Be Many Multiples of This Up To 999) | DI |
| | Type of Disbursement | DI |
| DISTRIBUTION TO PROGRAM – LEVEL 5 | Allotment Holder | DI |
| | Allotment Line Distribution Available Amount | DO |
| | Allotment Line Distribution Committed Amount | DO |
| | Allotment Line Distribution Expended Amount | DO |
| | Allotment Line Distribution Obligated Amount | DO |
| | Accounting Period | DI |
| | Appropriation Identifier | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |

| Entity Name | Attribute Name | Category |
|--|---|----------|
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Estimated Reimbursement Amount | DO |
| | Program | DI |
| | Qtr1 Allotment Line Item Amount | DI |
| | Qtr1 Pending Allotment Line Item Amount | DI |
| | Qtr2 Allotment Line Item Amount | DI |
| | Qtr2 Pending Allotment Line Item Amount | DI |
| | Qtr3 Allotment Line Item Amount | DI |
| | Qtr3 Pending Allotment Line Item Amount | DI |
| | Qtr4 Allotment Line Item Amount | DI |
| | Qtr4 Pending Allotment Line Item Amount | DI |
| | Source Year | DI |
| DUNNING NOTICE | Business Unit Indicator | DI |
| | Collection Due Date Lag Days Before Referral | DI |
| | Dunning Lag Days Before Referral | DI |
| | Dunning Text 1 | DI |
| | Dunning Text 2 | DI |
| | Dunning Text 3 | DI |
| | Minimum Dunning Count Before Referral | DI |
| | Minimum Referral Amount | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| FEDERAL TAX PAYMENT ACCUMULATION SUMMARY | Beginning Budget Fiscal Year | DI |
| | Ending Budget Fiscal Year | DI |
| | Accounting Period | DI |
| | Business Unit Indicator | DI |
| | Current Unpaid Amount | IG |
| | Ending Budget Fiscal Year | DI |
| | Appropriation Identifier | DI |
| | Last Created Transaction Number | DO |
| | Payment Trigger Amount | DI |
| | Total Tax Paid To Federal Reserve | DO |
| | Total Tax Withheld | DO |
| | Vendor Code – Main Designation (Federal Reserve Vendor) | DI |
| | Vendor Code – Sub Designation (Federal Reserve Vendor) | DI |
| FEDERAL TAX PAYMENT ACCUMULATION DETAIL | Amount Withheld Calendar Year 1 | DO |
| | Amount Withheld Calendar Year 2 | DO |
| | Amount Withheld Calendar Year 3 | DO |
| | Amount Withheld Calendar Year 4 | DO |

| Entity Name | Attribute Name | Category |
|---------------------------------|---|----------|
| | Amount Withheld Calendar Year 5 | DO |
| | Amount Withheld Calendar Year 6 | DO |
| | Amount Withheld Calendar Year 7 | DO |
| | Accounting Period | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| GENERAL LEDGER ACCOUNTS SUMMARY | Allotment Holder | DO |
| | General Ledger Amount | DO |
| | Beginning Budget Fiscal Year | DO |
| | Budget Organization | DO |
| | Business Unit | DO |
| | Ending Budget Fiscal Year | DO |
| | Fiscal Month | DO |
| | Fiscal Year | DO |
| | Appropriation Identifier | DO |
| | General Ledger Account | DO |
| | Budget Object Code | DO |
| | Program | DO |
| | Reporting Category | DO |
| JOURNAL VOUCHER SUMMARY | Business Unit Indicator | DI |
| | General Ledger Account Type | DI |
| | Accounting Period | DI |
| | Journal Voucher Reversal Indicator | DI |
| | Contract Type | DI |
| | Total Amount | DI |
| | Transaction Date | DI |
| | Transaction Identification Number | IG |
| | Transaction Type Identifier | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| JOURNAL VOUCHER DETAIL | Allotment Holder | DI |
| | Journal Voucher Amount | DI |
| | Accounting Period | DI |
| | Appropriation Identifier | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Contract Type | DI |
| | Closed Beginning Budget Fiscal Year | DI |
| | Closed Ending Budget Fiscal Year | DI |
| | Closed Fund | DI |

| Entity Name | Attribute Name | Category |
|--------------|--|----------|
| | Cost Organization | DI |
| | Date Disbursed By Treasury (Accomplished Date) | DI |
| | Debit/Credit Indicator | DI |
| | Disbursement Schedule Fiscal Year | DI |
| | Disbursement Schedule Number | DI |
| | Disbursing Office | DI |
| | Disbursing Schedule Information | DI |
| | Ending Budget Fiscal Year | DI |
| | Ending Budget Fiscal Years | DI |
| | Expense/Revenue/GL/Budget Indicator | DI |
| | Fiscal Month | DI |
| | Fiscal Year | DI |
| | General Ledger Account | DI |
| | General Ledger Account Type | DI |
| | Job Number | DI |
| | Journal Voucher Reversal Indicator | DI |
| | Posting Date | DI |
| | Program | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Transaction Identification Number Line Number | DI |
| | Transaction Identification Number | IG |
| | Transaction Type Identifier | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| JOURNAL ITEM | Accounting Entry Identifier | DO |
| | Account Type | DO |
| | Accounting Period | DO |
| | Allotment Holder | DO |
| | Appropriation Identifier | DO |
| | Beginning Budget Fiscal Year | DO |
| | Budget Object Code | DO |
| | Budget Organization | DO |
| | Business Unit Indicator | DO |
| | Customer Agreement Number | DO |
| | Date Time Transaction Processed | DO |
| | Deposit Number | DO |
| | Disbursing Office | DO |
| | Disbursing Schedule Information | DO |
| | Discount Type | DO |
| | Document Action | DO |
| | Document Description | DO |
| | Document User Organization | DO |

| Entity Name | Attribute Name | Category |
|--------------------|---|----------|
| | Dollar Amount | DO |
| | Ending Budget Fiscal Year | DO |
| | Fiscal Month | DO |
| | Fiscal Quarter | DO |
| | Fiscal Year | DO |
| | General Ledger Account | DO |
| | HUD Project Number | DO |
| | Interagency Symbol | DO |
| | Interest Reason Code | DO |
| | Job Number | DO |
| | Journal Voucher Reversal Indicator | DO |
| | Line Amount | DO |
| | Line Description | DO |
| | Number | DO |
| | Program | DO |
| | Referenced Document Transaction Identifier | DO |
| | Referenced Document Transaction Line | DO |
| | Reporting Category | DO |
| | TFCS Code | DO |
| | Transaction Identification Number | DO |
| | Transaction Identification Number Line Number | DO |
| | Transaction Type | DO |
| | Transaction Type Identifier | DO |
| | Treasury Symbol | DO |
| | User Identification | DO |
| | Vendor Code – Main Designation | DO |
| | Vendor Code – Sub Designation | DO |
| | Vendor Invoice Date | DO |
| | Vendor Invoice Line | DO |
| | Vendor Invoice Number | DO |
| | Vendor Name | DO |
| | Vendor Type | DO |
| OBLIGATION SUMMARY | Accepted As Received Amount | DI |
| | Alternate Payee – Sub Designation | DI |
| | Alternate Payee –Main Designation | DI |
| | Alternate Payee Name | DI |
| | Accounting Period | DI |
| | Business Unit Indicator | DI |
| | Closed Amount | DI |
| | Contract Number | DI |
| | Contract Type | DI |
| | Date Processed | DI |
| | Date Record Closed | DI |
| | Delivery Date | DI |

| Entity Name | Attribute Name | Category |
|-------------------|---|----------|
| | Discount % Days | DI |
| | Discount Type | DI |
| | Effective Date | DI |
| | End Date Description | DI |
| | Ending Date | DI |
| | Expended Amount | DI |
| | Hold Indicator | DI |
| | Holdback Amount | DI |
| | Invoiced Amount | DI |
| | Negotiated Payment Days | DI |
| | Ordering Contact | DI |
| | Outstanding Amount | DI |
| | Responsible Person | DI |
| | Total Amount | DI |
| | Transaction Identification Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| OBLIGATION DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Closed Amount | DI |
| | Cost Organization | DI |
| | Contract Type | DI |
| | Date Processed | DI |
| | Transaction Date | DI |
| | Date Record Closed | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | HUD Project Number | DI |
| | Job Number | DI |
| | Line Amount | DI |
| | Program | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Transaction Identification Type | IG |
| | Vendor Code – Main Designation | DI |

| Entity Name | Attribute Name | Category |
|-----------------------------|---|----------|
| | Vendor Code – Sub Designation | DI |
| OVERRIDES APPLIED AUDIT LOG | Business Unit Indicator | DI |
| | Date Override Applied | DO |
| | Error Message Overridden | DO |
| | Override Level Applied | IG |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| PAYMENT CANCELLATION | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Contract Type | DI |
| | Date Processed | DI |
| | Disbursement Cancellation Date | DI |
| | Disbursement Cancellation Reason Code | DI |
| | Disbursement Schedule Number | DI |
| | Disbursement Schedule Number Sequence Number | DI |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | HUD Project Number | DI |
| | Job Number | DI |
| | Line Amount | DI |
| | Program | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Total Amount | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Treasury Disbursement Tracking Number | DI |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| PAYMENT HISTORY | Payment History Amount | DO |
| | Business Unit Indicator | DO |
| | Accounting Period | DO |
| | Check Number or EFT Number | DO |
| | Contract Type | DO |
| | Date Disbursement Made By Disbursing Agency | DO |

| Entity Name | Attribute Name | Category |
|-------------------------|---|----------|
| | Date Disbursement Sent To Disbursing Agency | DO |
| | Disbursement Cancellation Status | DO |
| | Disbursement Schedule Number | DO |
| | Disbursement Tracking Number | DO |
| | Disbursing Entity | DO |
| | Disbursing Office | DO |
| | Method of Disbursement | DO |
| | Payment Transaction Identification Number | DO |
| | Payment Transaction Identification Number Line Number | DO |
| | Type of Disbursement | DO |
| PAYMENT NOTIFICATION | Payment Notification Amount | DO |
| | Business Unit Indicator | DO |
| | Check Number or EFT Number | DO |
| | Checking or Savings Designator | DO |
| | Contract Type | DO |
| | Date Disbursement Sent To Disbursing Agency | DO |
| | Date Payment Due | DO |
| | Date Payment Made | DO |
| | Deposit Account Number | DO |
| | Disbursement Tracking Number | DO |
| | Disbursing Office | DO |
| | Discount Amount Taken | DO |
| | Financial Org Name | DO |
| | Financial Org Routing Number | DO |
| | Interest Paid To Vendor | DO |
| | Money Owed HUD Deducted | DO |
| | Net Amount Paid | DO |
| | Obligation Number | DO |
| | Total Gross Amount For Vendor | DO |
| | Vendor Code – Main Designation | DO |
| | Vendor Code – Sub Designation | DO |
| | Vendor DUNS + 4 | DO |
| | Vendor Name | DO |
| PAYMENT REQUEST SUMMARY | Business Unit Indicator | DI |
| | Date Accepted of Goods or Services | DI |
| | Accounting Period | DI |
| | Contract Type | DI |
| | Date Invoice Logged At HUD | DI |
| | Date of Signature | DI |
| | Date Voucher Scheduled To Be Paid | DI |
| | Discount Percent | DI |
| | GTR Approving Official Name | DI |
| | GTR Phone Number | DI |

| Entity Name | Attribute Name | Category |
|------------------------|--|----------|
| | Holdback Amount | DI |
| | In Transit For Disbursement Amount | DI |
| | Invoice Date | DI |
| | Invoice Description | DI |
| | Transaction Identification Number | DI |
| | Vendor Code – Main Designation and Sub | DI |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| | Vendor Invoice Identification Number | DI |
| | Voucher Identifier | DI |
| PAYMENT REQUEST DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Date Accepted of Goods or Services | DI |
| | Date Invoice Logged At HUD | DI |
| | Contract Type | DI |
| | Cost Organization | DI |
| | Date of Signature | DI |
| | Transaction Date | DI |
| | Date Voucher Scheduled To Be Paid | DI |
| | Discount Percent | DI |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | GTR Approving Official Name | DI |
| | GTR Phone Number | DI |
| | Holdback Amount | DI |
| | HUD Project Number | DI |
| | In Transit For Disbursement Amount | DI |
| | Invoice Date | DI |
| | Invoice Description | DI |
| | Job Number | DI |
| | Line Amount | DI |
| | Program | DI |
| | Reporting Category | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Vendor Code – Main Designation and Sub | DI |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| | Vendor Invoice Identification Number | DI |

| Entity Name | Attribute Name | Category |
|-------------------------------------|--|----------|
| | Voucher Identifier | DI |
| PAYMENT WAREHOUSE | Payment Warehouse Amount | DO |
| | Business Unit Indicator | DO |
| | Accounting Period | DO |
| | Date Voucher Scheduled To Be Paid | DO |
| | Disbursing Office | DO |
| | Transaction Identification Line Number | DO |
| | Transaction Identification Number | DO |
| | Vendor Code – Main Designation | DO |
| | Vendor Code – Sub Designation | DO |
| PROJECT COST ACCUMULATION DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Commitment Amount | DI |
| | Ending Budget Fiscal Year | DI |
| | Expenditures Amount | DI |
| | Job Number | DI |
| | Maximum Project Amount | DI |
| | Obligation Amount | DI |
| | Program | DI |
| | Project End Date | DI |
| | Project Start Date | DI |
| PROMPT PAY REPORTING SUMMARY | Business Unit Indicator | DO |
| | Fiscal Quarter | DO |
| | Fiscal Year | DO |
| | Accounting Period | DO |
| | Contract Type | DO |
| | Interest Due But Not Paid - < \$1 Amount | DO |
| | Interest Due But Not Paid - < \$1 Number | DO |
| | Interest Due But Not Paid - Other Amount | DO |
| | Interest Due But Not Paid - Other Number | DO |
| | Interest Penalties Paid Amount | DO |
| | Interest Penalties Paid Number | DO |
| | Inv Pd 8+ Days Before Due-Not Approved Amt | DO |
| | Inv Pd 8+ Days Before Due-Not Approved Num | DO |
| | Invoice Paid 1 To 15 Days After Due Date Number | DO |
| | Invoice Paid 8+ Days Before Due-Approved Total Amount | DO |
| | Invoices Paid Late Amount | DO |

| Entity Name | Attribute Name | Category |
|--------------------------------------|---|----------|
| | Invoices Paid Late Number | DO |
| | Invoices Subject To Prompt Pay Amount | DO |
| | Invoices Subject To Prompt Pay Number | DO |
| PROMPT PAY REPORTING DETAIL | Business Unit Indicator | DO |
| | Discount Amount | DO |
| | Accounting Period | DO |
| | Discount Days | DO |
| | Discount Lost Amount | DO |
| | Discount Lost Reason | DO |
| | Discount Lost Reason Category | DO |
| | Discount Percent | DO |
| | Contract Type | DO |
| | Fiscal Month | DO |
| | Fiscal Quarter | DO |
| | Fiscal Year | DO |
| | Imputed Interest Amount | DO |
| | Interest Amount | DO |
| | Interest Reason | DO |
| | Invoice Amount | DO |
| | Late Pay Reason | DO |
| | Line Amount | DO |
| | Paid Amount | DO |
| | Penalty Amount | DO |
| | Prompt Pay Date | DO |
| | Prompt Pay Type | DO |
| | Transaction Identification Number | DO |
| | Transaction Identification Number Line Number | DO |
| | Vendor Code – Main Designation | DO |
| | Vendor Code – Sub Designation | DO |
| PURCHASE/TRAVEL CARD PAYMENT SUMMARY | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | HUD Project Number | DI |
| | Invoice Approved Amount | DI |
| | Job Number | DI |
| | Last Date Payment Generated | DI |
| | Original Invoice Amount | DI |
| | Program | DI |

| Entity Name | Attribute Name | Category |
|---|---|----------|
| | Purchase Card Invoice Identification Number | DI |
| | Purchase Card Run Date | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Total Amount | DI |
| | Total Payments Generated Amount | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Type | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| PURCHASE/ TRAVEL CARD PAYMENT DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | HUD Project Number | DI |
| | Invoice Approved Amount | DI |
| | Job Number | DI |
| | Last Date Payment Generated | DI |
| | Original Invoice Amount | DI |
| | Program | DI |
| | Purchase Card Account Number | DI |
| | Purchase Card Invoice Identification Number | DI |
| | Purchase Card Run Date | DI |
| | Purchase Card Sequence Number | DI |
| | Record Status | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Total Payments Generated Amount | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Transaction Identification Type | IG |
| | Vendor Code – Main Designation For Passenger | DI |
| | Vendor Code – Sub Designation For Passenger | DI |
| RECEIPT OF GOODS OR SERVICES | Business Unit Indicator | DI |

| Entity Name | Attribute Name | Category |
|--|--|----------|
| SUMMARY | Call Number of BPA | DI |
| | Accounting Period | DI |
| | Date Processed | DI |
| | Delivery Task Order Identification Number | DI |
| | Receipt Identification Number | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Total Amount | DI |
| | Transaction Identification Number | IG |
| | Vendor Code – Main Designation | DI |
| Vendor Code – Sub Designation | DI | |
| RECEIPT OF GOODS OR SERVICES DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Date Received | DI |
| | Ending Budget Fiscal Year | DI |
| | Item Description | DI |
| | Job Number | DI |
| | Line Amount | DI |
| | Program | DI |
| | Project Number | DI |
| | Quantity Ordered | DI |
| | Quantity Received | DI |
| | Receipt Identification Number | DI |
| | Receiving Official's Name | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| Vendor Code – Main Designation | DI | |
| Vendor Code – Sub Designation | DI | |
| Vendor Identification Number | DI | |
| RECURRING PROFORMA TRANSACTIONS | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Accounting Period | DI |
| | Budget Organization | DI |
| | Contract Number | DI |

| Entity Name | Attribute Name | Category |
|----------------------------------|---|----------|
| | Contract Type | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Entry End Date | DI |
| | Entry Start Date | DI |
| | Frequency Type | DI |
| | Job Number | DI |
| | Journal Voucher Reversal Indicator | DI |
| | Latest Date | DI |
| | Line Amount | DI |
| | Program | DI |
| | Project Number | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Reporting Category | DI |
| | Total Transaction Amount | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| REFERENCE DATA AUDIT TRAIL | After Value Record | IG |
| | Before Value Record | IG |
| | Change Type Code | IG |
| | Changer Identification Number | IG |
| | Date of Change | IG |
| | Entity Identifier | IG |
| | Time of Change | IG |
| REPLACEMENT DISBURSEMENT SUMMARY | Disbursement Number | DI |
| | Disbursement Schedule Number | DI |
| | Accounting Period | DI |
| | Disbursing Entity | DI |
| | Method of Disbursement | DI |
| | Replacement Disbursement Number | DI |
| | Replacement Disbursing Entity | DI |
| | Replacement Method of Disbursement | DI |
| | Replacement Type of Disbursement | DI |
| | Type of Disbursement | DI |
| REPLACEMENT DISBURSEMENT DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Check Number or EFT Number | DI |

| Entity Name | Attribute Name | Category |
|--------------------------------|--|----------|
| | Date Processed | DI |
| | Disbursement Officer | DI |
| | Disbursing Office | DI |
| | Ending Budget Fiscal Year | DI |
| | HUD Project Number | DI |
| | Job Number | DI |
| | Program | DI |
| | Referenced Document Transaction Identifier | DI |
| | Referenced Document Transaction Line | DI |
| | Rejected Record | DI |
| | Replacement Disbursement Line Amount | DI |
| | Replacement Disbursement Line Number | DI |
| | Replacement Disbursement Number | DI |
| | Replacement Disbursing Entity | DI |
| | Replacement Method of Disbursement | DI |
| | Reporting Category | DI |
| | Total Amount | DI |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| REQUISITION/COMMITMENT SUMMARY | Business Unit Indicator | DI |
| | Closed Amount | DI |
| | Accounting Period | DI |
| | Contract Type | DI |
| | Date Processed | DI |
| | Commitment Amount | DI |
| | Date Record Closed | DI |
| | Referenced Document Transaction Identifier | DI |
| | Responsible Person | DI |
| | Total Amount | DI |
| | Transaction Identification Number | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| REQUISITION/COMMITMENT DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Contract Type | DI |
| | Closed Amount | DI |
| | Date Processed | DI |
| | Commitment Amount | DI |
| | Cost Organization | DI |
| | Date Record Closed | DI |

| Entity Name | Attribute Name | Category |
|---------------------------------------|---|----------|
| | Transaction Date | DI |
| | Description | DI |
| | Ending Budget Fiscal Year | DI |
| | Fiscal Year | DI |
| | HUD Project Number | DI |
| | Job Number | DI |
| | Line Amount | DI |
| | Program | DI |
| | Reporting Category | DI |
| | Transaction Identification Number | IG |
| | Transaction Identification Number Line Number | IG |
| | Transaction Identification Type | IG |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| SECURITY VIOLATION LOG | Business Unit Indicator | IG |
| | Run Date And Time | IG |
| | Security Log Counter | IG |
| | Security Violation | IG |
| | System Userid | IG |
| | Table Identifier | IG |
| | Transaction Identification Number | IG |
| SUB-PROJECT COST ACCUMULATION SUMMARY | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |
| | Commitment Amount | DI |
| | Ending Budget Fiscal Year | DI |
| | Expenditures Amount | DI |
| | Job Number | DI |
| | Maximum Project Amount | DI |
| | Obligation Amount | DI |
| | Program | DI |
| | Project End Date | DI |
| | Project Start Date | DI |
| SUB-PROJECT COST ACCUMULATION DETAIL | Allotment Holder | DI |
| | Appropriation Identifier | DI |
| | Accounting Period | DI |
| | Beginning Budget Fiscal Year | DI |
| | Budget Object Code | DI |
| | Budget Organization | DI |
| | Business Unit Indicator | DI |

| Entity Name | Attribute Name | Category |
|--------------------------------------|---|----------|
| | Commitment Amount | DI |
| | Ending Budget Fiscal Year | DI |
| | Expenditures Amount | DI |
| | Job Number | DI |
| | Maximum Project Amount | DI |
| | Obligation Amount | DI |
| | Program | DI |
| | Project End Date | DI |
| | Project Start Date | DI |
| TRANSACTION CROSS REFERENCE TRACKING | Acceptance Date | DO |
| | Transaction Amount | DO |
| | Document Action | DO |
| | Referenced Document Transaction Identifier | DO |
| | Transaction Identification Number | DO |
| | Vendor Code – Main Designation | DO |
| | Vendor Code – Sub Designation | DO |
| VENDOR/CUSTOMER/GRANTEE | Social Security Number Or Federal Tax ID Number | DI |
| | Vendor 1099 Indicator | DI |
| | Vendor Code – Main Designation | DI |
| | Vendor Code – Sub Designation | DI |
| | Vendor Contact | DI |
| | Vendor Or Customer Type | DI |
| | Vendor Status | DI |
| VOUCHER AUDIT CONTROL | Voucher Threshold Level 1 Amount | DI |
| | Voucher Threshold Level 1 Number Selected | DI |
| | Voucher Threshold Level 2 Amount | DI |
| | Voucher Threshold Level 2 Number Selected | DI |
| | Voucher Threshold Level 3 Amount | DI |
| | Voucher Threshold Level 3 Number Selected | DI |
| | Voucher Threshold Level 4 Amount | DI |
| | Voucher Threshold Level 4 Number Selected | DI |
| VOUCHER SELECTED FOR AUDIT | Payment Voucher Amount | DO |
| | Audit Result | DO |
| | Date Processed | DO |
| | Transaction Identification Number | DO |
| | Vendor Code – Main Designation | DO |
| | Vendor Code – Sub Designation | DO |
| YEAR-END CLOSING ACCOUNTS | Closed Account Reinstate Flag | DI |
| | Closed Business Account | DI |
| | Closed Expired Business Accounts | DI |
| | Closed Expired General Accounts | DI |
| | Closed General Account | DI |
| | Closed Unexpired Business Accounts | DI |
| | Closed Unexpired General Accounts | DI |

2.0 Data Description

| Entity Name | Attribute Name | Category |
|--------------------|--------------------------|-----------------|
| | Expire/Carryover Flag | DI |
| | Fiscal Year | DI |
| | General Ledger Account | DI |
| | Plus/Minus Flag | DI |
| | Reinstate Expired Flag | DI |
| | Reinstate Unexpired Flag | DI |

2.3 Data Constraints

The *HIFMIP Data Model with Entity and Attribute Definitions Document* describes the business rules relevant to the ICFS data model for each logical entity. However, the following constraints extend beyond the general business rules defined in the aforementioned document:

- Most JFMIP-compliant, federal financial applications accommodate dollar amounts that extend to more than 20 digits with two implied decimal positions. Many Treasury systems, such as FACTS I and FACTS II, cannot accommodate dollar amounts beyond 17 positions with two implied decimal positions. The IPAC bulk file supports dollar amounts to a maximum of 14 positions (with 2 implied decimal places).
- Treasury requires that external reports such as FACTS I and FACTS II report accounting data using the 4-digit standard US SGL account structure. For this reason, HUD should consider establishing a chart of accounts that complies with Treasury requirements. The use of sub-accounts is a common practice. However, the sub-account structure should be defined such that a 4-digit US SGL account is the parent account.
- HUD has developed a unique naming convention for its internal fund code value to accommodate source year reporting for multi-year funds. The existing fund code field accommodates a value up to six characters in length. However, some applications may have limitations on the length of the fund code. For this reason, it may be necessary for HUD to employ an alternate strategy to meet its source year funding requirements.
- HUD's existing financial application, HUDCAPS, requires a unique document number that is comprised of a transaction code, division, and identification number. Other COTS applications may require a unique document by module. To facilitate a smooth implementation, HUD may consider including the transaction code and identification number as the new document number during conversion to better identify the source of the transaction.

The limitations relating to dollar values and the US SGL account constraints represent limitations imposed by the data recipients. The latter constraints are data limitations that are in place as a result of potential conversion processing.

2.4 Data Retention

ICFS involves the full implementation of an end-to-end integrated financial system that includes core financial and other functions such as general ledger, accounts payable, accounts receivable, budget execution (funds control), asset management, cost management, reporting, obligation processing, expenditure tracking, acquisition, cash management, cost accounting, financial reporting, workflow automation and federal financial assistance reporting including grants, subsidies and loans. The financial and accounting information are critical to HUD. As such, HUD data entity records will be retained for as long as they are needed. The HUD records officer shall be responsible for archiving and scheduling of record disposition from the system. The table below lists the ICFS data entities including the data retention requirement for each data entity as it is laid out in the General Records Schedule (GRS) section of the HUD Handbook 2228.2. HUD records Disposition Schedule 3, Appendix 3 of HUD Handbook Section 2225.6 describes the approved deviations that HUD can use to address its agency specific records disposition needs.

Table 2-3 Data Entities Retention Requirements

| Data Entity | Retention Requirement |
|--|---|
| 1099 Payment Accumulation Summary | To be retained for the entire life of the system |
| 1099 Payment Accumulation Detail | To be retained for the entire life of the system |
| Accounting Period | Destroy 6 years and 3 months after period covered by account. |
| Accounts Receivable Bill Summary | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Accounts Receivable Bill Detail | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Address | Destroy 6 years after date of last entry |
| Agency Location Reference | To be retained for the entire life of the system |
| Allotment Line Item (Distribution to Program/Object Class) Level 4 | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Allotment Total – Level 3 | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Apportionment – Level 2 | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Appropriation – Level 1 | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Approvals Applied Audit Log | Destroy 6 years and 3 months after period covered by account. |
| Approval Security Definition (by document) | Destroy 6 years and 3 months after period covered by account. |
| Assignment to Organization – Level 6 | Destroy 6 years and 3 months after period covered by account. |
| Automatic Document Numbering Counter | To be retained for the entire life of the system |
| Bank Account Information | To be retained for the entire life of the system |
| Budget Object Code Hierarchy and Reference Information | To be retained for the entire life of the system |
| Cash Receipts Summary | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Cash Receipts Detail | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Cost Allocation | Destroy 6 years and 3 months after period covered by account. |
| Customer Agreement | To be retained for the entire life of the system |
| Default Payment Text | To be retained for the entire life of the system |
| Disbursement Rules | Destroy 6 years and 3 months after period covered by account. |
| Disbursement Schedules | Destroy 6 years and 3 months after period covered by account. |
| Disbursement Summary | Destroy 6 years and 3 months after the close of the fiscal year involved. |

2.0 Data Description

| Data Entity | Retention Requirement |
|---|--|
| Disbursement Detail | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Disbursing Entity Definition | To be retained for the entire life of the system |
| Distribution to Program – Level 5 | Destroy 6 years and 3 months after period covered by account. |
| Dunning Notice | To be retained for the entire life of the system |
| Error Message Definition | To be retained for the entire life of the system |
| Federal Tax Payment (WTA) Accumulation Summary | Destroy when 4 years old |
| Federal Tax Payment Detail | Destroy 4 years after superseded or obsolete or upon separation of employee. |
| Fiscal Year/Budget FY | To be retained for the entire life of the system |
| Fund Group Hierarchy | To be retained for the entire life of the system |
| Fund Reference Information | To be retained for the entire life of the system |
| General Ledger Accounts Summary | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| General Ledger Posting Models | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| HUD Project Number | To be retained for the entire life of the system |
| Journal Item | Destroy 6 years and 3 months after period covered by account. |
| Journal Voucher Summary | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Journal Voucher Detail | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Obligation (Contract/Purchase Order, Travel Order, Grant, etc.) Summary | Destroy when funds are obligated. |
| Obligation (Contract/Purchase Order, Travel Order, Grant, etc.) Detail | Destroy or delete when 5 years old. |
| Organization Hierarchy | To be retained for the entire life of the system |
| Overrides Applied Audit Log | To be retained for the entire life of the system |
| Payment Cancellation | Destroy 6 years and 3 months after period covered by account. |
| Payment History | Destroy 6 years and 3 months after period covered by account. |
| Payment Notification | Destroy 6 years and 3 months after period covered by account. |
| Payment Request Summary | Destroy 6 years and 3 months after period covered by account. |
| Payment Warehouse | Destroy 6 years and 3 months after period covered by account. |
| Program Code Hierarchy Reference Information | To be retained for the entire life of the system |

2.0 Data Description

| Data Entity | Retention Requirement |
|---|---|
| Project Cost Accumulation Summary | Destroy 6 years and 3 months after period covered by account. |
| Project Cost Accumulation Detail | Destroy 6 years and 3 months after period covered by account. |
| Project Cost Code Reference Hierarchy (Project and Sub Project) | To be retained for the entire life of the system |
| Prompt Pay Reporting Summary | Destroy 6 years and 3 months after period covered by account. |
| Prompt Pay Reporting Detail | Destroy 6 years and 3 months after period covered by account. |
| Purchase/Travel Card Payment Summary | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Purchase/ Travel Card Payment Detail | Destroy 6 years and 3 months after the close of the fiscal year involved. |
| Receipt of Goods or Services Summary | Destroy 1 year after completion of job |
| Receipt of Goods or Services Detail | Destroy 1 year after completion of job |
| Recurring ProForma Transactions | To be retained for the entire life of the system |
| Reference Data Audit Trail | To be retained for the entire life of the system |
| Replacement Disbursement Summary | To be retained for the entire life of the system |
| Replacement Disbursement Detail | To be retained for the entire life of the system |
| Requisition/Commitment Summary | Destroy 3 years after final payment. |
| Requisition/Commitment Detail | Destroy 6 years and 3 months after final payment. |
| Security by User | Destroy when 2 years old. |
| Security Role Definitions | Destroy when 2 years old. |
| Security Violation Log | Destroy when 2 years old. |
| Standard General Ledger Account Listing | Destroy 6 years 3 months after period covered by account |
| Sub-Project Cost Accumulation Summary | To be retained for the entire life of the system |
| Sub-Project Cost Accumulation Detail | To be retained for the entire life of the system |
| System Data Reference Definition | To be retained for the entire life of the system |
| Transaction Cross Reference Tracking | To be retained for the entire life of the system |
| Treasury Symbol | To be retained for the entire life of the system |
| Vendor/Customer/Grantee | To be retained for the entire life of the system |
| Voucher Audit Control | Destroy 6 years 3 months after period covered by account |
| Vouchers Selected for Audit | Destroy 6 years 3 months after period covered by |

| Data Entity | Retention Requirement |
|---------------------------|--|
| | account |
| Year End Closing Accounts | To be retained for the entire life of the system |

2.5 Impacts

This section describes the anticipated impacts of the proposed system on the existing organizational and operational user environments, detailing an estimate of the data storage requirements in terms of size and number of records, and description of the expected growth of the data and related components. It will also describe the impacts of the data requirements on equipment (processor speed, memory, and hard disk space and configuration), software, user and developer organizations.

2.5.1 Equipment

The ICFS shall employ a wide array of entities and data elements with relationships. It is anticipated that the relational database will be used to organize the data stored in a data warehouse. Given such requirements, the larger the database, the greater the hardware requirement. ICFS will be used by a large number of employees. Processing, analyzing, storing and retrieving data from the warehouse (whose end goal is to provide real time and batch access) requires the system to employ fast multi-processors to cache more of the data in memory. This also permits the system to quickly process queries referencing large amounts of data. The system should have a large expandable disk space to meet the data storage requirements as the amount of stored data increases.

Estimating ICFS relational database transaction volumes will help determine the hardware configuration necessities for achieving the optimal performance required by the ICFS application software. Additionally, they facilitate ensuring the appropriate physical amount of disk space to store the data and indexes. These estimates will also assist in determining whether the database design needs refining. For example, if the estimated database size exceeds HUD's requirements, more normalization will be performed to reduce the database size. Conversely, if the database size is much smaller than expected, the database must be de-normalized to improve query performance.

The database size approximations will be calculated by estimating the size of each table in the database and summing the individual values to get the total size. The size of a table will depend on whether the table has indexes, and the type of indexes.

Since ICFS shall be a web-based application, the hardware shall be able to support web browsers and be able to interface with common office peripherals such as printers etc. The hardware should be able to interface with other HUD organizations systems such as FHA-SL as well as external organizations such as the Department of Treasury to process inbound and outbound data. The hardware shall be expandable to accommodate HUD organizations that are not within the initial ICFS development.

On-line access to ICFS will be supported by a workstation. The workstation must be able to run a web browser and have access to the HUD standard network. The minimum hardware required to install and run the server components of a JFMIP-certified COTS federal financial systems product could be as small as a single hardware server. However, the preferred configuration used in typical production configurations has a dedicated database server to handle input and output to the backend relational database and one or more application servers dedicated to servicing on-line users and real-time

transaction processing from other integrated financial applications. The HUD Target Enterprise Architecture recommends target workstation and server specifications as shown below.

Table 2-4 HUD Target Recommendations – Workstations and Servers

| Service Standard | Target Recommendations | |
|-------------------|------------------------|--|
| | Products | Specifications |
| Servers/Computers | N/A | Open Standards (UNIX) Enterprise Server Intel based server Commodity Intel-based workstation |

The capacity of the storage media depends on several factors: the size of the operating system and other systems software (for example, middleware and relational data base management systems); the size of the application software and the number of subsystems installed; the amount of historical data to be converted; and, the anticipated years of financial history to be retained. Data storage requirements cannot be determined until the COTS federal financial system has been selected and the design related decisions have been made. HUD's specification for storage devices is presented in the table below.

Table 2-5 HUD Target Recommendations – Storage Devices

| Service Standard | Target Recommendations | |
|------------------|------------------------|--|
| | Products | Specifications |
| Storage Devices | N/A | Storage-area Network (SAN) Network-attached Storage (NAS) |

Access Channels are the interface between the COTS federal financial system and its users. Access Channels can be a web browser, a personal digital assistant or other communication devices. The recommended target products identified in the HUD Target Enterprise Architecture v1.0 is presented in the table below.

Table 2-6 HUD Target Recommendations – Access Channels

| Service Standard | Target Recommendations | |
|---------------------------------|---|----------------|
| | Products | Specifications |
| Web Browser | Internet Explorer 6.01 Netscape Communicator 7.0 | N/A |
| Wireless/PDA | Blackberry PocketPC | N/A |
| Communication/ Collaboration | Lotus Notes/Domino Mail 6.5 Lotus SMTP Gateway | |

2.5.2 Software

The ICFS is a web based system that enables clients to access resources via a server. The system shall be based on a relational database model. A primary requirement for the system is a software program that is capable of supporting a very large relational database. The software shall support a broad range of database objects including tables, data types, views, stored procedures, functions, indexes, constraints, rules, defaults, and triggers. These objects will make it easier for the software to be able to capture, organize, retrieve, process, store, and present data more effectively and efficiently.

ICFS will have inbound and outbound interfaces. As such, the software must be able to support such interfaces. The software shall support file transmissions via interfaces in the required format and timing. The software shall have reliable protocols for sending, receiving, and retrieving data.

JFMIP-certified COTS federal financial systems are supported by a variety of operating systems and relational data base management systems (RDBMS). HUD's standards for operating systems and RDBMS are presented below. If other third party reporting or middleware products are required in the operation of the COTS federal financial system they are usually bundled with the application and will be licensed to HUD on a limited use basis. The Configuration Change Management Board (CCMB) defines HUD's operating system standard.

Table 2-7 HUD's Operating System Standard

| Service Standard | CCMB Approved Operating Systems | |
|------------------|---|----------------|
| | Products | Specifications |
| Operating System | Windows 2000 Advanced Servers MS Windows NT 4.0 UNIX Solaris 2.6 ESRI ArcSDE | N/A |

The database management systems recommended for HUD's Target Enterprise Architecture are presented in the table below.

Table 2-8 HUD's Database Management System Standard

| Service Standard | Target Recommendations | |
|------------------|---|----------------|
| | Products | Specifications |
| Database | Oracle 9i or later MS Access MS SQL Server 2000 or later ESRI ArcSDE | N/A |

If any of the COTS federal financial system software components fails to meet an approved HUD standard, the appropriate documentation must be submitted to the Configuration Change Management Board (CCMB) for approval.

2.5.3 Organization

If hosted internally by HUD, the COTS federal financial system may require additional information systems support staff and specific training in several disciplines.

- Configuration Management – Support staff must be trained in the software architecture of the selected COTS federal financial system to install the application and apply periodic software patches and version upgrades.
- Capacity Management and Planning – IS staff will need to be trained in the operational characteristics of the COTS federal financial system to perform performance tuning and to monitor and plan for future server capacity upgrades.
- Middleware Product(s) – Depending on the COTS federal financial system selected, IS support staff may need to be trained on maintaining one or more middleware products, for example BEA System's Tuxedo and JOLT products.
- Reporting/OLAP Products – Depending on the COTS federal financial system selected, IS support staff may need to be trained on new reporting and On-line Analytical Processing (OLAP) tools.

- System Administration – Additional IS support staff may be required to perform system and database administration on the COTS federal financial system.
- Continuity of Operations Planning (COOP) – Additional IS staff may be required to modify current COOP standards or to establish new failover or recovery scenarios.

With a Center of Excellence (COE) implementation, the roles and responsibilities of HUD’s information system support staff will depend on the service level agreements established between HUD and the COE. The activities specified in the disciplines above may be carried out by HUD personnel or COE staff.

2.6 Data Storage

ICFS data storage capacity is largely dependant on several factors. These factors include: the size of the operating system and other systems software (for example, middleware and relational data base management systems); the size of the application software and the number of subsystems installed; the amount of historical data to be converted; and, the anticipated years of financial history to be retained.

Actual ICFS data storage requirements cannot be determined until the COTS federal financial system has been selected and the design related decisions have been made. However, Table 2-9 provides estimates for ICFS data storage based on existing HUDCAPS, PAS, and LOCCS transaction volumes that correspond to the data entities where information was available.

The memory required for storage is calculated by multiplying the number of rows allocating 1 byte (8 bits) for character variables and 4 bytes (32 bits) for decimal variables.

Table 2-9 Estimated Annual ICFS Data Storage Requirements

| Data Entity or Table Name | Number of Rows | Number of Numeric Type Data Elements in a Row | Number of Character Type Data Elements in a Row | Memory required for storage (in Bytes) |
|--|----------------|---|---|--|
| 1099 Payment Accumulation Summary and Detail | 42,478 | 15 | 11 | 3,015,910 |
| Accounting Period | 228 | 6 | 1 | 5,700 |
| Accounts Receivable Bill Summary | 149 | 1 | 6 | 1,490 |
| Accounts Receivable Bill Detail | 145 | 16 | 30 | 13,630 |
| Address | 48,270 | 1 | 29 | 1,592,910 |
| Agency Location Code | 28 | 1 | 3 | 196 |
| Allotment Line Item - Level 4 | 15,600 | 16 | 10 | 1,154,400 |
| Allotment Total – Level 3 | 6,240 | 16 | 10 | 461,760 |
| Apportionment – Level 2 | 1,560 | 17 | 5 | 113,880 |
| Appropriation – Level 1 | 600 | 17 | 5 | 43,800 |
| Approvals Applied Audit Log | 137,780 | 6 | 4 | 3,857,851 |
| Approval Security Definition (by document) | 1,140 | 0 | 6 | 6,840 |

2.0 Data Description

| Data Entity or Table Name | Number of Rows | Number of Numeric Type Data Elements in a Row | Number of Character Type Data Elements in a Row | Memory required for storage (in Bytes) |
|--|----------------|---|---|--|
| Assignment to Organization – Level 6 | 46,800 | 17 | 9 | 3,603,600 |
| Automatic Document Numbering Counter | 767 | 1 | 5 | 6,903 |
| Bank Account Information | 51,172 | 2 | 8 | 818,752 |
| Budget Object Code Hierarchy and Reference Information | 223 | 1 | 14 | 4,014 |
| Cash Receipts Summary | 1,198 | 5 | 3 | 27,554 |
| Cash Receipts Detail | 1,722 | 11 | 10 | 92,988 |
| Cost Allocation | 525 | 6 | 14 | 19,950 |
| Customer Agreement | 21 | 5 | 11 | 651 |
| Default Payment Text | 7 | 2 | 2 | 70 |
| Disbursement Rules | 1 | 4 | 11 | 27 |
| Disbursement Schedules | 10,000 | 1 | 3 | 70,000 |
| Disbursement Summary | 509 | 3 | 11 | 11,707 |
| Disbursement Detail | 205,494 | 11 | 14 | 11,918,652 |
| Disbursing Entity Definition | 28 | 1 | 7 | 308 |
| Distribution to Program – Level 5 | 23,400 | 14 | 9 | 1,521,000 |
| Dunning Notice | 5 | 5 | 5 | 125 |
| Error Message Definition | 1,000 | 0 | 4 | 4,000 |
| Federal Tax Payment (WTA) Accumulation Summary | 1 | 7 | 5 | 33 |
| Federal Tax Payment Accumulation Detail | 40 | 11 | 0 | 1,760 |
| Fiscal Year/Budget FY | 1 | 0 | 5 | 5 |
| Fund Group Hierarchy | 1,000 | 2 | 6 | 14,000 |
| Fund Reference Information | 1,002 | 4 | 18 | 34,068 |
| General Ledger Accounts Summary | 836 | 4 | 11 | 22,572 |
| General Ledger Posting Models | 9,380 | 6 | 16 | 375,200 |
| HUD Project Number | 1,500 | 5 | 6 | 39,000 |
| Journal Item | 1,394,269 | 12 | 38 | 119,907,134 |
| Journal Voucher Summary and Detail | 134,123 | 16 | 29 | 12,473,439 |
| Obligation Summary | 12,294 | 10 | 17 | 700,758 |
| Obligation Detail | 22,198 | 11 | 15 | 1,309,682 |
| Organization Hierarchy | 7,092 | 0 | 12 | 85,104 |
| Overrides Applied Audit Log | 69,713 | 4 | 2 | 1,254,842 |

2.0 Data Description

| Data Entity or Table Name | Number of Rows | Number of Numeric Type Data Elements in a Row | Number of Character Type Data Elements in a Row | Memory required for storage (in Bytes) |
|---|----------------|---|---|--|
| Payment Cancellation | 197 | 11 | 15 | 11,623 |
| Payment History | 344,627 | 3 | 11 | 7,926,421 |
| Payment Notification | 424,776 | 9 | 13 | 20,814,024 |
| Payment Request Summary and Detail | 424,776 | 7 | 11 | 16,566,264 |
| Payment Warehouse | 5,000 | 5 | 3 | 115,000 |
| Program Code Hierarchy Reference Information | 1,711 | 0 | 14 | 23,954 |
| Project Cost Accumulation Summary and Detail | 1,780 | 12 | 18 | 117,480 |
| Project Cost Code Reference Hierarchy (Project and Sub Project) | 6,340 | 2 | 18 | 164,840 |
| Prompt Pay Reporting Summary | 22,012 | 11 | 6 | 1,100,600 |
| Prompt Pay Reporting Detail | 22,012 | 15 | 9 | 1,518,828 |
| Purchase/Travel Card Payment Summary | 24 | 13 | 12 | 1,536 |
| Purchase/ Travel Card Payment Detail | 156 | 14 | 14 | 10,920 |
| Receipt of Goods or Services Summary and Detail | 388,403 | 20 | 16 | 37,286,698 |
| Recurring ProForma | 200 | 11 | 14 | 11,600 |
| Reference Data Audit Trail | 3,000 | 2 | 5 | 39,000 |
| Replacement Disbursement Summary and Detail | 1,000 | 8 | 26 | 58,000 |
| Requisition/Commitment Summary | 2,792 | 7 | 4 | 89,344 |
| Requisition/Commitment Detail | 4,460 | 10 | 15 | 245,300 |
| Security by User | 1,100 | 0 | 19 | 20,900 |
| Security Role Definitions | 250 | 0 | 15 | 3,750 |
| Security Violation Log | 2,000 | 1 | 6 | 20,000 |
| Standard General Ledger Account Listing | 1,500 | 1 | 4 | 12,000 |
| Sub-Project Cost Accumulation Summary and Detail | 6,340 | 6 | 9 | 209,220 |

| Data Entity or Table Name | Number of Rows | Number of Numeric Type Data Elements in a Row | Number of Character Type Data Elements in a Row | Memory required for storage (in Bytes) |
|--------------------------------------|------------------|---|---|--|
| System Date Reference Definition | 172 | 6 | 9 | 5,676 |
| Transaction Cross Reference Tracking | 1,673,451 | 5 | 2 | 36,815,922 |
| Treasury Symbol | 459 | 2 | 7 | 6,885 |
| Vendor/Customer/Grantee | 25,586 | 2 | 5 | 332,618 |
| Voucher Audit Control | 5 | 8 | 0 | 160 |
| Vouchers Selected for Audit | 43,156 | 4 | 2 | 776,808 |
| Year End Closing Accounts | 802 | 1 | 12 | 12,832 |
| Total | 5,658,627 | 489 | 754 | 288,904,468 |

2.7 Scales of Measurement

ICFS data that requires measurement are time, money, and interest rate (for overdue invoices and discount terms). Time is measured in days, months, or years. Money is measured by dollar value with a precision to 2 decimal places. Rate is measured as percentage per annum to two decimal places. When a calculation requires the number of days in a calendar year, the number of days is 360 (not 365).

All payment amounts (decimal data) range from 0 to 9999999999999999 (implied decimal in the last two places).

Table 2-10 Data Element Classification

| Data Elements | Scale of Measurement |
|---|--|
| Term | Measured in months and is input in months, incremented in months normally in the range of 1 – 360 |
| Interest Rate | Measured in percentage ranging between 0.00 – 99.99 |
| Amounts reported to ICFS, monthly payment amounts, accrued amounts, and monthly amounts due | Measured in dollar amounts, ranging between 0 to 9999999999999999 (implied decimal in the last two places) |

2.8 Measurement Conversion Factors

In some cases, stored data is measured in one unit of measure but processed by the system in another unit of measure. For example, a data element is a function of time, stored in hours; the new system requires that the data be stored in terms of minutes. In this example, the conversion factor is “multiply by 60.” No measurement conversion factors have been identified for the ICFS implementation since the new COTS package has not been selected yet.

2.9 Frequency of Update and Processing

Appendix A – ICFS Metadata states the expected frequency of data element update and the expected frequency of processing input data elements for each entity identified in the ICFS configuration.

3.0 DATA HANDLING

3.0 DATA HANDLING

This section documents the ICFS data sources and data characteristics that will be input into the ICFS application.

3.1 Source of Input

This section identifies the input source for all input data. The source documents that capture ICFS input data are as follows:

1. FMS-145 Schedule of Cancelled EFT Items
2. Form-122 Transfer Order – Excess Personal Property
3. Form-123 Transfer Order – Surplus Personal Property
4. Form-123A Transfer Order – Surplus Personal Property (Continuation Sheet)
5. Form-126 Report of Personal Property for Sale
6. Form-126 Report of Personal Property for Sale (Continuation Sheet)
7. Form-26 Award Contract
8. HUD-1012 Travel Voucher Attachment
9. HUD-21005 Supplement to Travel Order and Authorization
10. HUD-21018 Transfer of Personal Property between HUD organizations, Headquarters and Regional Offices
11. HUD-22005 Reimbursable Order for Information Technology (IT) Goods & Services
12. HUD-25012 Time and Attendance Record
13. HUD-27045 Invoice Approval For Contract/Purchasing and Training
14. HUD-55 Transfer of Personal Property between HUD organizations, Headquarters and Regional Offices
15. HUD-10.4 Requisitions for Supplies, equipment, Forms, Publications and Procurement
16. HUD-158 Advice of Allotment
17. HUD-185 Regional Fund Assignment
18. HUD-21018 Report of Property Transactions
19. HUD-25 Official Travel Order
20. HUD-26 Custody Receipt for Government Property on Personal Charge
21. HUD-718 Funds Reservation and Contract Authority
22. HUD-720 Request for Contract Services
23. HUD-730 Award/Modification of Interagency Agreement
24. OF-347 Order for Supplies or Service
25. OFHEO Form 30 Time and Attendance Record
26. SF-1151 Appropriation Transfer Between Agencies
27. SF-1164 Claim for Reimbursement for Expenditures on Official Business
28. SF-1199A Direct Deposit Sign-up Form
29. SF-120 Report of Personal Property
30. SF-120A Continuation Sheet for SF-120
31. SF-132 Apportionment and Reapportionment Schedule
32. SF-182 Request, Authorization, Agreement and Certification of Training

Table 3-1 ICFS Input Data Source Matrix identifies the source from which data elements will be entered.

Table 3-1 ICFS Input Data Source Matrix

| Data Element Name | Source |
|---|--|
| Account Symbol | 23 |
| Accounting Entry Identifier | 11 |
| Accounting Period | 1 |
| Agency Bureau Code | 33 |
| Agency Location Code | 1, 22, 25, 34 |
| Agency Location Description | 1, 25, 30 |
| Agency Name | 1, 2, 3, 4, 28, 29, 30, 31, 32, 33 |
| Agreement Amount | 25 |
| Agreement Number | 11,13, 25 |
| Allocation Code | 4, 5 |
| Allotment Amount | 16, 33 |
| Allotment Holder | All |
| Allotment Line Distribution Available Amount | 16 |
| Amount to be Distributed | 8 |
| Appropriation Available Amount | 33 |
| Appropriation Identifier (internal fund code) | All |
| Approval Action | 15 |
| Approvals | 16, 17, 23, 24, 28, 29, 31, 32 |
| Bank ABA Number | 30 |
| Bank Name | 30 |
| Borrowing Authority | 33 |
| Budget Fiscal Year Indicator | 13 |
| Budget Line Item | 11 |
| Budget Object Code | 1, 8, 15, 21, 29 |
| Budget Organization | 8 |
| Bureau Code | 28, 33 |
| Business Unit | All |
| Change Amount | 16, 23, 25 |
| Check Number or EFT Number | 1 |
| Check Total | 1 |
| Commitment Amount | 23, 25 |
| Contract Authority | 33 |
| Contract Number | 13, 15, 23, 24, 26 |
| Contractor Name | 24 |
| Control Number | 28, 31, 32 |
| Credit Amount | 1 |
| Date Accepted of Goods or Services | 13, 26 |
| Date Delivered of Goods or Services | 13 |
| Date of Cancellation | 1 |
| Date of Change | 16 |
| Date of Signature | 2, 3, 5, 6, 11, 13, 16, 23, 25, 26, 27, 29, 30 |
| Date Payment Made | 1 |
| Date Received | All |
| Delivery Date | 15 |

| Data Element Name | Source |
|---|--|
| Description | 2, 3, 4, 8, 15, 16, 23, 24, 25, 31, 32 |
| Disbursement Schedule Number | 1 |
| Disbursing Office | 1 |
| Discount Amount | 13 |
| Effective Date | 25, 28 |
| EFT Total | 1 |
| Fiscal Year | All |
| Fund Code | All |
| Fund Name | 34 |
| GTR Approving Official Name | 13, 24, 25 |
| GTR Phone Number | 13 |
| Guaranteed Loan Levels – CY | 33 |
| Guaranteed Loan Levels – PY | 33 |
| Inception To Date Reserved Amount | 15 |
| Increase Line D/C | 17 |
| Increase/Decrease Amount | 17, 23 |
| Invoice Amount | 13 |
| Invoice Number | 13, 26 |
| Item description | 11 |
| Line Amount | 11 |
| Mailing City | 3 |
| Mailing State Code | 3 |
| Mailing Vendor Customer Address Line 1 | 15, 21, 29, 24 |
| Obligation Amount | 24, 25 |
| Ordering Contact | 26 |
| Organization | 15, 21, 22, 23, 26 |
| Organization Code | All |
| Outstanding Amount | 1, 23 |
| Paid Amount | 1 |
| Payee Code | 1 |
| POC Telephone Number And Extension | 13, 15, 25, 29, 34 |
| Program | 17, 23 |
| Project Number | 11, 15 |
| Project Start Date/Project End Date | 24 |
| Quantity Ordered | 11 |
| Qtr 1 Apportionment Amount | 33 |
| Qtr 2 Apportionment Amount | 33 |
| Qtr 3 Apportionment Amount | 33 |
| Qtr 4 Apportionment Amount | 33 |
| Quantity Ordered | 2, 15, 26 |
| Quantity Received | 26 |
| Receiving Official's Name | 13 |
| Reporting Category | 3 |
| Requisition Number | 23, 24, 25, 26, 34 |
| Schedule Number | 15, 29 |
| Social Security Number Or Federal Tax ID Number | 8, 12, 21, 29, 34 |

| Data Element Name | Source |
|--|---------------------------------------|
| Start Date | 13 |
| Sub-object Code | All |
| Transaction Amount | All |
| Transaction Date | All |
| Travel Mode | 9 |
| Travel Purpose Code | 8 |
| Treasury Disbursement Tracking Number | 29 |
| Treasury Symbol | 28, 33 |
| User First/Last Name | 8, 23, 29, 31, 34 |
| Vendor Code Main Designation (Vendor Name) | 9, 12, 15, 21, 22, 23, 25, 26, 27, 30 |
| Vendor Contact | 25 |
| Vendor Telephone Number | 22, 30 |
| Voucher Identifier | 29 |

Each of these input sources originate at an organizational level. With the exception of SF-132 Apportionment and Reapportionment Schedule, all import sources are internal to HUD. The SF-132 is the source document that accompanies an iterative process between HUD and OMB to obtain the Department's approved apportionment.

3.2 Medium and Device

3.2.1 Input Medium and Device

A detailed format for the record layout of all input data is described in Appendix A – ICFS Metadata. ICFS data should be able to receive input data via keyboard, file transfers, modems, as well as system interfaces.

3.2.2 Output Medium and Device

Table 3-2 ICFS Interfacing Systems lists the systems that will send files to or receive files from ICFS. These transmissions will take place via automated interfaces. Automated interfaces will transfer data to / from ICFS using the HUD LAN/WAN interfacing server where ICFS data resides.

Note: The SDM Define Stage Project Team will meet with members of the HIFMIP Project Team on Wednesday, August 3, 2005 to finalize details on the disposition of HUD's legacy systems. Meeting results may increase or decrease the number of ICFS system interfaces.

Table 3-2 ICFS Interfacing Systems

| # | From | | | To | | |
|---|-----------|------------------------------|--------------|-----------|---|--------------|
| | System ID | System Name | System Owner | System ID | System Name | System Owner |
| 1 | A35 | HUD Procurement System (HPS) | OCPO | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 2 | TBD | Integrated Core | OCFO | Treasur | Goals | Dept |

| # | From | | | To | | |
|----|-------------|---|--------------|-----------|---|--------------|
| | System ID | System Name | System Owner | System ID | System Name | System Owner |
| | | Financial System (ICFS) | | y | | Treasury |
| 3 | TBD | Integrated Core Financial System (ICFS) | OCFO | A75R | Financial Data Mart (FDM) | OCFO |
| 4 | TBD | Integrated Core Financial System (ICFS) | OCFO | Treasury | Treasury Payment System | Treasury |
| 5 | USDA | National Finance Center (NFC) Payroll | OCFO | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 6 | TBD | Integrated Core Financial System (ICFS) | OCFO | A67 | Line of Credit Control System (LOCCS) | OCFO |
| 7 | TBD | Integrated Core Financial System (ICFS) | OCFO | D65A | Section 8 Budget Outlay Support System (BOSS) | OCFO |
| 8 | TBD | Integrated Core Financial System (ICFS) | OCFO | F24D | Real Estate Management System (REMS) | Housing |
| 9 | TBD | Integrated Core Financial System (ICFS) | OCFO | F87 | Tenant Rental Assistance Certification System (TRACS) | Housing |
| 10 | C04 | Integrated Disbursement and Information System (IDIS) | OCFO | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 11 | D21 | Departmental Accounts Receivable Tracking / Collection System (DARTS) | OCFO | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 12 | Credit Card | Bank One Credit Card | Bank One | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 13 | GNMA | Macola Accounting Software System (MASS) | GNMA | A39 | HUD Financial Central Reporting System (HFCRS) (Hyperion) | OCFO |
| 14 | OFHEO | Financial Information and Management System (FIMS) | OFHEO | A39 | HUD Financial Central Reporting System (HFCRS) (Hyperion) | OCFO |
| 15 | P013 | FHA Subsidiary Ledger | FHA | A39 | HUD Financial Central Reporting System (HFCRS) (Hyperion) | OCFO |

| # | From | | | To | | |
|----|-------------|---|--------------|-----------|---|--------------|
| | System ID | System Name | System Owner | System ID | System Name | System Owner |
| 16 | P035 | Small Purchases System (SPS) | OCFO | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 17 | SATO | Scheduled Airline Transportation Office (SATO) | SATO | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 18 | FedTraveler | Fedtraveler.com (replaces HTMS) | GSA / EDS | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 19 | DoD | Central Contractor Registration (CCR) | DoD | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 20 | D61 | EZ Budget | OCFO | Manual | Integrated Core Financial System (ICFS) | OCFO |
| 21 | Manual | Facilities Integrated Resources Management System (FEMIS) | OCFO | TBD | Integrated Core Financial System (ICFS) | OCFO |
| 22 | H18 | Integrated Automated Travel System (IATS) | OCFO | Manual | Integrated Core Financial System (ICFS) | OCFO |

3.3 Recipients

The ICFS will support all HUD financial functions across the program and administrative areas. In addition, the system will interface with other organizations and systems to exchange data as needed. This section identifies the systems that will interface with ICFS. Each of the systems is described briefly. Following each description is a table that presents data elements for the system that will receive data from ICFS along with the corresponding ICFS data elements. The ICFS entity with which the data element is associated is also provided.

3.3.1 HUD Procurement System (HPS)

The HUD Procurement System (HPS) is a client-server application administered by the Office of the Chief Procurement Officer (OCPO) at HUD Headquarters. HPS automates the contract procurement and acquisition process by recording, monitoring, and reporting the status of all actions throughout the procurement lifecycle. HPS interfaces with HUDCAPS to generate commitment and obligation documents. These documents are validated for funds availability and posted to HUDCAPS GL. This interface must also exist with ICFS. The table below identifies the data elements that will interface between HPS and ICFS.

Table 3-3 HPS / ICFS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Reservation No. | Transaction Identification Number | Requisition / Commitment Summary |
| Request Date | Transaction Date | Requisition / Commitment Summary |
| Accounting Period | Accounting Period | Requisition / Commitment Summary |
| Vendor TIN No. | Taxpayer Identification Number | Vendor/Customer/Grantee |
| Vendor Alternate Code | Vendor Code – Sub Designation | Requisition / Commitment Summary |
| Alternate Payee Code | Vendor Code – Sub Designation | Requisition / Commitment Summary |
| Alternate Payee Alt Code | Vendor Code – Sub Designation | Requisition / Commitment Summary |
| Contract Number | Contract Number | Requisition / Commitment Summary |
| Sent ID | Responsible Person | Requisition / Commitment Summary |
| Sent Date | System Date | Requisition / Commitment Summary |
| Pre-award Header ID | Referenced Transaction Identification Number | Requisition / Commitment Detail |
| FFS Amount | Line Amount | Requisition/Commitment Detail |
| Beginning BFY | Beginning Budget Fiscal Year | Requisition/Commitment Detail |
| Ending BFY | Ending Budget Fiscal Year | Requisition/Commitment Detail |
| Fund Code | Appropriation Identifier | Requisition/Commitment Detail |
| Budget Organization Code | Budget Organization Code | Requisition/Commitment Detail |
| Budget Organization Sub | Sub-Budget Organization Code (hierarchy values to be used for sub-budget organization code) | Requisition/Commitment Detail |
| Cost Org Code | Cost Organization Code | Requisition/Commitment Detail |
| Cost Org Sub | Sub-Cost Organization Code (hierarchy values to be used for sub-cost organization code) | Requisition/Commitment Detail |
| Program | Program | Requisition/Commitment Detail |
| Budget Object Code | Budget Object Code | Requisition/Commitment Detail |
| Budget Object Sub-code | Budget Object Code (hierarchy values to be used for sub-object codes) | Requisition/Commitment Detail |
| Report Category | Reporting Category | Requisition/Commitment Detail |
| Closeout Beginning BFY | Beginning Budget Fiscal Year | Requisition/Commitment Detail |
| Closeout Ending BFY | Ending Budget Fiscal Year | Requisition/Commitment Detail |
| Closeout Fund Code | Appropriation Identifier | Requisition/Commitment Detail |
| Created By | User Identification Number | Requisition/Commitment Detail |
| Created Date | System Date | Requisition/Commitment Detail |
| Obligation No | Transaction Identification Number | Obligation Summary |
| Modification Date | Transaction Date | Obligation Summary |
| Accounting Period | Accounting Period | Obligation Summary |
| Vendor TIN No | Taxpayer Identification Number | Vendor/Customer/Grantee |
| Vendor Alternate Code | Vendor Code – Sub Designation | Obligation Summary |
| Trans Type | Transaction Type | Obligation Summary |
| Alternate Payee Code | Vendor Code – Sub Designation | Obligation Summary |
| Alternate Payee Alt Code | Vendor Code – Sub Designation | Obligation Summary |
| Contract Number | Contract Number | Obligation Summary |
| Sent ID | User Identification Number | Obligation Summary |
| Sent Date | Date Processed | Obligation Summary |
| Created By | User Identification Number | Obligation Summary |
| Created Date | Transaction Date | Obligation Summary |

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Postaward Header ID | Referenced Document Transaction Identifier | Obligation Detail |
| Amount | Line Amount | Obligation Detail |
| Reservation No | Referenced Transaction Identification Number | Obligation Detail |
| Reservation Line No | Referenced Document Transaction Line | Obligation Detail |
| Beginning BFY | Beginning Budget Fiscal Year | Obligation Detail |
| Ending BFY | Ending Budget Fiscal Year | Obligation Detail |
| Fund Code | Appropriation Identifier | Obligation Detail |
| Budget Organization Code | Budget Organization Code | Obligation Detail |
| Budget Organization Sub | Sub-Budget Organization Code (hierarchy values to be used for sub-budget organization code) | Obligation Detail |
| Cost Org Code | Cost Organization Code | Obligation Detail |
| Cost Org Sub | Sub-Cost Organization Code (hierarchy values to be used for sub-cost organization code) | Obligation Detail |
| Program | Program | Obligation Detail |
| Budget Object Code | Budget Object Code | Obligation Detail |
| Budget Object Sub-code | Sub-Budget Object Code (hierarchy values to be used for sub-object codes) | Obligation Detail |
| Report Category | Reporting Category | Obligation Detail |
| Closeout Beginning BFY | Beginning Budget Fiscal Year | Obligation Detail |
| Closeout Ending BFY | Ending Budget Fiscal Year | Obligation Detail |
| Closeout Fund Code | Appropriation Identifier | Obligation Detail |
| P/F Flag | Partial / Final Flag | Obligation Detail |
| Created By | User Identification Number | Obligation Detail |
| Created Date | Date Processed | Obligation Detail |

3.3.2 Government On-line Accounting Link System II (GOALSII)

The Government On-line Accounting Link System II (GOALSII) allows agencies to report and view their financial information provided to Treasury. Treasury's GOALS II application supports the following:

- FACTS I
- FMS 1219/1220 System
- FMS 224 System
- GOALS II/IAS System
- IPAC System

Each of these systems has pre-defined file layouts that HUD must use to comply with each system's reporting requirements. For more details on each system's file formats, please visit the FMS web page at <http://fms.treas.gov/goals/index.html>.

3.3.3 Financial Data Mart (FDM)

The Financial Data mart is a SQL Server database comprised of HUDCAPS table extracts to allow HUD users to view financial data in specific desired report format. The Financial Data Mart currently receives financial information from HUDCAPS nightly. The Financial Data Mart also receives information from PAS, LOCCS, and other systems. The Financial Data Mart must support an ICFS interface that continues to support HUD's ad-hoc reporting requirements. The table below presents the data fields that ICFS will pass to the Financial Data Mart to meet this need.

Table 3-4 ICFS / Financial Data Mart Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--|---|---|
| Accounting Period | Accounting Period | Journal Item |
| Accounting Entry Identifier | Accounting Entry Identifier | Journal Item |
| Account Type | Account Type | Journal Item |
| Allotment Holder | Allotment Holder | Journal Item |
| Appropriation Identifier | Appropriation Identifier | Journal Item |
| Beginning Budget Fiscal Year | Beginning Budget Fiscal Year | Journal Item |
| Budget Object Code | Budget Object Code | Journal Item |
| Budget Organization | Budget Organization | Journal Item |
| Business Unit Indicator | Business Unit Indicator | Journal Item |
| Customer Agreement Number | Customer Agreement Number | Journal Item |
| Date Time Transaction Processed | Date Time Transaction Processed | Journal Item |
| Deposit Number | Deposit Number | Journal Item |
| Disbursing Office | Disbursing Office | Journal Item |
| Disbursing Schedule Information | Disbursing Schedule Information | Journal Item |
| Discount Type | Discount Type | Journal Item |
| Document Action | Document Action | Journal Item |
| Document Description | Document Description | Journal Item |
| Document User Organization | Document User Organization | Journal Item |
| Dollar Amount | Dollar Amount | Journal Item |
| Ending Budget Fiscal Year | Ending Budget Fiscal Year | Journal Item |
| Fiscal Month | Fiscal Month | Journal Item |
| Fiscal Quarter | Fiscal Quarter | Journal Item |
| Fiscal Year | Fiscal Year | Journal Item |
| General Ledger Account | General Ledger Account | Journal Item |
| HUD Project Number | HUD Project Number | Journal Item |
| Interagency Symbol | Interagency Symbol | Journal Item |
| Interest Reason Code | Interest Reason Code | Journal Item |
| Job Number | Job Number | Journal Item |
| Journal Voucher Reversal Indicator | Journal Voucher Reversal Indicator | Journal Item |
| Line Amount | Line Amount | Journal Item |
| Line Description | Line Description | Journal Item |
| Number | Number | Journal Item |
| Program | Program | Journal Item |
| Referenced Document Transaction Identifier | Referenced Document Transaction Identifier | Journal Item |
| Referenced Document Transaction Line | Referenced Document Transaction Line | Journal Item |
| Reporting Category | Reporting Category | Journal Item |

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|---|---|---|
| TFCS Code | TFCS Code | Journal Item |
| Transaction Identification Number | Transaction Identification Number | Journal Item |
| Transaction Identification Number Line Number | Transaction Identification Number Line Number | Journal Item |
| Transaction Type | Transaction Type | Journal Item |
| Transaction Type Identifier | Transaction Type Identifier | Journal Item |
| Treasury Symbol | Treasury Symbol | Journal Item |
| User Identification | User Identification | Journal Item |
| Vendor Code – Main Designation | Vendor Code – Main Designation | Journal Item |
| Vendor Code – Sub Designation | Vendor Code – Sub Designation | Journal Item |
| Vendor Invoice Date | Vendor Invoice Date | Journal Item |
| Vendor Invoice Line | Vendor Invoice Line | Journal Item |
| Vendor Invoice Number | Vendor Invoice Number | Journal Item |
| Vendor Name | Vendor Name | Journal Item |
| Vendor Type | Vendor Type | Journal Item |
| Accounting Entry Identifier | Accounting Entry Identifier | General Ledger Posting Model |
| Automatic Journal Reversal Indicator | Automatic Journal Reversal Indicator | General Ledger Posting Model |
| Budget Object Code | Budget Object Code | General Ledger Posting Model |
| Business Unit Indicator | Business Unit Indicator | General Ledger Posting Model |
| Credit Account | Credit Account | General Ledger Posting Model |
| Debit Account | Debit Account | General Ledger Posting Model |
| Description | Description | General Ledger Posting Model |
| Fiscal Year | Fiscal Year | General Ledger Posting Model |
| Increase Line D/C | Increase Line D/C | General Ledger Posting Model |
| Journal Type Identifier | Journal Type Identifier | General Ledger Posting Model |

3.3.4 Treasury Payment System

Payment requests are initiated in a number of HUD systems, but payment files are submitted to Treasury's payment system via HUDCAPS. ICFS will assume the role in the ICFS Initial Phase. HUD transmits its payment files to Treasury via the electronic SF 1166.

Treasury will issue payment in the form of a check or the more preferred method, of a direct deposit of funds into each customer's bank account. Treasury posts an electronic file confirming payment of the approved schedule in GOALS. JFMIP-compliant, federal software packages are required to capture, track, and maintain all required information to transmit payment files to Treasury. Refer to <http://www.fms.treas.gov/ecs/index.html> for detailed SF 166 payment file layouts.

3.3.5 National Finance Center (NFC) Payroll System

The National Finance Center (NFC) makes salary and wage payments to HUD employees based on Time and Attendance information received via its PC-TARE application. Each week, The NFC transmits payroll transactions and employee information to HUD using an Interactive Output Facility (IOF) "snap" to a remote Transaction Processing (TP) address on the Personal Services Cost Reporting System (PSCRS), a Hitachi mainframe. Essentially, the NFC creates a dataset on the Hitachi mainframe to provide HUD access to the payroll and personnel files. PSCRS processes the transactions and generates reports using the payroll and personnel data. HUD can take this opportunity to create a direct interface between NFC and the ICFS. The table below identifies the data elements that will interface between NFC and ICFS.

Table 3-5 NFC / ICFS Interface Data

| Data Element Requirement | Corresponding Data Elements in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|----------------------------------|---|---|
| Account Class | Account Type | Journal Item |
| Agency | Agency | Vendor/Customer/Grantee |
| Amount | Line Amount | Journal Item |
| Billing Number | Customer Agreement Number | Journal Item |
| Budget Fiscal Year | Budget Fiscal Year | Journal Item |
| Budget Object Code (BOC) | BOC | Journal Item |
| Budget Organization | Budget Organization | Journal Item |
| Collection Code | Bill Type | Accounts Receivable Detail |
| Cost Organization | Cost Organization | Journal Item |
| Current Date | System Date | Journal Item |
| Employee Type | Vendor Type | Vendor/Customer/Grantee |
| Fiscal Month | Fiscal Month | Journal Item |
| Fiscal Year | Fiscal Year | Journal Item |
| Fund | Appropriation Identifier | Journal Item |
| Fund Category | Fund Category | Journal Item |
| Fund Name | Fund Name | Journal Item |
| General Ledger Account Number | General Ledger Account | Journal Item |
| Job Number | Job Number | Journal Item |
| Object Class | Budget Object Code | Disbursement |
| Organization Code | Budget Organization | Journal Item |
| Program | Program | Journal Item |
| Schedule Number | Disbursing Schedule Information | Journal Item |
| Social Security Number | Social Security Number | Vendor/Customer/Grantee |
| Sub-Budget Object Code (Sub-BOC) | Budget Object Code (use hierarchy to break down BOCs) | Journal Item |
| TOPS Code | Disbursing Schedule Information | Journal Item |
| Transaction Category | Transaction Type Identifier | Journal Item |
| Transaction Type | Transaction Type | Journal Item |
| Treasury Symbol | Treasury Symbol | Journal Item |
| Vendor Code | Vendor Code | Journal Item |
| Vendor Type | Vendor Type | Journal Item |

3.3.6 Line of Credit Control System (LOCCS)

LOCCS is an on-line, multi-user disbursement and cash management system. It authorizes payments to a number of different recipients based on payment requests received via telephone or the internet. Examples of some of LOCCS payment recipients include Public Housing Authorities (PHAs), state and local governments, and non-profit organizations. LOCCS controls disbursements for a majority of HUD's loan, grant, and subsidy programs. The table below presents the required interface data between ICFS and LOCCS.

Table 3-6 ICFS / LOCCS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|---------------------------------|--|--|
| Batch Date Created | Date Processed | Payment Request Summary |
| Transaction Type | Transaction Type | Payment Request Summary |
| Contract Type | Contract Type | Payment Request Summary |
| Fiscal Year | Fiscal Year | Payment Request Summary |
| Document Number | Transaction Number | Payment Request Summary |
| Effective Date | Effective Date | Payment Request Summary |
| Fed_Non | Vendor or Customer Type | Vendor/Customer/Grantee |
| Schedule Number | Schedule Number | Payment Request Detail |
| Category A | Reporting Category | Payment Request Detail |
| Allotment Number | Allotment Holder | Payment Request Detail |
| Program Name | Program Name | Payment Request Detail |
| Expense ID (Event Code) | Referenced Document Transaction Identifier | Payment Request Detail |
| Program Code | Program Code | Payment Request Detail |
| Project Number | Project Number | Payment Request Detail |
| Object Class | Budget Object Code | Payment Request Detail |
| Contract Amount | Line Amount | Payment Request Detail |
| Disbursement Amount | Line Amount | Payment Request Detail |
| Appropriation Number | Appropriation Identifier | Payment Request Detail |
| Initial Contract Date | Effective Date | Payment Request Detail |
| Contract Expiration Date | Effective Date | Payment Request Detail |
| Initial Execution Date | Date Processed | Payment Request Detail |

3.3.7 Section 8 Budget Outlay Support System (BOSS)

The Office of Budget (OB) sponsored the development of a budget forecasting tool called the Budget Outlay Support System (BOSS). It was developed to help increase the accuracy and timeliness of budget forecasts for Section 8 program outlays.

BOSS currently receives information from PAS, LOCCS, TRACS and HUDCAPS and uses budget formulation for projecting outlays for Section 8. This is where the actual data for the first year of a three year budget is forecasted. The table below summarizes the data that will be passed to BOSS from ICFS.

Table 3-7 ICFS / BOSS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Transaction Date | System Date | General Ledger Posting Model |
| Document No. | Voucher Identifier | Payment Request Summary |
| Fiscal Year | Fiscal Year | Payment Request Detail |
| Cost Organization | Organization | Payment Request Detail |
| Object Class | Budget Object Code | Payment Request Detail |
| Project Number | HUD Project Number | Payment Request Detail |
| Disbursement Amount | Line Amount | Payment Request Detail |
| Program Code | Program | Payment Request Detail |
| Contract Amount | Line Amount | Payment Request Detail |
| Appropriation Number | Appropriation Identifier | Payment Request Detail |

3.3.8 Real Estate Management System (REMS)

The Real Estate Management System, also known as REMS, records and tracks critical information pertaining to multi-family housing projects. It allows HUD to value and manage its multifamily housing portfolio using one system. REMS interfaces with PAS but a direct interface into HUDCAPS does not exist today. The table below presents the interface data that would be required to support an interface between ICFS and REMS.

Table 3-8 ICFS / REMS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|----------------------------|---|---|
| FHA Number | Transaction Identification Number | Accounts Receivable Bill Summary |
| Process Month / Year | Accounting Period | Accounts Receivable Bill Summary |
| Responsible Mortgagee | Vendor Code – Main Designation | Accounts Receivable Bill Summary |
| Original Receivable Amount | Total Amount | Accounts Receivable Bill Summary |
| Due Date | Invoice Due Date | Accounts Receivable Bill Summary |
| Line Number | Transaction Identification Line Number | Accounts Receivable Bill Detail |
| Fiscal Year | Fiscal Year | Accounts Receivable Bill Detail |
| Fund Code | Appropriation Identifier | Accounts Receivable Bill Detail |
| Cost Organization | Cost Organization | Accounts Receivable Bill Detail |
| Object Class | Budget Object Code | Accounts Receivable Bill Detail |
| Project Number | HUD Project Number | Accounts Receivable Bill Detail |
| Amount | Line Amount | Accounts Receivable Bill Detail |
| Program Code | Program | Accounts Receivable Bill Detail |

3.3.9 Tenant Rental Assistance Certification System (TRACS)

Determination of tenant eligibility and calculation of the subsidy amounts is processed in Tenant Rental Assistance Certification System (TRACS). The Office of Housing (OH) provides subsidy programs that support low income tenants with affordable housing through subsidized rents.

Table 3-9 ICFS / TRACS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Source Grantee ID | Vendor Code – Main Designation | Requisition/Commitment Summary |
| Transaction Date | System Date | General Ledger Posting Models |
| Document Number | Transaction Identification Number | Requisition/Commitment Summary |
| Source Type | Transaction Type Identifier | Requisition/Commitment Summary |
| Recipient Grantee ID | Vendor Code – Main Designation | Requisition/Commitment Summary |
| Fund Type | Appropriation Identifier | Requisition/Commitment Detail |
| Fiscal Year | Fiscal Year | Requisition/Commitment Detail |
| Program Code | Program Code | Requisition/Commitment Detail |
| Grant Number | Project Number | Requisition/Commitment Detail |
| Authorized Amount | Assignment to Organization Amount | Assignment to Organization – Level 6 |
| Sub-Allocation Amount | Commitment Amount | Requisition/Commitment Detail |
| Source Grantee ID | Vendor Code – Main Designation | Obligation Summary |
| Document Number | Transaction Identification Number | Obligation Summary |
| Source Type | Transaction Type Identifier | Obligation Summary |
| Recipient Grantee ID | Vendor Code – Main Designation | Obligation Summary |
| Fund Type | Appropriation Identifier | Obligation Detail |
| Fiscal Year | Fiscal Year | Obligation Detail |
| Program Code | Program Code | Obligation Detail |
| Grant Number | Project Number | Obligation Detail |
| Sub-Allocation Amount | Commitment Amount | Obligation Detail |
| Contract Amount | Line Amount | Obligation Detail |
| Actual Committed Amount | Obligation Amount | Obligation Detail |

3.3.10 Integrated Disbursement and Information System (IDIS)

IDIS supports CPD's consolidated planning, disbursement, and reporting requirements for the entitlement grant programs (HOME, CDBG, ESG, and HOPWA) and simplifies the grants management process for all participants. The table below presents the interface data required to support an interface between ICFS and IDIS.

Table 3-10 ICFS / IDIS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Source Grantee ID | Vendor Code – Main Designation | Requisition/Commitment Summary |
| Transaction Date | System Date | General Ledger Posting Models |
| Document Number | Transaction Identification Number | Requisition/Commitment Summary |
| Source Type | Transaction Type Identifier | Requisition/Commitment Summary |
| Recipient Grantee ID | Vendor Code – Main Designation | Requisition/Commitment Summary |
| Fund Type | Appropriation Identifier | Requisition/Commitment Detail |
| Fiscal Year | Fiscal Year | Requisition/Commitment Detail |
| Program Code | Program Code | Requisition/Commitment Detail |
| Grant Number | Project Number | Requisition/Commitment Detail |
| Authorized Amount | Assignment to Organization Amount | Assignment to Organization – Level 6 |
| Sub-Allocation Amount | Commitment Amount | Requisition/Commitment Detail |

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Source Grantee ID | Vendor Code – Main Designation | Obligation Summary |
| Document Number | Transaction Identification Number | Obligation Summary |
| Source Type | Transaction Type Identifier | Obligation Summary |
| Recipient Grantee ID | Vendor Code – Main Designation | Obligation Summary |
| Fund Type | Appropriation Identifier | Obligation Detail |
| Fiscal Year | Fiscal Year | Obligation Detail |
| Program Code | Program Code | Obligation Detail |
| Grant Number | Project Number | Obligation Detail |
| Sub-Allocation Amount | Commitment Amount | Obligation Detail |
| Contract Amount | Line Amount | Obligation Detail |
| Actual Committed Amount | Obligation Amount | Obligation Detail |
| Source Grantee ID | Vendor Code – Main Designation | Payment Request Summary |
| Document Number | Transaction Identification Number | Payment Request Summary |
| Source Type | Transaction Type Identifier | Payment Request Summary |
| Recipient Grantee ID | Vendor Code – Main Designation | Payment Request Summary |
| Fund Type | Appropriation Identifier | Payment Request Detail |
| Fiscal Year | Fiscal Year | Payment Request Detail |
| Program Code | Program Code | Payment Request Detail |
| Grant Number | Project Number | Payment Request Detail |
| Contract Amount | Line Amount | Payment Request Detail |
| Actual Committed Amount | Obligation Amount | Payment Request Detail |

3.3.11 Departmental Accounts Receivable Tracking System (DARTS)

DARTS establishes, tracks, and collects account receivable information for residual receipts, excess financing, and miscellaneous payments for the PHAs/Indian Housing Authorities and Section 236 program receivables for Multi-Family Excess Rental Income.

Table 3-11 ICFS / DARTS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|----------------------------|---|---|
| FHA Number | Transaction Identification Number | Accounts Receivable Bill Summary |
| Process Month / Year | Accounting Period | Accounts Receivable Bill Summary |
| Responsible Mortgagee | Vendor Code – Main Designation | Accounts Receivable Bill Summary |
| Original Receivable Amount | Total Amount | Accounts Receivable Bill Summary |
| Due Date | Invoice Due Date | Accounts Receivable Bill Summary |
| Line Number | Transaction Identification Line Number | Accounts Receivable Bill Detail |
| Fiscal Year | Fiscal Year | Accounts Receivable Bill Detail |
| Fund Code | Appropriation Identifier | Accounts Receivable Bill Detail |
| Cost Organization | Cost Organization | Accounts Receivable Bill Detail |
| Object Class | Budget Object Code | Accounts Receivable Bill Detail |
| Project Number | HUD Project Number | Accounts Receivable Bill Detail |
| Amount | Line Amount | Accounts Receivable Bill Detail |
| Program Code | Program | Accounts Receivable Bill Detail |

3.3.12 Bankcard Processing

The Government wide Commercial Purchase Card uses a standard commercial card to streamline the purchase of supplies, equipment, and services up to \$2,500.00. The Office of Administrative and Management Services in the Office of the Secretary for Administration (ADMN) is responsible for administering the Government wide Commercial Purchase Card Program in HUD.

The HUDCAPS bankcard payment process requires purchase card payment transactions through the Chase interface. The Chase interface transmits credit card data on a monthly basis from Chase to HUDCAPS. The interface records the purchase card expenditures and generates the automated payments for each monthly bill. Expenditure documents are generated and processed for each cardholder's approved VISA transactions. The interface also provides an on-line table for supplying required accounting elements for each VISA transaction as well as a reference document. ICFS must support this interface as well. The table below identifies the data elements that will interface between the Bankcard process and ICFS.

Table 3-12 ICFS / Bankcard Processing Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Journal Voucher | Journal Type Identifier | General Ledger Posting Model |
| Region | Business Unit Indicator | Purchase/Travel Card Summary |
| Date (Statement) | Statement Date | Purchase/Travel Card Summary |
| Total Invoice Amount | Invoice Approved Amount | Purchase/Travel Card Summary |
| Receipt Date | Date Invoice Logged at HUD | Payment Request Summary |
| Invoice Date | Invoice Date | Payment Request Summary |
| BFYs | Fiscal Year | Purchase/Travel Card Detail |
| Fund | Appropriation Identifier | Purchase/Travel Card Detail |
| Amount | Original Invoice Amount | Purchase/Travel Card Detail |
| Total PCARD Approved | Invoice Approved Amount | Purchase/Travel Card Detail |
| Total PCARD Payment | Total Payments Generated Amount | Purchase/Travel Card Detail |
| PCARD Line Number | Transaction Identification Number Line Number | Purchase/Travel Card Detail |
| Invoice Number | Transaction Identification Number | Purchase/Travel Card Detail |
| Account Number | Purchase Card Account Number | Purchase/Travel Card Detail |

3.3.13 Other HUD Business Areas

FHA, Ginnie Mae, and OFHEO will provide reporting information only during the initial stage. To ensure continuity of HUD's current financial system modernization projects, FHA, Ginnie Mae and OFHEO will temporarily interface with the new ICFS for preparing the consolidated financial reports. As HUD transitions to a single core financial system and all four organizations have completed their financial system modernization projects, HUD will then determine the integration options that are available, and are cost-effective, efficient and support HUD's business process.

FHA Subsidiary Ledger (FHA-SL) captures and reports FHA's financial transactions in a manner consistent with industry-specific federal rules and regulations. MASS maintains the General Ledger for Ginnie Mae and performs accounting functions for Ginnie Mae. Similar to FHA-SL, FIMS captures and reports OFHEO's financial transactions in a manner consistent with industry-specific federal rules and regulations and is instrumental in OFHEO's oversight responsibilities.

The table below presents the data elements that must be captured in the interface from FHA-SL, MASS, and FIMS in order for HUD to accurately produce its consolidated financial statements and other external reports.

Table 3-13 ICFS / Other HUD Business Areas Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|-------------------------------------|---|---|
| Accounting Period | Accounting Period | Journal Item |
| Business Unit Indicator | Business Unit Indicator | Journal Item |
| Fiscal Year | Fiscal Year | Journal Item |
| Department Code | Department Code | Journal Item |
| Bureau Code | Bureau Code | Fund Reference Information |
| Fund Group | Fund Group | Journal Item |
| SGL Account Number | SGL Account Number | Journal Item |
| Federal / Nonfederal Attribute | Vendor or Customer Type | Vendor/Customer/Grantee |
| Federal Trading Partner | Trading Partner | Journal Item |
| Debit / Credit Indicator | Debit / Credit Indicator | Journal Item |
| Dollar Amount | Dollar Amount | Journal Item |
| Exchange / Non-exchange Attribute | Exchange / Non-exchange | Journal Item |
| Budget Sub-function | Budget Sub-function | Journal Item |
| Custodial / Non-custodial Attribute | Custodial / Non-custodial | Journal Item |
| Advance Flag | Advance Flag | Journal Item |
| Apportionment Category | Budget Category A or B | Fund Reference Information |
| Authority Type | Fund Type | Fund Reference Information |
| Availability Time | Availability Time | Journal Item |
| BEA Category Indicator | BEA Category Indicator | Journal Item |
| Borrowing Source | Borrowing Source | Journal Item |
| Deficiency Flag | Deficiency Flag | Journal Item |
| Definite/Indefinite Flag | Definite/Indefinite Flag | Journal Item |
| Function | Function | Journal Item |
| Reimbursable Flag | Reimbursable Flag | Journal Item |
| TAFS Status | TAFS Status | Journal Item |
| Transaction Partner | Transaction Partner | Journal Item |
| Transfer To/From | Transfer To/From | Journal Item |
| Year of Budget Authority | Year of Budget Authority | Journal Item |
| Public Law Code | Public Law Number | Journal Item |
| Program Reporting Category | Program Reporting Category | Journal Item |

3.3.14 Small Purchase System (SPS)

The HUD Procurement System (HPS) Small Purchase System (SPS) records all commitments and obligations via a manual input, of all purchase documentation for purchases of \$100,000.00 or less throughout the procurement lifecycle. The table below identifies the data elements that will interface between SPS and ICFS.

Table 3-14 ICFS / SPS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Reservation No. | Transaction Identification Number | Requisition / Commitment Summary |
| Request Date | Transaction Date | Requisition / Commitment Summary |
| Accounting Period | Accounting Period | Requisition / Commitment Summary |
| Vendor TIN No. | Taxpayer Identification Number | Vendor/Customer/Grantee |
| Vendor Alternate Code | Vendor Code – Sub Designation | Requisition / Commitment Summary |
| Alternate Payee Code | Vendor Code – Sub Designation | Requisition / Commitment Summary |
| Alternate Payee Alt Code | Vendor Code – Sub Designation | Requisition / Commitment Summary |
| Contract Number | Contract Number | Requisition / Commitment Summary |
| Sent ID | Responsible Person | Requisition / Commitment Summary |
| Sent Date | System Date | Requisition / Commitment Summary |
| Pre-award Header ID | Referenced Transaction Identification Number | Requisition / Commitment Detail |
| FFS Amount | Line Amount | Requisition/Commitment Detail |
| Beginning BFY | Beginning Budget Fiscal Year | Requisition/Commitment Detail |
| Ending BFY | Ending Budget Fiscal Year | Requisition/Commitment Detail |
| Fund Code | Appropriation Identifier | Requisition/Commitment Detail |
| Budget Organization Code | Budget Organization Code | Requisition/Commitment Detail |
| Budget Organization Sub | Sub-Budget Organization Code (hierarchy values to be used for sub-budget organization code) | Requisition/Commitment Detail |
| Cost Org Code | Cost Organization Code | Requisition/Commitment Detail |
| Cost Org Sub | Sub-Cost Organization Code (hierarchy values to be used for sub-cost organization code) | Requisition/Commitment Detail |
| Program | Program | Requisition/Commitment Detail |
| Budget Object Code | Budget Object Code | Requisition/Commitment Detail |
| Budget Object Sub-code | Budget Object Code (hierarchy values to be used for sub-object codes) | Requisition/Commitment Detail |
| Report Category | Reporting Category | Requisition/Commitment Detail |
| Closeout Beginning BFY | Beginning Budget Fiscal Year | Requisition/Commitment Detail |
| Closeout Ending BFY | Ending Budget Fiscal Year | Requisition/Commitment Detail |
| Closeout Fund Code | Appropriation Identifier | Requisition/Commitment Detail |
| Created By | User Identification Number | Requisition/Commitment Detail |
| Created Date | System Date | Requisition/Commitment Detail |
| Obligation No | Transaction Identification Number | Obligation Summary |
| Modification Date | Transaction Date | Obligation Summary |
| Accounting Period | Accounting Period | Obligation Summary |
| Vendor TIN No | Taxpayer Identification Number | Vendor/Customer/Grantee |
| Vendor Alternate Code | Vendor Code – Sub Designation | Obligation Summary |
| Trans Type | Transaction Type | Obligation Summary |
| Alternate Payee Code | Vendor Code – Sub Designation | Obligation Summary |
| Alternate Payee Alt Code | Vendor Code – Sub Designation | Obligation Summary |
| Contract Number | Contract Number | Obligation Summary |
| Sent ID | User Identification Number | Obligation Summary |
| Sent Date | Date Processed | Obligation Summary |
| Created By | User Identification Number | Obligation Summary |
| Created Date | Transaction Date | Obligation Summary |

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Postaward Header ID | Referenced Document Transaction Identifier | Obligation Detail |
| Amount | Line Amount | Obligation Detail |
| Reservation No | Referenced Transaction Identification Number | Obligation Detail |
| Reservation Line No | Referenced Document Transaction Line | Obligation Detail |
| Beginning BFY | Beginning Budget Fiscal Year | Obligation Detail |
| Ending BFY | Ending Budget Fiscal Year | Obligation Detail |
| Fund Code | Appropriation Identifier | Obligation Detail |
| Budget Organization Code | Budget Organization Code | Obligation Detail |
| Budget Organization Sub | Sub-Budget Organization Code (hierarchy values to be used for sub-budget organization code) | Obligation Detail |
| Cost Org Code | Cost Organization Code | Obligation Detail |
| Cost Org Sub | Sub-Cost Organization Code (hierarchy values to be used for sub-cost organization code) | Obligation Detail |
| Program | Program | Obligation Detail |
| Budget Object Code | Budget Object Code | Obligation Detail |
| Budget Object Sub-code | Sub-Budget Object Code (hierarchy values to be used for sub-object codes) | Obligation Detail |
| Report Category | Reporting Category | Obligation Detail |
| Closeout Beginning BFY | Beginning Budget Fiscal Year | Obligation Detail |
| Closeout Ending BFY | Ending Budget Fiscal Year | Obligation Detail |
| Closeout Fund Code | Appropriation Identifier | Obligation Detail |
| P/F Flag | Partial / Final Flag | Obligation Detail |
| Created By | User Identification Number | Obligation Detail |
| Created Date | Date Processed | Obligation Detail |

3.3.15 eTravel / HUD Travel Management System (HTMS)

The HUD Travel Management System provides automated entry and routing of travel requests and vouchers. Travelers create a travel authorization request at their workstation PC. The table below identifies the data elements that will interface between HTMS and ICFS.

Table 3-15 ICFS / HTMS Interface Data

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Canonical ID | Journal Type Identifier | General Ledger Posting Models |
| Accounting Label | Accounting Entry Identifier | General Ledger Posting Models |
| Social Security Number | Social Security Number | Vendor/Customer/Grantee |
| Document Number | Transaction Identification Number | Obligation Summary |
| Total Amount | Total Amount | Obligation Summary |
| Expense Category | Budget Object Code | Obligation Detail |
| Document Name / Category | Description | Obligation Detail |
| Line Type | Transaction Identification Type | Obligation Detail |
| Line Amount | Line Amount | Obligation Detail |

| Data Element Requirement | Corresponding Data Element/s in Proposed ICFS | Associated Entity Name in Proposed ICFS |
|--------------------------|---|---|
| Document Type | Transaction Type | Obligation Detail |
| Line Number | Transaction Identification Line Number | Obligation Detail |
| Social Security Number | Social Security Number | Vendor/Customer/Grantee |
| Document Number | Transaction Identification Number | Payment Request Summary |
| Expense Category | Budget Object Code | Payment Request Detail |
| Document Name / Category | Description | Payment Request Detail |
| Line Type | Transaction Identification Type | Payment Request Detail |
| Line Amount | Line Amount | Payment Request Detail |
| Document Type | Transaction Type | Payment Request Detail |
| Line Number | Transaction Identification Line Number | Payment Request Detail |

3.3.16 Central Contractor Registration (CCR)

HUD maintains daily updates of the Central Contractor Registration (CCR) database in the Financial Data Mart. In addition to procurement information, CCR contains EFT information that facilitates the generation of electronic vendor payments. The OCFO provides different views of CCR data to various HUD organizations to support procurement and payment functions.

To obtain the FY2004 JFMIP certification, a federal COTS application was required to capture and maintain the CCR data elements and definitions used to facilitate an information exchange and to maintain current information on the vendors with which an agency conducts business. As a result, a separate interface is not required since HUD will be acquiring a JFMIP-compliant application.

3.3.17 EZ Budget (EZB)

EZ Budget is a stand-alone, client/server-based application that automates much of the manually intensive portion of the budget submission process. It provides a streamlined and systematic approach to budget formulation for individual HUD Programs, HUD Salaries and Expenses (S&E), and jointly administered programs.

According to the *Budget Formulation System (EZ Budget)*, *EZB-5.0-FRD-1.0 Functional Requirements Document*, there are two types of budget information: (1) narrative, which includes text information and budget estimates and (2) spreadsheet, type cells of numeric financial information. EZ Budget facilitates the input, display, modification, and output of each data type throughout the budget cycle. However, there are no interfaces between EZ Budget and other systems. It is unlikely that an automated interface will exist between EZ Budget and ICFS.

3.3.18 Facilities Integrated Resources Management System (FEMIS)

FEMIS is a decentralized system that identifies and tracks personal property by item. FEMIS incorporates bar code technology which partially automates the physical inventory and reconciliation processes. Currently, FEMIS is used to calculate depreciation amounts for HUD furniture and equipment. This information is then manually entered into HUDCAPS. There is currently a manual interface between FEMIS and HUDCAPS. It is unlikely that an automated interface will exist between FEMIS and ICFS.

3.3.19 Integrated Automated Travel System (IATS)

The Integrated Automated Travel System (IATS) is a stand-alone system used to calculate federal, FICA and Medicare taxes. These taxes are withheld from each relocation voucher. The calculated payment and tax amounts would then be recorded in ICFS. The taxes recorded in ICFS as being collected from the employee's payments are then paid to IRS on a monthly basis. There is currently a manual interface between IATS and HUDCAPS. It is unlikely that an automated interface will exist between IATS and ICFS.

Note: The SDM Define Stage Project Team will meet with members of the HIFMIP Project Team on Wednesday, August 3, 2005 to finalize details on the disposition of HUD's legacy systems. Meeting results may increase or decrease the number of ICFS interface systems.

3.4 Data Collection Procedures

ICFS users will employ various data collection procedures ranging from manual inputs by HUD employees to automated data collection from interface files. Manual inputs will be accomplished using the source documents identified in section 3.1 Source of Input and other manual calculations that are carried out in HUD's stand-alone systems. For example, the relocation tax estimates calculated by IATS would be manually entered into ICFS.

Record formats for automated data collection procedures are detailed in section 3.3 Recipients.

3.5 User Access

Table 3-16 ICFS User Access lists the ICFS user types and the corresponding create, read, update, and delete permissions for ICFS data.

Table 3-16 ICFS User Access

| User Type | Permission |
|----------------|--|
| Administrator | Create, Update, Delete, Approve, Change Profiles and Access Privileges |
| Supervisor | Create, Update, Delete, Approve |
| Data Entry | Create, Update, Delete |
| Query | Read-only |
| Create reports | Unlimited Read-only |

3.6 Error Handling

The ICFS should provide internal database consistency during all online and batch update operation. It should not allow insufficient, incomplete or inaccurate data to be entered into the system. In the event of a system failure, ICFS must be able to perform the following functions:

- Back out transactions that did not successfully update the database.
- Restore the system to its last consistent state before the failure occurred.
- Re-apply all incomplete transactions previously submitted by the user.

- Validate internal database consistency to ensure duplicate postings are avoided.
- Report any data or transactions that failed to process.

ICFS will make use of common error-handling routines across its functional modules and present meaningful and traceable error messages that allow the user or system operator to respond to reported problems. In the case of online data entry, the application should apply specific field level edit criteria and database validation where possible to insure accurate data entry. Any errors identified during online data entry should result in 'real time' user notification of the reason for online edit errors and whether it is a rejection, warning or for information only.

The ICFS must also support functionality to suspend erroneous interface transactions until corrected and processed by an authorized user. Suspense processing must include the ability to perform the following functions:

- Report suspended transactions.
- Retrieve, view, correct and process, or cancel suspended transactions.
- Re-process suspended transactions.
- Report re-processed transactions.

For the API, generate transaction editing error records in a standard format, defined by the vendor, for return to the originating feeder application (i.e., provide two-way interface support).

ICFS system administrators may find it useful to have the ability to customize common error message text. This feature permits the use of customer-preferred terminology.

3.7 Data Responsibilities

The Financial Event Information Flow Diagrams and Discussion describes HUD's basic financial flows and the associated users and offices for each type of financial event. The basic user classes defined in the Financial Event discussion are summarized in Table 3-17¹.

Table 3-17 HUD User Classes

| User Class | Internal (I)/ External (E) | Financial Processes |
|--|-------------------------------|---|
| Central Paying and Transfer Agent (CPTA) | E | Ginnie Mae Mortgage Backed Securities (MBS) |
| Contract Administrator | E | Subsidy (Rental Assistance) |
| Customers | E | Receivables |
| Document Custodian | E | Ginnie Mae Mortgage Backed Securities (MBS) |
| Grantee | E | Grants |
| Issuer | E | Ginnie Mae Mortgage Backed Securities (MBS) |
| Lender | E | Asset Management |
| Lockbox | E | Receivables |

¹ Calibre, *Financial Event Information Flow Diagrams and Discussion Paper*, November 25, 2003, Sections 3 through 7.

| User Class | Internal (I)/ External (E) | Financial Processes |
|---|-------------------------------|---|
| Mortgage Lender | E | Ginnie Mae Mortgage Backed Securities (MBS) |
| NFC | E | Payroll |
| OMB | E | Budget Formulation |
| Owner/Agent | E | Subsidy (Rental Assistance) |
| Pool Processing Agent (PPA) | E | Ginnie Mae Mortgage Backed Securities (MBS) |
| SATO | E | Transportation |
| Treasury | E | HUDCAPS Expenditures Cash Reconciliation FHA SF 224 Reporting FHA FACTS I and FACTS II Reporting Ginnie Mae FACTS I and FACTS II Reporting Ginnie Mae SF 224 Reporting HUD SF 1151 Reporting HUD FACTS I and FACTS II Reporting HUD SF 224 Reporting LOCCS Expenditures Receivables |
| Accountable Property Officer (APO) | I | Personal Property Disposition |
| Accounting Staff | I | LOCCS Expenditures |
| Approval Chain | I | Travel |
| Approving Official | I | Bankcard |
| Asst. CFO Accounting | I | Budget Execution |
| Asst. CFO Budget/OCFO | I | Budget Execution |
| Authorized Offices | I | Budget Execution |
| Authorized Procurement Users | I | Purchasing |
| Budget/OCFO | I | Working Capital Fund (WCF) |
| Chief Financial Officer Accounting Center (CFOAC) | I | Transportation Bankcard Ginnie Mae FACTS I and FACTS II Reporting HUD SF 1151, FACTS I and FACTS II Reporting HUDCAPS Expenditures Purchasing Relocation |
| Contracting Office | I | Purchasing |
| Decision-makers | I | Budget Formulation |
| Disbursement Official | I | LOCCS Expenditures |
| Employee | I | Payroll |

| User Class | Internal (I)/ External (E) | Financial Processes |
|--|-------------------------------|---|
| | | Personal Property Acquisition |
| FHA | I | FHA SF 224 Reporting |
| FHA – Office of Controller | I | FHA SF 224 Reporting |
| FHA Accounting Staff | I | Receivables Asset Management Real Estate Management Real Estate Sales |
| FHA Field Office Staff | I | Real Estate Sales |
| FHA Program Staff | I | Asset Management Real Estate Management |
| Final Approving Authority | I | Travel |
| FMC Staff | I | HUDCAPS Expenditures |
| Ginnie Mae Controller's Office | I | Ginnie Mae SF 224 Reporting |
| | | Ginnie Mae FACTS I and FACTS II Reporting |
| FHA Program Staff | | Real Estate Management |
| Government Technical Manager (GTM) | I | HUDCAPS Expenditures |
| Government Technical Representative (GTR) | I | Grants HUDCAPS Expenditures LOCCS Expenditures |
| Housing Authority | I | HUDCAPS Expenditures LOCCS Expenditures |
| HUD Bankcard Holder | I | Bankcard |
| HUD Operating Organizations | I | Budget Formulation Budget Execution Grants |
| Office of the Chief Financial Officer (OCFO) | I | Budget Formulation Budget Execution Cash Reconciliation De-obligations Grants HUD SF 1151 Reporting FACTS I and FACTS II Reporting HUD SF 224 Reporting HUDCAPS Expenditures LOCCS Expenditures Payroll Transportation |

| User Class | Internal (I)/ External (E) | Financial Processes |
|-----------------------------|---------------------------------------|--|
| Payment Certifying Official | I | LOCCS Expenditures |
| Program Manager | I | De-obligations |
| Supervisor | I | Payroll Personal Property Acquisition |
| Timekeeper | I | Payroll |
| Traveler | I | Travel Transportation |

A summary of user class interaction by financial process area is included in Table 3-18 below. Existing HUD financial systems, general user interaction with each of these systems, and the interaction of systems and user classes with each other are documented in the HUD Financial Systems Flow Chart² and the HUD Financial Systems Flow Chart Discussion Paper.³

Table 3-18 Interaction of User Classes by Financial Process Area

| Financial Process Area | Interacting User Classes |
|-------------------------------|--|
| Budget Formulation | <ul style="list-style-type: none"> • OMB • HUD Decision-makers • OCFO • HUD Operating Organizations |
| Budget Execution | <ul style="list-style-type: none"> • HUD Operating Organizations • OCFO • Asst. CFO Budget/OCFO • Asst. CFO Accounting • Authorized Offices |
| Working Capital Fund | <ul style="list-style-type: none"> • Budget/OCFO |
| Payroll | <ul style="list-style-type: none"> • Timekeeper • Employee • Supervisor • NFC • OCFO |
| Travel | <ul style="list-style-type: none"> • Traveler • Approval Chain • Final Approving Authority |
| Transportation | <ul style="list-style-type: none"> • Traveler • SATO • OCFO • CFOAC |
| Relocation | <ul style="list-style-type: none"> • CFOAC |
| Bankcard | <ul style="list-style-type: none"> • HUD Bankcard Holder • CFOAC • Approving Official |
| Purchasing | <ul style="list-style-type: none"> • Contracting Office • CFOAC • Authorized Procurement Users • Contracting Officer |

² Calibre, *HUD Financial Systems Flowchart*, September 4, 2003.

³ Calibre, *HUD Financial Systems Flowchart Discussion Paper*, November 25, 2003.

| Financial Process Area | Interacting User Classes |
|---------------------------------|--|
| Grants | <ul style="list-style-type: none"> • Organization • GTR • Grantee • OCFO |
| Subsidy (Rental Assistance) | <ul style="list-style-type: none"> • Owner/Agent • Contract Administrator • OCFO |
| De-obligations | <ul style="list-style-type: none"> • OCFO • Program Manager |
| HUDCAPS Expenditures | <ul style="list-style-type: none"> • CFOAC • GTR • GTM • Housing Authority • FMC Staff • OCFO • Treasury |
| LOCCS Expenditures | <ul style="list-style-type: none"> • OCFO • Payment Certifying Officials • Disbursement Officials • GTR • Accounting Staff • Treasury • Business Partners |
| HUD Receivables | <ul style="list-style-type: none"> • Lockbox (including LOCCS) • Treasury • FHA Accounting |
| Cash Reconciliation | <ul style="list-style-type: none"> • Treasury • OCFO • FHA Accounting |
| Loan Guarantees | <ul style="list-style-type: none"> • Program Staff • Lender • Accounting Staff |
| GNAM Mortgage Backed Securities | <ul style="list-style-type: none"> • Mortgage Lender • Document Custodian • Pool Processing Agent • Central Paying and Transfer Agent • Issuer |

| Financial Process Area | Interacting User Classes |
|---|---|
| Real Estate Acquisition | <ul style="list-style-type: none"> • FHA Program Staff • FHA Accounting Staff |
| Real Estate Sales | <ul style="list-style-type: none"> • FHA Accounting Staff • FHA Field Office Staff |
| Personal Property Acquisition | <ul style="list-style-type: none"> • Employee • Supervisor |
| Personal Property Disposition | <ul style="list-style-type: none"> • Accountable Property Officer (APO) |
| HUD SF 224 Statement of Transactions | <ul style="list-style-type: none"> • OCFO • OCFOAC • Treasury |
| FHA SF 224 Statement of Transactions | <ul style="list-style-type: none"> • Treasury • FHA • FHA – Office of the Controller |
| Ginnie Mae SF 224 Statement of Transactions | <ul style="list-style-type: none"> • Controller’s Office • Treasury |
| HUD SF 1151, FACTS I & II Reporting | <ul style="list-style-type: none"> • Treasury • OCFO • CFOAC |
| FHA FACTS I & II Reporting | <ul style="list-style-type: none"> • FHA – Office of the Controller • Treasury |
| Ginnie Mae FACTS I & II Reporting | <ul style="list-style-type: none"> • Treasury • Controller’s Office |

3.8 Security

ICFS is a major integrated financial system for the Department of Housing and Urban Development. With full implementation, core financial functions plus interface processing with eTravel, Treasury, payroll, FHA Subsidiary Ledger(s), Ginnie Mae subsidiary ledger, OFHEO’s subsidiary ledger, and program systems will be stored within. ICFS data will be in use by HUD offices for: planning and managing program activities, evaluating program performance, and depicting financial trends and requirements. The sensitivity level of the system and of the information stored within, processed by, or transmitted by the system reflects the value of the system to the organization and has been used as the basis for implementing the necessary IT security controls for ICFS.

All HUD information can be divided into two main categories: (1) Public; and, (2) Sensitive. Public information is information that has been declared public knowledge by someone with the authority to do so, and can freely be given to anyone without any possible damage to HUD. Sensitive information contains all other non-public information.

Federal IT security standards define the following three basic protection requirements in order to determine the information sensitivity:

1. **Confidentiality** – Protection from unauthorized disclosure
2. **Integrity** – Protection from unauthorized, unanticipated, or unintentional modification
 - a. Non-repudiation – Verification of the origin or receipt of a message
 - b. Authenticity – Verification that the content of a message has not changed in transit
3. **Availability** – Available on a timely basis to meet mission requirements or to avoid substantial losses.

Sensitive information is also categorized by levels to include High (for the most sensitive), Medium, and Low (for the least sensitive). Sensitive data that is classified as ‘high’ must be protected in a more secure manner than data with a ‘low’ rating. For example, data protected by the Privacy Act, acquisition actions, and budget information qualifies as highly sensitive data. Security controls must be implemented and tested commensurate with the data sensitivity level.

The core financial system will contain highly sensitive information in all categories. This includes financial data, limited personnel data, vendor/customer data, and control data. It will also contain confidential data concerning Internal Revenue Service 1099 tax records. The sensitivity and criticality of the information stored within, processed, or transmitted by a system is a major factor in risk management. It will be important to address security requirements effectively while the system is being developed.

The ICFS will be based on a JFMIP-certified financial system. For this reason, the system should meet the following JFMIP security requirements as they are also required by HUD.

- Have integrated security features that are configurable by the system administrator to control access to the application, functional modules, transactions, and data. The application’s integrated security features should be compliant with the National Institute of Standards and Technology (NIST) Security Standards.
- Ensure that the agency’s access policies are consistently enforced against all attempts made by users or other integrated system resources including software used to submit ad-hoc data query requests or to generate standard reports.
- Require the use of unique user identifications and passwords for authentication purposes. Passwords must be non-printing and non-displaying. The application must allow the enforcement of password standards (e.g., minimum length and use of alpha, numeric and special characters.) The application must also allow for the establishment of a specified period for password expiration and accommodate prohibiting the user from reusing recent passwords.
- Enable the system administrator to define functional access rights (e.g., to modules, transactions, approval authorities) and data access rights (e.g., record, create, read, update and delete) by assigned user ID, functional role (e.g., payable technician) and owner organization.
- Permit the system administrator to assign multiple levels of approval to a single user, but prevent that user from applying more than one level of approval to a given document in order to conform to the principle of separation of duties.
- Allow the system administrator to restrict access to sensitive data elements such as social security numbers and banking information by named user, groups of users, or functional role.
- Maintain an audit logging capability to record access activity including:
 - All log-in/log-out attempts by user and workstation,

- User submitted transactions,
- Initiated processes,
- System override events; and
- Direct additions, changes or deletions to application maintained data.
- Provide the ability to query the audit log by type of access, date and time stamp range, user identification, or terminal ID.

These requirements were included in the recent Request for Information (RFI) survey of the commercial marketplace. Survey objectives were to facilitate the assessment of technical (including security) and functional characteristics of JFMIP-compliant financial management and related application software currently available.

In addition, a consolidated list of significant security requirements related to the ICFS has been gathered from the NIST, JFMIP, and HUD requirements. They are summarized below.

Table 3-19 ICFS Information Security Requirements

| Number/ Version | Description | Priority |
|-----------------------|--|----------|
| <i>Authentication</i> | | |
| 1 – 1 | The system shall utilize Role Based access restrictions. These roles include but are not limited to: OS Administrator, Database developer, Web Application Administrator, and authorized authenticated users | High |
| 1 – 2 | The system shall have an authorization mechanism in place to control access to system resources and database information. | High |
| 1 – 3 | The system shall leverage the Enterprise-user authentication mechanisms where possible. | High |
| 1 – 4 | Each access role shall be governed by the principal of least privilege to ensure that users have the least amount of privilege to perform their duties. | High |
| 1 – 5 | The system shall have separate roles for users from different business areas. | High |
| 1 – 6 | The system shall ensure that business area representatives only have access to their respective business area resources. | High |
| 1 – 7 | The system shall ensure all machine-to-machine connections are authorized and authenticated. | High |
| 1 – 8 | The system shall utilize certificate-based authentication for web and network login. | High |
| 1 – 9 | The system shall restrict access to all ICFS data to authorized users on a need-to-know basis. | High |
| 1 – 10 | The system shall enforce time-out on inactive user connections. | High |
| <i>Auditing</i> | | |
| 2 -1 | The system shall log all accesses violations. | High |
| 2 – 2 | The system shall log and monitor changes performed on the system including changes made to user and/or machine privileges. | High |
| 2 – 3 | The system shall restrict changes to the system logs. | High |
| 2 – 4 | The system shall log all authorized accesses. | High |

| Number/ Version | Description | Priority |
|------------------------|--|----------|
| 2 – 5 | The system shall log all unauthorized access attempts to the system. | High |
| <i>Data Protection</i> | | |
| 3 – 1 | The system shall utilize encryption mechanisms to transport sensitive system data to users. | High |
| 3 – 2 | The machine-to-machine connections carrying sensitive data shall be encrypted. | High |
| 3 – 3 | The system shall isolate data from different business lines and program areas. Note: Customer requirements need to be defined. | High |
| 3 – 4 | The system shall validate input data prior to committing to database. | High |
| 3 – 5 | The system shall track the origin of updates to the database including, but not limited to source (system process or user account), and date-time tag. | High |
| 3 – 6 | The system server-components shall be located in an isolated network security zone. | High |
| 3 – 7 | The Web Application Security Coding Standards shall be used to design and develop the ICFS application. | High |
| 3 – 8 | All reports and displays containing data from the system database shall be labeled sensitive. | High |
| 3 – 9 | There shall be an MOU/ISA in place for all external connections to the system. | |
| 3 – 10 | A log of changes in user privileges shall be created and maintained. | High |

APPENDIX A – ICFS METADATA

APPENDIX A – ICFS METADATA

Appendix A lists the metadata characteristics for all ICFS data elements by entity. The metadata characteristics include the:

- Data element name
- Data type (alphanumeric, numeric, or precision decimal)
- Definition
- Format
- Range of values
- Unit of measure
- Precision (as it applies to numeric and precision decimal fields)
- Update frequency (A/N denotes 'as needed')
- Security rules that are associated with the specific data element.