Section II
Production

Chapter 4
Architectural Analysis and Cost Processing

4.1 General

A. Qualifications of Lender’s Third-Party Representatives

1. Architectural Third-Party Reviewer — See Lender’s Architectural Reviewer and Cost Analyst’s Statement of Work — New Construction, Substantial Rehabilitation, and 241(a), Section I.A (available on the Section 232 Program website).


3. Needs Assessor Third-Party Reviewer — See Project Capital Needs Assessment (PCNA) Statement of Work — 223(f), Section I, and PCNA Statement of Work — 223(a)(7), Section I (both are available on the Section 232 Program website).

B. Required Architectural Services for Design and Supervision - See Lender’s Architectural Reviewer and Cost Analyst’s Statement of Work — New Construction, Substantial Rehabilitation, and 241(a), Exhibit C.

C. Architectural Standards and Other Criteria

1. HUD’s Minimum Property Standards, Handbook 4910.1

2. Accessibility Standards (See Section 4.1 D below)

clarification on Seismic Resistance Requirements. To improve seismic safety in older buildings and to preserve existing residential care facilities, project applications for substantial rehabilitation and refinance/acquisition must comply with the relevant standards published by the American Society of Civil Engineers (ASCE) and its affiliate, the Structural Engineering Institute (SEI). The relevant standard is ASCE 41-13 Seismic Evaluation and Retrofit of Existing Buildings. A registered structural engineer familiar with lateral force design is required for the seismic analysis.

a. A seismic hazard and building performance analysis of the building(s) must be submitted with lateral force design, where applicable code requirements at the time of construction did not equal or exceed the property is exempt as described in paragraph c below. The Seismic Report shall include the referenced seismic standards following:

i. The evaluation Seismic Report must include an examination of the structure for continuity, ductility, and resistance to lateral forces.

b. Structural elements and connections between elements must be strengthened and new elements installed as required, if the existing structure does not provide three fourths (3/4) of the seismic force level resistance required by paragraph A above.

ii. The analysis shall assume a building performance objective of “life safety” as defined by ASCE 41-13. For soil classification refer to the International Building Codes.

iii. Mitigation must be provided to meet minimum life safety requirements. In general, this means that for a design earthquake (i.e., a measure of the anticipated event), the building may be expected to avoid partial or total structural collapse, or damage to non-structural components which damage would be life threatening, e.g., damage leading to fire, blocked egress, release of hazardous materials, etc.

b. Section 223(a)(7) applications. A new Seismic Report is not required if such study was done as part of the original insurance application. A new report must be submitted with the application if the property site’s Design Earthquake Spectral Response Acceleration Parameters exceeds the threshold for exempt buildings as defined below in paragraph c and no Report was completed previously.

c. Exempt Properties.

i. Benchmark Buildings. A “benchmark building” is an existing building originally built to or later retrofitted to an identified design code that equals or exceeds the standards defined by ASCE 41-13. A licensed design professional experienced with lateral force design must determine whether a building is a “benchmark
building.” The design professional must review the plans (if available) and must perform a site visit to confirm that the building does, in fact, meet the benchmark building code. If a determination cannot be made by this means, a Seismic Report must be completed.

ii. Exempt Buildings. Many buildings are exempt from the seismic performance analysis required by ASCE 41-13. A property composed of exempt buildings as defined below will not require a Seismic Report:

1. Any single-story, wood, or steel frame building with total building area equal to or less than 3,000 square feet.
2. Any single-story accessory building (i.e., no dwellings in structure).
3. Any detached or semi-detached structure where the Design Earthquake Spectral Response Acceleration Parameter Sxs, BSE-1E is less than .400 g; and
4. Any building on site with both Design Earthquake Spectral Response Acceleration Parameters of:
   a. Sxs, BSE-1E is less than .330 g; and
   b. Sx1, BSE-1E is less than .133 g.

Note: New construction seismic standards are dictated by local code using the most recent ASCE/SEI Standards.

4. Energy Efficiency Requirements. For New Construction or Substantial Rehabilitation, the project design must meet or exceed the requirements of the 2006 International Energy Conservation Code (IECC) (or later versions adopted by the Secretary of HUD), or in the case of a high-rise care facility—high rises (defined as structures of 4 or more stories), the requirements of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1—(1989 for substantial rehabilitation and 2004, 2007 edition (or later versions as adopted by the Secretary of HUD) for new construction), and shall be cost-effective with respect to construction and operating costs on a life-cycle cost basis.) HUD, in cooperation with the Environmental Protection Agency and the Department of Energy, has adopted a wide-ranging energy action plan for improving energy efficiency in all housing programs, which includes encouraging program participants to use Energy Star products. When state or local requirement exceeds the HUD minimum standards, the HUD minimum standards will not over-ride or replace existing state or local requirements.

5. Department of Health & Human Services, Centers for Medicare & Medicaid Services, final rule entitled, “Medicare and Medicaid Programs; Fire Safety Requirements for Long Term Care Facilities, Automatic Sprinkler Systems.”

6. Subsurface Exploration (Soil Investigation). Before foundation design and application for Firm commitment, reliable information about subsurface conditions
and foundation recommendations must be made available to the Lender’s analyst by
the borrower.

a. The Architect must advise the Borrower of the scope and type of soils
information and/or subsurface investigation required for structural design.
b. The Borrower must provide the services of a registered design professional for
determining subsurface conditions. These services shall be provided in
accordance with the AIA B108 Owner-Architect Agreement and B108 HUD
Amendment.
c. The Lender’s architectural analyst will assure that the architect has
comprehensive, well documented soils information and that project
foundation design follows the report recommendations. When necessary, the
Lender’s architectural analyst may request engineering help in reviewing soil
reports and related designs.
d. Soils investigation shall be in accordance with Chapter 18 of the International
Building Code, except that an investigation and report is required for every
project involving new construction; (or any new foundations), whether or not
required by the building official.

See PCNA Statement of Work — 223(f); Lender’s Architectural Reviewer and Cost
Analyst’s Statement of Work — New Construction, Substantial Rehabilitation, and
241(a); and PCNA Statement of Work — 223(a)(7), for a full list and details of
requirements and standards.

D. Accessibility for Persons with Disabilities

1. See Accessibility Matrix for Section 232 (available on the Section 232 Program
website. Direct link:
for guidance on the applicability of the Fair Housing Act (FHA), Section 504 of the
Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA), as they
relate to Purchase/Refinance, New Construction, and Substantial Rehabilitation
loans), and

2. See Lender’s Architectural Reviewer and Cost Analyst’s Statement of Work — New
Construction, Substantial Rehabilitation, and 241(a), Section IV.A.1.c., for more
details, including accessibility for the vision or hearing impaired, and residential
accommodation kitchens. Please see direct link here:
(available on the Section 232 Program website).

E. HUD Labor Standards and Enforcement Protocol

Applicable when Davis-Bacon wage rates apply as indicated in Production Chapter 2. See
Appendix 4.1, HUD Labor Standards and Enforcement Protocol, for procedures during:

1. Firm Commitment Processing,
2. Initial Closing Clearance,
3. Construction Phase, and
4. Final Closing Clearance.

### Section 232 New Construction, Substantial Rehabilitation and 241(a) Supplemental Loans

#### A. Lender Processing Review


#### B. ORCF Underwriter Review

The following areas shall be reviewed:

1. Check for complete Plans and Specifications; and Contractor’s and/or Mortgagor’s Cost Breakdown (From HUD-92328-ORCF);

2. Check for compliance with the Fair Housing Accessibility Act’s design and construction provisions, Section 504 of the Rehabilitation Act of 1973 (also known as Section 504), and Title II of the ADA (if applicable), as well as the applicable accessibility standards as shown on the Accessibility Matrix for Section 232;

3. Ensure the project is in compliance with regulatory requirements regarding number of full bathrooms per resident (if the project is an ALF or BC);

4. Review the Reserve for Replacement (R4R) Funding Schedule;

5. Review the existing R4R Account (for 241(a) Supplemental Loans);

6. Check that the General Contractor’s Overhead does not exceed 2% of the sum of Total Land Improvements (Total Structures and General Requirements); and

7. Review the AIA Owner-Architect Agreement, and HUD Amendment to B108 (Form HUD-92408-ORCF) to confirm they are complete and correct.
4.3 Section 232 Substantial Rehabilitation

A. Definition – Substantial Rehabilitation

A project qualifies as a substantial rehabilitation project when:

The hard costs of repairs, replacements, and improvements (not including major movable equipment) exceed 15% of the project’s as complete value after completion of all repairs, replacements, and improvements. Additions are permitted in substantial rehabilitation projects, but the costs of the addition are not included in the eligibility test; OR

1. Two or more major building components are being substantially replaced. The component must be significant to the building and its use, normally expected to last the useful life of the structure, and not minor or cosmetic. Substantially replaced means that at least 50% of the component must be replaced. Examples of major building components are: roof structures, wall or floor structures, foundations, plumbing systems central heating systems, air conditioning systems and electrical systems. Examples related to a roof replacement include major building components such as roof sheathing, rafters, framing members; and examples of minor building components include shingles or built up roofing.

NOTE: Estimates for determining the cost for substantial rehabilitation must include general requirements and fees for contractor’s general overhead and profit, bond premium, borrower’s and contractor’s other fees and design architect and supervisory architect. However, when determining the eligibility of Section 232/223(f) projects, include only the repair costs; do not add general requirements and fees.

B. Joint Inspection. See Lender’s Architectural Reviewer and Cost Analyst’s Statement of Work – New Construction, Substantial Rehabilitation, and 241(a), Exhibit F for details.

4.4 Section 232/223(f) Refinance

A. Lender Processing Review


2. Timing: The effective date of the PCNA should be the date the Needs Assessor inspected the subject property. For 223(f) refinances the PCNA is to be submitted to ORCF by the Lender within 180 days of the PCNA’s effective date. Expired reports must either be updated or granted a waiver through consultation with the ORCF.
B. ORCF Underwriter Review

The following areas shall be reviewed:

1. PCNA: Check for changes to repair conclusions. Has the Lender suggested a lower dollar amount or fewer repairs than the Needs Assessor’s repair conclusions? Owner-Elected Repairs must be reviewed by the Needs Assessor for reasonableness, costs, and included in the PCNA.

2. Check for repair inspectability. Are the repairs clearly described in terms of inspectability (location and what the need is)?

3. Verify compliance with the Fair Housing Act, Section 504, and Title II of the ADA (if applicable), as well as applicable accessibility standards as shown on the Accessibility Matrix for Section 232.

4. Review R4R Funding Schedule. Has the Lender supplied an acceptable R4R Funding Schedule showing a positive account balance through year 15— and proposed Initial and Annual Deposits? Does the funding schedule appear to be based on the Needs Assessors R4R schedule? If not, has the Lender’s Underwriter justified adequate deviations from the Third-Party PCNA?

4.5 Section 232/223(a)(7) Refinance

A. Lender Processing Review


2. Timing: The effective date of the PCNA should be the date the Needs Assessor inspected the subject property. For 223(f) refinances the PCNA is to be submitted to ORCF by the Lender within 180 days of the PCNA’s effective date. Expired reports must either be updated or granted a waiver through consultation with the ORCF.

B. ORCF Account Executive / Asset Manager Review

The following areas shall be reviewed, if a PCNA is required and submitted:

1. PCNA: Check for changes to repair conclusions. Did the Lender address the status of all deficiencies from last REAC Inspection?
2. Check for repair inspectability. Are the repairs clearly described in terms of inspectability (location and what the need is, building and unit number, type of repair needed)?

3. Verify compliance with the Fair Housing Act, Section 504 and Title II of the ADA (if applicable), as well as applicable accessibility standards.

4. Has the Lender supplied a R4R Funding Schedule (showing all funding needs, and a proposed Initial and Annual Deposit) that shows a positive Reserve balance in years 1–15?

5. Has the funding schedule appear to be based on the Needs Assessors R4R schedule? If not, has the Lender’s Underwriter justified any adequate deviations from the third-Party PCNA, and have they certified to any new costs not reviewed by the Needs Assessor?