

**GUIDELINES FOR DELIVERY OF ELECTRONIC FILES**  
**Office of Policy Development and Research**  
**U.S. Department of Housing and Urban Development**

These guidelines are to ensure that electronic media are readable by the users. The intended recipient must approve any exceptions in advance. Additional specifications or exceptions may be required in individual projects and will be included in the statement of work for the project. These guidelines apply to both data files from data gathering, analysis or presentations projects (which may use statistical, database, or geographic information applications) as well as smaller, written projects (which may use word processing, page layout, spreadsheet, internet based, or presentation applications).

Potential users will include agency staff, trade or interest groups, other organizations, and the public (if data are not confidential).

**HUD STANDARD SOFTWARE AND HARDWARE**

- a. All machine readable files must be supplied to HUD in formats compatible with HUD standard systems unless specified otherwise in the statement of work. The specific format for individual deliverables may be established in agreement with the FAC-COTR, but the contractor must be capable of producing files compatible with HUD standards listed below by category.
- b. OFFICE AUTOMATION SOFTWARE: Microsoft Office 2007 including: Word, Excel, Access, Infopath, Publisher, and Powerpoint.
- c. WEB POSTING FILE FORMATS: Hypertext Markup Language (HTML), Extensible Markup Language (XML), Adobe Acrobat.
- d. DATA PROCESSING SOFTWARE: SAS, SPSS
- e. GEOGRAPHIC INFORMATION SYSTEM SOFTWARE: Arc GIS
- f. DATA STORAGE MEDIA: CD-ROM (ISSO 9660), DVD-ROM (ISSO 9660), 9-track mainframe tape, or 3480-type mainframe cartridge
- g. VIDEO: DVD-Video standard MPEG-2; Flash video for Web.
- h. FILE COMPRESSION SOFTWARE: WinZip
- i. CAMERA-READY PRINT PREPARATION SOFTWARE: Adobe InDesign CS4.

## REQUIREMENTS FOR DATA FILES

a. Three items must be delivered in electronic format: Data, Documentation, and Computer code for reading, labeling, and formatting the data. The documentation must also be provided on paper (two copies).

b. For files intended for use on PCs, self-extracting compressed format is optional. If a file is delimited by commas and quotes, no field may be entirely blank, so, “ ”, or 0, are acceptable (some spreadsheets and other software skip blank fields in comma-delimited files). The internet (via e-mail or any other method) may not be used for transmission of final versions, nor for private data, since it may introduce unnoticed errors, and is not wholly private.

c. For Mainframe (9-track): ASCII or EBCDIC files. No compression is allowed. Each record type must be fixed format. Blocks must be less than 32,768 characters per block so a variety of systems can read the data. No multi-reel files are allowed unless they are ASCII labeled.

d. Illustrations and other figures shall be submitted both in the original program format for the originating software and in universal formats usable by HUD standard software and equipment.

e. Media must be affixed with an external sticker listing: Title of data, Contact person(s), Date of preparation, Software Format (if mainframe, show characters per record and per block). For example: Shelter Occupant Survey, 1999, P. Burke, rev. May 4, 2000, ASCII 88 char/record, 8800 char/block.

f. Documentation must include a title page, with the same items as the sticker, plus: Company name, project director, Contract number, Stage of processing (preliminary, final, revised, etc.), 150-250 word abstract, Weighted and unweighted control totals (so users know the size, and can check their own runs), and Table of Contents for the rest of the documentation. All should be understandable by members of the public who are not familiar with the project. This page will usually become a “README” file for the public.

g. Documentation must include a bibliography of reports produced by the project.

h. Documentation must include for each field: name, position, definition or explanation if needed, meaning of any codes, presence of any errors or mis-codes if known.

i. Documentation must include a description of EVERY step in processing, including sampling process, call-back process, training of people who collected the data, data entry, treatment of missing data and outliers, weighting and any other significant steps (if lengthy, include one page overview).

j. Documentation must include a statement of non-response rate and any other known omissions or problems.

k. Documentation must include the complete data collection instrument, with variable names written in (marginal notes are also desirable). Unless proprietary software rules prohibit it, the contractor must provide a working copy of the data collection instrument.

## **CODES**

a. Geography. If instructed by the contract, all addresses must be geocoded. All geocoded address data must include all input address fields and standardized output address fields. All geocoded address data must include a field that reflects the precision of the geocode (i.e. street match, zip+4 match, zip match, etc.). Latitude and longitude must be of a numeric data type with a minimum of six (6) decimal places. All Census geographic codes must be reported in text format, with leading 0s preserved and decimal points, if applicable, must be implied. At a minimum, the following basic Census geographic codes are expected: State, County, Place, Minor Civil Division (where applicable), Tract, Block Group and Block. Metropolitan Area codes must reflect the most current Metropolitan and Micropolitan Core Based Statistical Area (CBSA) definitions set forth by the Office of Management and Budget. All geocoded products must be accompanied by a FGDC-compliant metadata record in HTML or XML format. This metadata must include descriptions of each of the data items described above and the method(s) by which they were derived.

b. Occupation and industry. If present, these must use standard codes of the Census Bureau, Labor Department, or of Office of Management and Budget.

## **DOCUMENTATION FOR SMALL DATA AND PROJECT FILES**

Documentation for project (word processing, spreadsheet, and graphics) files should include disk (or media) labels that include the project name, contact person, contractor, contract number, and date. If the submission consists of multiple files, the contractor should include a README file that briefly describes each file on the disk. Files submitted (particularly final deliverables) should include portable document format (pdf) files suitable for web posting as well as the files in the application format in which they were prepared (doc, xls, etc.). While special protection (password or print restrictions) is desired, those additional requirements will be articulated separately.

## **FORMATS FOR AUDIOVISUAL FILES**

a. CD/DVD: Final versions of videos will be provided on CDs or DVDs. In addition, raw footage will be provided in the same format (CD or DVD). In the case of media anticipated for web posting, delivery in Flash or other format as directed by the FAC-COTR will be used.

b. Digital photographs: Digital photography will be provided as jpg files on CD or DVD. The resolution of these photographs should remain as high as possible (given the source and potential image adjustment). While specific captions are not required, the files should be sorted and placed into directories on the disk to allow HUD to understand when and where the photographs were made. The contractor should provide all technically acceptable photographs taken under the project, not just those used in publications. In the event photographs are taken for ultimate publication, detailed information on those photographs should be provided, including releases and caption information. In that event, a more appropriate format may be specified.

## **DOCUMENTATION FOR AUDIOVISUAL FILES**

Video disks (CD/DVD) will be labeled with the title of the production, run time, the project name, contact person, contractor, contract number, and date. In addition to the above information, raw video will be accompanied by paper or electronic video logs and releases will be provided with all raw footage.

## **508 COMPLIANCE REQUIREMENTS**

All files intended to be web posted and/or as applicable per the project/task are required to be compliant with Section 508 of the Rehabilitation Act of 1973, which gives all people with disabilities the right to equal access to all electronic and information technology of any Federal agency.

## **REVIEW AND EVALUATION OF SUBMISSIONS**

Unless specified in the contract or task order statement of work, within eight (8) weeks of receipt, the recipient will be responsible for having read the data and documentation on an appropriate computer system, will notify the supplier of any corrections or changes needed, and will release copies for general dissemination as appropriate.