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CHAPTER 2. ARCHITECTURAL EXHIBITS

- 2-1. GENERAL. Construction exhibits will be submitted with each application for mortgage insurance that involves proposed construction, partially completed construction or additions (alterations) to existing construction.

Exhibits for alterations or repairs need only pertain to the work to be done.

Exhibits must be adequate and accurate to determine compliance with applicable HUD standards, form the accurate basis for HUD commitments, determine acceptability of the physical improvements, and provide the basis for conclusions involving the builder's warranty.

Exhibits must be submitted for all properties receiving high loan-to-value ratios. All exhibits must be retained in the HUD case binder in order to discuss construction complaints with homeowners or builders. Homeowners may request copies of exhibits under the Freedom of Information Act.

Refer to the Architectural Requirements Grid in Appendix 11.

- 2-2. DRAWINGS FOR INDIVIDUAL APPLICATIONS. Submit with each application:

- A. Plot Plan. Minimum scale of 1" = 20'- 0" or 1/16" = 1'- 0", showing (See example of Typical Plot Plan in Appendix 1):
- 1) Lot and block number;
  - 2) Dimensioned length of each boundary;
  - 3) North point;
  - 4) Dimensions of front, back, and side yards;
  - 5) Location and dimensions of garage, carport, and other accessory buildings, including footing drains (or other subdrains) and their points of discharge;

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(2-2.A.)

- 6) Location of streets, curbs, walks, driveways, approach slabs, surfacing and utilities;
- 7) Location of steps, terraces, porches, fences, trees, shrubs, retaining walls, slopes, and drainage swales, channels, pipes and related facilities;
- 8) Location and dimensions of easements and established setback requirements, if any.
- 9) Grade elevations will be provided at:
  - a. First floor of dwelling and floor of garage, carport and other accessory buildings;
  - b. Finish curb or crown of street at points of extension of lot lines;
  - c. Existing and finish grade elevations at each corner of the plot and each principal corner of the dwelling;
  - d. Finish grade elevations at the toe of any slopes or retaining walls;
  - e. Other site elevations necessary to show proper grading design and the flow routes of surface drainage, including but not limited to: heads of swales; points of change in swale gradients; at all building walls; and on proposed flatwork that might trap runoff (See Appendix 8);
  - f. Detailed existing and finish grade elevations are required where topography, or design of the structure, necessitates special grading, drainage, subdrainage, slope stabilization or foundation design;

Examples are: irregular or steeply sloping sites; filled or cut areas or multi-level structures; and

(2-2.A.9))

- g. Where fill depths will exceed two feet beneath dwellings, or where expansive, compressible, collapsing or organic soils will be present beneath buildings, grading plans and specifications developed according to procedures in HUD Handbook 4140.3 (Data Sheet 79G), must be a commitment requirement and complied with during construction;

This requires pre-design site exploration and testing and post-grading engineering compliance reports.

- B. Floor Plan. Minimum scale of 1/4" = 1'- 0", showing:

- 1) Provide separate foundation plan with construction details, including any subdrainage facilities. Where on-site soils are expansive, compressible, collapsible or organic, or where subsidence is possible, foundation plans must be accompanied by supporting soil, geologic, groundwater and structural design information.

In outlying low volume areas where qualified engineering services may be locally unavailable, or the incidence and significance of observable foundation performance problems in and around the location of the subdivision and property are negligible, HUD Field Office can determine the degree of refinement needed for the supporting engineering data.

- 2) Plan of each floor and of basement, if any. If dwelling is of crawl space type, or slab-on-grade, provide separate foundation plans showing construction details.
- 3) Plan of any attached terrace, porch, garage, or carport.

(2-2.B.)

- 4) Direction, size and spacing of all floor and ceiling framing members, girders, columns or piers.
- 5) Location of all partitions and walls, indicating door and window sizes and direction of door swing.
- 6) Location and size of all permanently installed construction and equipment (i.e., kitchen cabinets, closets, shelves, plumbing fixtures, water heaters & heating-cooling units).

Details of kitchen cabinets may be on separate drawings.

- 7) Location and symbols of all electrical equipment, including switches, outlets, fixtures and panels.
- 8) Heating system on separate drawings, or as part of plan of floors and basement, showing:
  - a. Location and size of ducts, piping, registers, radiators, etc;
  - b. Location of heating unit and room thermostat;
  - c. Total calculated heat loss of dwelling. For duct or piped distribution system include calculated heat loss of each heated space, using American Society of Heating, Refrigerating and Air Conditioning (ASHRAE) Standards; and
  - d. Model number and BTU/hour capacity of equipment.

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(2-2.B.)

- 9) Cooling system, on separate drawings or as part of heating plan, floor or basement plan, showing:
  - a. Location and size of ducts, registers, compressors, coils, etc;

- b. Heat gain calculations, including estimated heat gain for each space conditioned;
- c. Model number and BTU/hour capacity of equipment or units according to applicable ASHRAE standards;
- d. BTU/hour capacity and total KW input at stated local design conditions; and
- e. If room or zone conditioners are used, show location, size, and installation details.

C. Exterior Elevations. Minimum scale of 1/4" = 1'- 0", must show:

(Elevations other than main elevation, which contain no special details, may be drawn at 1/8" = 1' - 0".)

- 1) Front, rear, and both side elevations, and elevation of any interior courts;
- 2) Window and doors - show size unless separately scheduled or shown on floor plan;
- 3) Wall finish materials - show where more than one type is used;
- 4) Depth of wall footing, foundations, or piers; show stepped, if at more than one level;
- 5) Finish floor lines; and
- 6) Finish grade lines at buildings.

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(2-2.)

D Sections. Minimum scale of 3/8" = 1'- 0", will be provided through the following areas of the structure:

- 1) Exterior wall sections must show details of construction from the bottom of the foundation to the highest point of the roof;

Where more than one type of wall construction is used, each type must be

shown.

- 2) Show wall sections through any portion of the dwelling where rooms are situated at various levels or where finished attic space is proposed; and
- 3) Stairwells, landings, and stairs, including headroom clearances and surrounding framing.

E. Details. Provide the following:

- 1) Elevations and sections through fireplace, scale not less than 3/8" = 1'- 0";
- 2) Engineered design with roof truss connections and test data, scale not less than 3/8" = 1'- 0";
- 3 Elevations and sections through kitchen cabinets, indicating shelving, scale not less than 1/4" = 1'- 0"; and
- 4) Sections and details of all critical construction points, special structural items or special millwork, scale not less than 3/8" = 1'- 0".

F. Additional Exhibits. Field Office can require technical reports and/or other exhibits when the mortgage risk could be affected by unstable soil or other differential ground movement, ground water

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(2-2.F.)

problem, and other site or toxic hazards. Refer to paragraph 7-4.

Examples include, but are not limited to: engineers' reports on soil exploration and testing; earthwork specifications (79-G) and special grading plans; special foundation and related designs proper for conditions found; slope or other stability evaluations, evaluations of underground sewage, effluent disposal and waste disposal sites.

G. Size of Construction Drawings. On individual new construction cases plans should be no larger than

18" X 24". Half size photocopies of the drawings (8 1/2" X 14") are acceptable provided they are legible and lettering is no smaller than 1/16". Computer aided drawings at half scale are also acceptable. See Appendix 9.

2-3. DESCRIPTION OF MATERIALS.

- A. Submit Form HUD 92005 for each plan type. Instructions are on it.
- B. Builder May Provide Own Form (computerized is acceptable). Format and printed text must be identical to Form HUD 92005.

2-4. DRAWINGS FOR MASTER CONDITIONAL COMMITMENT (MCC).  
Submit only for group applications that repeat a basic type dwelling (see list of additional items in Handbook 4115.3).

- A. Master Plot Plan will include:
  - 1) Scale that will clearly and legibly show information;
  - 2) North point;
  - 3) Location and width of streets and rights-of-way;

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(2-4.A.)

- 4) Locations and dimensions of all easements;
- 5) Boundary dimensions of each lot;
- 6) Dimensions locating each dwelling on the lot;
- 7) Dimensions of front, back, and side yards;
- 8) Location and dimensions of garages, carports, or other accessory buildings;
- 9) Location of walks, driveways, and other permanent improvements; and
- 10) Identification of each lot by number and indication of basic plan and elevation.

- B. Typical Plot Plan. Submit for each basic, type dwelling in lieu of fully detailing each lot on Master Plot Plan (See paragraph 2-2.A. and Appendix 1). Use only when topography and lot arrangements present no collective (or individual planning) construction problems. Necessary information not shown on typical plot plan will be included on Master Plot Plan. See Appendix 8 for guidance on grading and drainage.

A plot plan for each individual lot must be provided to the fee inspector at the initial inspection on site.

- C. Grading and Drainage. Show on a separate plan or on the Master Plot Plan. Refer to HUD Handbooks 4140.1 and 4140.3. See Appendix 8.
- 1) Scale must show contours of existing and finish grades at intervals of not more than 5 feet;
  - 2) Contour intervals less than 5 feet may be required for less steeply sloping lots;
  - 3) Location of house and accessory buildings on each lot;

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(2-4.C.)

- 4) Identification of each lot by number;
- 5) Elevations according to individual plot plan, including bench mark and datum or, in lieu of finish grade elevations, contours of proposed finish grading may be submitted. Contour intervals selected will be appropriate to the topography of the site;
- 6) Lot grading will be shown by indicating protective slopes and approximate location of drainage swales; and
- 7) Location of drainage outfall if any drainage is not to a street.

Special requirements by HUD Field Office may be



necessary for grading plans, specifications and engineers certifications (79-G). See paragraph 2-2.B. and 2-2.F.

- D. Floor Plans, Elevations, Sections, and Details. Submit for each plan type (see paragraph 2-2 for scale and details).

Optional elevations to a basic plan can be shown at a scale not less than 1/8" = 1'- 0".

When the Schedule of Options is used, provide necessary exhibits.

- E. Description of Materials. See paragraph 2-3.

2-5. INDIVIDUAL WATER SUPPLY AND SEWAGE DISPOSAL SYSTEMS. Provide:

- A. A Written Opinion by the Health Authority.

- 1) Water-supply system.

Give the most recent record of failure of wells in the immediate vicinity to furnish an adequate supply of water.

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CHANGE 1

(2-5.A.)

- 2) Sewage disposal system.

- a. Provide a statement that the permitted individual sewage disposal system, with proper maintenance, can be expected to function satisfactorily and is unlikely to create an unsanitary condition;

The statement does not constitute an assurance by the authority that the system will continue to perform satisfactorily, only that if properly maintained, the system can be expected to be adequate, based on the authority's knowledge of present site conditions; and

- b. Show how many bedrooms the sewage disposal system is designed for and whether there is or is not a garbage disposal.

The HUD Field Office or the DE Lender must include a Specific Condition on Form HUD 92800.5B (in addition to

item E on the back of the form that ensures acceptable installation according to accepted exhibits). Obtain a statement from the local health authority that if a water-supply system is used, that the quality of water is satisfactory for human consumption.

B. Location Map of property.

C. Plot Plan. Show these additional items (see paragraph 2-2.A. and Appendix 1):

- 1) Lot lines and all improvements;
- 2) Topography;
- 3) Location of septic tank, distribution box, absorption field or bed, seepage pits, and other essential parts of sewage system;

Holding tanks are not acceptable on newly constructed properties.

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CHANGE 1

(2-5.C.)

- 4) Location of well, service lines and other essential parts of water supply system, including well casing seal;
- 5) Distance to individual well from the dwelling, septic field and property line. Also show distance of well to individual well and septic systems on adjacent properties;
- 6) Grade elevations of the well and/or septic systems; and
- 7) Location of the individual systems on adjacent properties and distance to poisoned soil.

If wells are not involved on the subject property, or adjacent properties, only that part of the sewage system on adjacent property within 10 feet of the property line need be shown.

D. Report on Local Conditions.

- 1) Hydrology and any protection required;
- 2) Geology, including a description of soil materials to a depth of at least six feet; and

- 3) Topography.
- E. Plans and Specifications of systems. Show details of all component parts; indicate material, equipment and construction.
  - F. Well Log and Yield Report.
  - G. Water Quality Report on bacteriological properties. \*

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(2-4.C.)