UNDERWRITING MANUAL

WITH REVISIONS TO FEBRUARY 1938

FEDERAL HOUSING ADMINISTRATION

WASHINGTON, D. C.

UNDERWRITING MANUAL

UNDERWRITING AND VALUATION PROCEDURE
UNDER TITLE II

OF THE

NATIONAL HOUSING ACT

FEDERAL HOUSING ADMINISTRATION

WASHINGTON, D. C.

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UNDERWRITING MANUAL

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UNDERWRITING MANUAL

PREFACE

1. The Underwriting Manual is issued by the Federal Housing Administration. It contains instructions and regulations governing the procedure and policies to be followed by Underwriting Staffs of the Federal Housing Administration.

2. The Manual describes the techniques used by the Federal Housing Administration to determine whether or not mortgages are eligible for insurance under Title II of the National Housing Act. Eligibility is determined by risk rating. This process consists of an examination of mortgage risk and embraces valuation.

3. The salaried underwriting personnel and duly appointed fee consultants are furnished with loose-leaf Underwriting Manuals. Each of these manuals is numbered and remains the property of the Federal Housing Administration. Copies assigned to staff members or fee consultants are listed in the name of the individual to whom assigned. They shall not be destroyed or transferred and must be surrendered upon demand of the Federal Housing Administration.

4. Revisions of the Manual are issued by supplying new or substitute sections for the loose-leaf edition. Such sections indicate the dates upon which their contents become effective. They are to be inserted in their proper places as indicated by the section numbers.

5. In order to promote a broad understanding of the underwriting and valuation principles and procedure adopted and advocated by the Federal Housing Administration, the Underwriting Manual is made available to individuals and institutions. Such manuals are bound and contain an imprint on the cover indicating the date to which revisions have been made.

6. This edition of the Manual, dated February, 1938, covers policies and procedures to be used in connection with non-farm mortgages to be insured under the provisions of Section 203, Title II of the National Housing Act, as amended February 3, 1938. For mortgages to be insured under Sections 207 and 210, those involving larger projects, and farm properties under Section 203, policies are basically the same, but procedures and forms are distinctly different. In order to make the Manual available to the Underwriting Staffs and to the public, this edition has been ordered to be printed immediately upon enactment of the legislative amendments.

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Effective February 1938.
Federal Housing Administration.

PART I

SECTION 1

ORGANIZATION

OBJECTIVES

101. Title II of the National Housing Act established a system of mutual insurance of mortgages secured by residential property. The general objectives of Title II are the creation and maintenance of a sound structure for mortgage loans of this type and the improvement of housing standards. The Act provides that no mortgage shall be accepted for insurance unless it is economically sound. It anticipates that eventually any liability in connection with mortgages insured under the provisions of Section 203 of the Act will be that of the Mutual Mortgage Insurance Fund; and requires that such mortgages accepted for insurance be classified into groups of similar risk characteristics so that the mortgagor may have the opportunity of receiving any benefits arising from the mutual feature. These and other requirements of the Act presuppose the insurance of sound mortgages only.

102. Specifically, the major objectives of the Federal Housing Administration include the following:

a. To increase the security of home ownership by making funds available at reasonable rates and on terms within the borrower's capacity to pay. This anticipates a single mortgage amortizing completely in a definite period of time, as compared with more hazardous methods of mortgage financing.

b. To induce lending institutions to lend on mortgage security in the residential field by offering to them the benefits of the single mortgage system.

c. To establish standards of quality with respect to neighborhoods, construction, architecture, and factors contributing to more satisfactory housing in order to encourage improvement in housing standards and conditions. Improvement in housing standards and conditions will result in better mortgage security as well as benefits to owners.

d. To stimulate home construction in localities where housing is needed. Such a program provides employment for wage earners in building trades and allied industries.

e. To conduct statistical surveys and economic studies for the purpose of determining suitable fields for mortgage investment, guiding the development of housing, and assisting mortgage investors and home owners or buyers in the formulation of sound judgments and policies.

f. To maintain a nation-wide system of dwelling financing based on economically sound and readily salable mortgages.

103. One of the means of achieving these objectives is to require those who process and analyze mortgages submitted for insurance to adhere to sound underwriting practices. The purpose of this manual is to prescribe uniform and sound underwriting techniques.

GENERAL ORGANIZATION

104. The authority vested in the Administrator in connection with Section 203, Title II of the National Housing Act is delegated to a Deputy Administrator with headquarters in Washington, D. C.

105. The organization to operate Section 203, Title II includes Washington Headquarters, Insuring Offices, and Underwriting Offices.

106. The *Washington Headquarters* includes the administrative and technical personnel located in or traveling out of Washington on supervisory or special missions.

107. *Insuring Offices* are in the charge of Directors or Managers who report on administrative performance and problems to the Assistant Deputy Administrator in charge of the Zone in which their Offices lie. Insuring Offices handle locally all phases of insuring activity through and including the endorsement of insurance of mortgages qualifying under Section 203 of the Act. There are five territorial zones with an Assistant Deputy Administrator in charge of each zone.

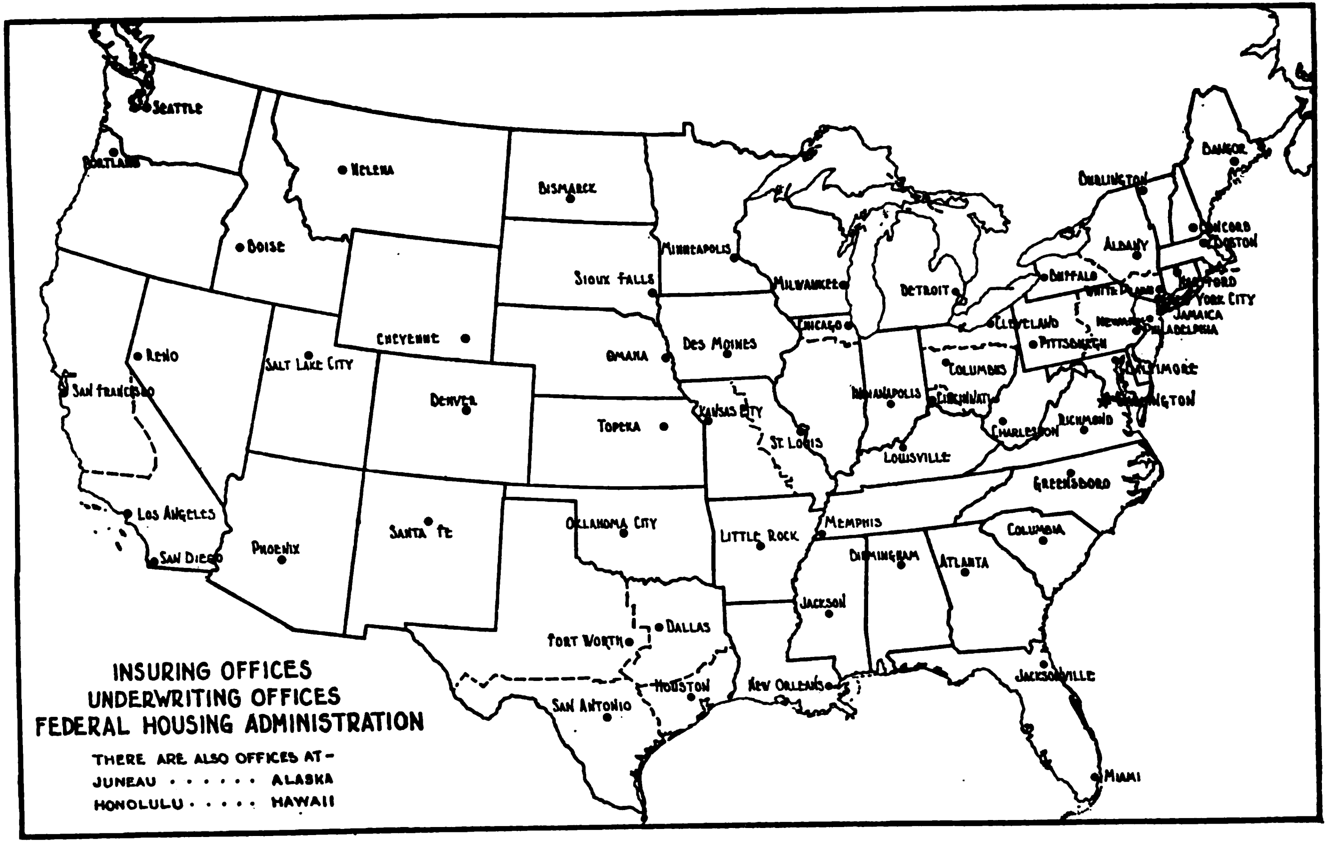
108. *Underwriting offices* contain complete Underwriting Staffs, but differ from Insuring Offices in other respects.

109. Each Underwriting and Insuring Office has jurisdiction over a definitely outlined area.

110. The Insuring Office or Underwriting Office shall not process any application involving property outside of its established jurisdiction.

111. The Underwriting Staffs of all Offices are entirely independent of each other.

112. The accompanying map shows the locations of Insuring and Underwriting Offices. The counties assigned to each of the Offices are indicated in special instructions issued by the Deputy Administrator for Title II.


INSURING OFFICES
UNDERWRITING OFFICES
FEDERAL HOUSING ADMINISTRATION
THERE ARE ALSO OFFICES AT-
JUNEAU . . . . . . ALASKA
HONOLULU . . . . . HAWAII
Seattle
Portland
Helena
Boise
Bismarck
Minneapolis
Sioux Falls
Milwaukee
Detroit
Bangor
Burlington
Concord
Boston
Albany
Buffalo
New York City
Jamaica
Philadelphia
Pittsburgh
Cleveland
Chicago
Des Moines
Omaha
Cheyenne
Salt Lake City
Reno
San Francisco
Denver
Topeka
Kansas City
St. Louis
Columbus
Indianapolis
Cincinnati
Baltimore
Washington
Charleston
Richmond
Louisville
Greensboro
Memphis
Little Rock
Oklahoma City
Santa Fe
Phoenix
Los Angeles
San Diego
Columbia
Birmingham
Atlanta
Jackson
Dallas
Fort Worth
Houston
San Antonio
New Orleans
Jacksonville
Miami

113. Insuring Offices and Underwriting Offices are indicated by the names of the cities in which they are located and the types of offices; for example, Chicago Insuring Office, Phoenix Underwriting Office.

114. The following cities contain either Insuring or Underwriting Offices:

Albany, N. Y.
Atlanta, Ga.
Baltimore, Md.
Bangor, Me.
Birmingham, Ala.
Bismarck, N. Dak.
Boise, Idaho
Boston, Mass.
Buffalo, N. Y.
Burlington, Vt.
Charleston, W. Va.
Columbia, S. C.
Cheyenne, Wyo.
Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Columbus, Ohio
Concord, N. H.
Dallas, Tex.
Denver, Colo.
Des Moines, Iowa
Detroit, Mich.
Fort Worth, Tex.
Greensboro, N. C.
Hartford, Conn.
Helena, Mont.
Honolulu, T. H.
Houston, Tex.
Indianapolis, Ind.
Jackson, Miss.
Jacksonville, Fla.
Jamaica, N. Y.
Juneau, Alaska
Kansas City, Mo.
Little Rock, Ark.
Los Angeles, Calif.
Louisville, Ky.
Memphis, Tenn.
Milwaukee, Wis.
Miami, Fla.
Minneapolis, Minn.
Newark, N. J.
New Orleans, La.
New York, N. Y.
Oklahoma City, Okla.
Omaha, Nebr.
Philadelphia, Pa.
Phoenix, Ariz.
Pittsburgh, Pa.
Portland, Ore.
Reno, Nev.
Richmond, Va.
St. Louis, Mo.
Salt Lake City, Utah
San Antonio, Tex.
San Diego, Calif.
San Francisco, Calif.
Santa Fe, N. Mex.
Seattle, Wash.
Sioux Falls, S. Dak.
Topeka, Kans.
Washington, D. C.
White Plains, N. Y.

115. When the volume of business justifies, additional Underwriting Offices or Insuring Offices may be opened and existing jurisdictions divided in an appropriate manner. In certain cases Service Offices are established to expedite the handling of business. When Service Offices are manned with underwriting personnel, such personnel reports directly to the Underwriting Staff in the Insuring Office having jurisdiction.

116. Washington Headquarters Organization. The Headquarters organization to operate Title II, except Sections 207 and 210 thereof, comprises several divisions, as follows:

a. Operating Division, which supervises relations between Insuring and Underwriting Offices and Headquarters, relations with mortgagees, and general administrative policy matters

b. Underwriting Division, which directs all matters pertaining to underwriting activities as defined in paragraph 117, and is charged with the responsibility of securing compliance with standards and eligibility requirements

c. Technical Division, which establishes eligibility requirements as to property standards, subdivision standards, minimum construction requirements, and new methods of dwelling construction

d. Legal Division, which establishes policy with respect to interpretations of the National Housing Act and regulations concerning legal matters

e. Division of Economics and Statistics, which engages in research activities, compiles information as a basis for policy-making and guidance of underwriting activities, and produces operating statistics

f. Division of Education, which directs educational activities in connection with the housing program outlined in the National Housing Act

g. Division of Public Relations, which compiles and supplies all public information bearing on the program

h. Comptroller's Division, which handles revenue, expenditures, and management of funds, including the mutual mortgage insurance fund of the Federal Housing Administration

UNDERWRITING ORGANIZATION

117. Organization for Underwriting Activities. The underwriting activities are comprised of all operations which concern analyses of proposed mortgage transactions, including inspections, valuations, and risk ratings. They include all underwriting procedure after the recordation of the application until a rating is given to the proposed mortgage and a final recommendation is made by the Underwriting Staff.

118. The organization for underwriting activities and the underwriting personnel is composed of:

a. The Director of the Underwriting Division, Washington Headquarters, and his staff. This staff includes Underwriting Supervisors who perform executive duties and who travel out of Washington Headquarters on supervisory missions, and Underwriting Examiners who review processed cases both in Washington and in the field.

b. The personnel of the Underwriting Staffs in Insuring, Underwriting, and Service Offices. These are permanently stationed in the field, and include salaried employees, per diem employees, and approved fee consultants engaged in analysis of cases to determine both eligibility and ratings of proposed mortgages.

119. Members of the organization for underwriting activities are selected and duly accredited by the Underwriting Division, Washington, D. C. No persons are permitted to engage in underwriting activities before they are so accredited.

120. Underwriting Division, Washington Headquarters. The Underwriting Division is organized into Sections.

121. The *Control Center* maintains a record of the performance of Underwriting Staffs in Field Offices. It handles routine correspondence with the Underwriting Staffs in field offices and assigns correspondence to the respective sections. It also handles the distribution of loose-leaf Manuals to the personnel of the Administration.

122. The *Allocation Section* determines for the Underwriting Division the qualifications of members of Underwriting Staffs and fee consultants and makes an allocation of underwriting personnel to positions according to the qualifications and requirements. This section handles, for the Underwriting Division, appointments, transfers, changes in status, promotions, demotions, resignations, and terminations. It also makes physical arrangements for whatever training schools may take place in Washington. It handles correspondence pertaining to underwriting personnel and prepares studies of field office performance and expense.

123. The *Wholesale Operations Section* develops procedures for the wholesale examination of portfolios of residential mortgages, real estate owned, or both. It initiates and supervises preliminary surveys of these portfolios. When necessary, it establishes special offices and selects and trains the required personnel for the handling of wholesale operations. Procedures for wholesale underwriting operations are designed and supervision is given these activities.

124. *The Project Section* is responsible for the determination of eligibility of large projects insofar as the Underwriting Division is concerned with such projects. The section handles correspondence and reviews Insuring Office decisions concerning such large projects and undeveloped subdivisions, and supplies supervision for the conduct of this work in the field.

125. *The Supervision Section* is charged with the duty of discovering and solving underwriting problems in field offices and the determination of the quality of the work performed and the decisions made by Underwriting Staffs. It is also charged with all general training of Staffs and recommendations for instruction by other sections. This section recommends action for the solution of problems when such action extends beyond its regular function. It takes care of the routine provisions for travel for the Division. To perform these duties the Supervision Section maintains personal contact with the field underwriting organization, reviews Case Binders, and verifies by inspections underwriting decisions on cases received by the field offices. It engages in general training activities and supplies personnel for temporary emergency assignments in the field and for the conduct of wholesale operations.

126. The Sections whose activities are listed above report to a Chief of Underwriting Operations who coordinates the activities of these Sections and reports to the Director of the Underwriting Division.

127. *The Administrative Section* supplies interpretations of underwriting policies and handles inter-Divisional relations. It coordinates the work of the Underwriting Division, including the preparation of the Underwriting Manual and various forms used in underwriting activity. It reviews Underwriting Division reports and is charged with the office management of the Underwriting Division including expense, personnel, supplies, and the assignment of stenographic service to all sections.

128. The remaining sections of the Underwriting Division are known as the specialized sections.

129. *The Valuation Section* develops techniques regarding valuation and training of underwriting personnel, and handles all correspondence regarding valuation problems. It prepares illustrative case material relating to valuation activities and makes supervisory inspections of the Valuation Sections of field offices. It handles development and revision of the underwriting forms concerning valuation activities. It reviews and makes recommendations concerning disagreements between Chief Underwriters and Directors. Appraisals for other Governmental Departments are handled upon request by the Valuation Section. It also handles special technical assignments.

130. *The Location Rating Section* develops techniques for the rating of Adjustment for Non-Conformity, Locations, and

Economic Background Areas. It handles the development of underwriting forms, all correspondence with Underwriting Staffs in field offices, and the preparation of illustrative case material for these phases of underwriting activity. It performs supervisory inspections of the Valuation Sections of field offices, completes special technical assignments, and supervises the revision of Economic Background ratings.

131. *The Borrower Rating Section* develops techniques for the rating of individual and commercial borrowers and the credit analysis of subdivision sponsors and operative builders. It prepares illustrative case material and correspondence concerning these activities. It performs supervisory inspections of the Mortgage Risk Sections of field offices. It supervises the relations with credit agencies and performs special technical assignments. The Borrower Rating Section reviews and establishes ratings of corporate borrowers and determines the credit allotments in connection with borrowers applying for large lines of credit.

132. *The Property Rating Section* develops techniques for the rating of physical security and compliance inspections, cooperates with the Technical Division in the preparation and establishment of Property Standards and Minimum Construction Requirements, prepares illustrative case material, and handles correspondence concerning these activities. It enforces Property Standards, Minimum Construction Requirements, and regulations concerning new methods of construction. It performs supervisory inspections of the Architectural Sections of field offices, trains Valuation Sections in related subjects, and completes special technical assignments. The Cost Data Unit is a part of the Property Rating Section. This Unit, in cooperation with the Technical Division, develops techniques for cost estimation. It is responsible for the compilation of cost data in field offices. The compilation of this data is made by Cost Analysts permanently stationed in the field.

133. The four Sections described above, the Valuation, Location Rating, Borrower Rating, and Property Rating Sections, as well as the Administrative Section, report to the Director of the Underwriting Division.

134. The personnel comprising the Underwriting Division is divided into the following groups by titles:

a. Director
b. Underwriting Supervisors
  1. Senior Underwriting Supervisors
  2. Underwriting Supervisors
  3. Junior Underwriting Supervisors

c. Underwriting Examiners, who perform case binder review and field verification duties

d. Cost Analysts, who are responsible for construction cost data and who are permanently stationed in the field

135. Underwriting Organization in Insuring and Underwriting Offices. All underwriting activity in each Insuring and Underwriting Office is under the jurisdiction of a Chief Underwriter. He reports to the Director or Manager in charge of the office to which he is attached on all matters pertaining to discipline, organization, personnel, and routine, and to the Underwriting Division, Washington, D. C., on all matters pertaining to procedure, qualifications of underwriting personnel, technical standards, valuation, cost estimation, compliance inspections, research, and rating of mortgage loans. All correspondence of the Underwriting Staff directed outside the Insuring Office shall be signed by the Chief Underwriter, Manager, or Director. Section Chiefs are prohibited from signing outside correspondence.

136. The following paragraphs set forth prescribed duties and responsibilities of Underwriting Staffs. However, when conditions permit, the Director or Manager may arrange with the Chief Underwriter for the assignment of underwriting personnel to other duties such as educational activities.

137. Accompanying charts illustrate the underwriting organization for large, medium, and small volume offices. It is to be noted that in small offices one individual may perform the functions which are divided between several individuals in the larger offices. Thus, the Chief Underwriter in a small office may perform the duties of Preliminary Examiner, Chief Mortgage Risk Examiner, and Chief Valuator, in addition to his regular duties as Chief Underwriter. The actual functions assigned to an individual will be dictated by the volume of business handled by the office, with the viewpoint and motive of accomplishing the necessary underwriting activity in the most economical and expeditious manner possible.

138. Chief Underwriter. The Chief Underwriter shall organize the Underwriting Staff into four sections: the Architectural Section, Valuation Section, Mortgage Risk Section, and Review Section. The duties and responsibilities of the Chief Underwriter include the following:

a. The interpretation and application of standards, procedures, and techniques established by Washington Headquarters

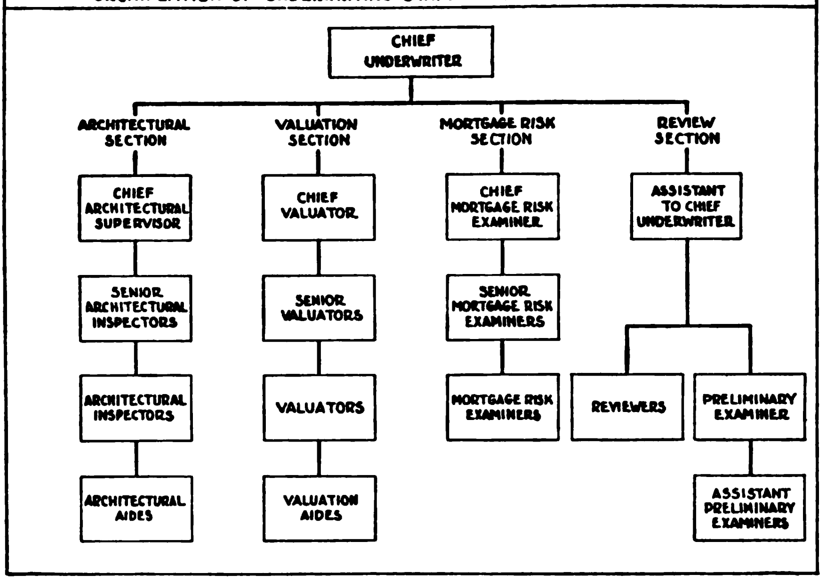
b. The quality of work, soundness and reasonableness of the decisions produced by the Underwriting Staff, and its efficiency of operation; and the completion of the Report of Chief Underwriter

c. Supervision of the training and instruction of staff, per diem, and fee personnel of the Underwriting Staff

d. The completion, upon specific request by Washington Headquarters, of special investigations and examinations of any property in which the Federal Housing Administration has an interest

e. Executive and administrative control of all activity of the Underwriting Staff to assure efficiency and economical operation

ORGANIZATION OF UNDERWRITING STAFF IN TYPICAL LARGE OFFICE



f. Coordination of the work of all sections in order that consistent, efficient, and economical handling of cases may result

g. Maintenance of an adequate production of work per section, expeditious processing of cases by the Underwriting Staff and efficient and economical organization of personnel

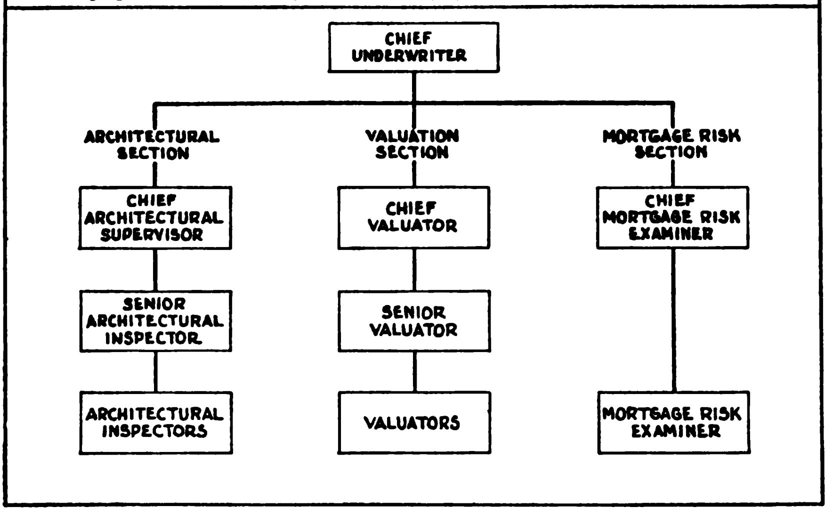
h. Making recommendations to the Director or Administrative Officer for the purpose of securing and maintaining an adequate and trained personnel in each Section in order that replacements or additions may be effected when and where warranted, and that unusual volume may be handled without over-taxing the capacity of the Sections, lowering efficiency, or adversely affecting the quality of work

i. The completion of the Report of Architectural Inspector, Report of Valuator, Report of Mortgage Risk Examiner, as well as Compliance Inspection Report, when such work is found advisable

j. Periodic field verification of cases processed and recordation of inspections on Case Review Summary Sheets, in order to obtain uniform underwriting decisions

139. Architectural Section. *The Chief Architectural Supervisor* is in charge of the Architectural Section and is responsible

ORGANIZATION OF UNDERWRITING STAFF IN TYPICAL OFFICE



to the Chief Underwriter for the quality of work and the efficient operation of this Section. His duties and responsibilities include the following:

a. Interpretation and application of architectural standards, procedures, and techniques established by Washington Headquarters

b. The quality and efficiency of work produced by the section as a whole and by individual members of the section

c. The completion of Reports of Architectural Inspector and Compliance Inspection Reports, the verification of the eligibility of physical security and its compliance with established standards, ratings of physical security, estimates of replacement cost of improvements, estimates of lished Ratings of Locations; maintenance of location cards and neighborhood maps; compilation, recordation and application of valuation data; and analysis of undeveloped subdivisions

d. Training of all staff, per diem, and fee personnel of the Valuation Section by instruction conferences, guidance, demonstration, and field supervision

e. Executive and administrative control of all activity within the section, planning of work, and coordination of effort necessary for the efficient and economical operation of the section

f. Coordination of the work of the section with all other sections of the office in order that consistent, efficient, and economical handling of cases may result

g. Maintenance of adequate production of work per man, expeditious processing of cases through the section and economical utilization of personnel, especially recognizing the capacity and qualifications of the individual Valuators in making case assignments

h. Personal preparation of Reports of Valuator, and Compliance Inspection Reports on request, when other duties permit

i. Periodic field verification of cases processed and recordation of inspections on Case Review Summary Sheets, in order to obtain uniform valuations and ratings

145. *Assistant Chief Valuator.* The Assistant Chief Valuator prepares Reports of Valuator; secures and correlates data for Economic Background Ratings; completes Established Ratings of Locations; makes analyses of undeveloped subdivisions and completes Chief Underwriter's Subdivision Reports; reviews reports prepared by other members of the Valuation Section, making recommendations to the Chief Valuator for approval of reports which appear satisfactory, changes in reports which appear questionable or unsatisfactory, and recommendations for revaluation and reanalysis when such action is considered desirable; compiles and records valuation data in accordance with instructions contained in Section 18, Compilation and Recordation of Data; renders assistance to the Preliminary Examiner; and renders Compliance Inspection Reports when requested. This title is used only in the largest offices.

146. *Senior Valuator.* The Senior Valuator completes Reports of Valuator; secures and correlates data for Economic Background Ratings; makes analyses of undeveloped subdivisions and prepares Chief Underwriter's Subdivision Reports; renders Compliance Inspection Reports when requested; compiles and records Valuation data in accordance with instructions contained in Section 18, Compilation and Recordation of Data; renders assistance to the Preliminary Examiner; and completes such other assignments as may be required by the Chief Valuator. While he handles routine cases, those applications involving special problems are referred to him. In the medium volume office, the Senior Valuator may perform, when necessary, the duties of the Assistant Chief Valuator set forth above.

147. *Valuator.* Staff, per diem, and fee Valuators complete Reports of Valuator; secure and correlate data for Economic Background ratings; complete Established Ratings of Locations; make analyses of undeveloped subdivisions and prepare Chief Underwriter's Subdivision Reports; compile and record valuation data in accordance with instructions contained in Section 18, Compilation and Recordation of Data; render assistance to the Preliminary Examiner; render Compliance Inspection Reports when requested; and complete such other assignments as may be required by the Section Chief.

148. *Valuation Aide.* It is the duty of a Valuation Aide to secure data for Economic Background Ratings, Established Ratings of Locations, and subdivision analyses; to assemble, brief, digest, and maintain the collected valuation data in usable form; to assist in the preparation of Report of Valuator under the close supervision of a Valuator or Chief Valuator; and to complete such other assignments as may be required by the Section Chief. However, the Valuation Aide shall not complete Report of Valuator.

149. **Mortgage Risk Section.** *The Chief Mortgage Risk Examiner* is in charge of the Mortgage Risk Section and is responsible to the Chief Underwriter for the quality of work and the efficient operation of this section. His duties and responsibilities include the following:

a. Interpretation and application of borrower rating standards, procedures, and techniques established by Washington Headquarters

b. The quality and efficiency of work produced by the section as a whole, and individually by members of the section

c. The completion of Reports of Mortgage Risk Examiner; maintenance of the Mortgage Insurance Allotment Record; verification of ratings of borrowers; and compilation of borrower rating data which include credit control files for multiple risk, corporate, and operative builder borrowers *d.* Training of personnel of the Mortgage Risk Section by instruction conferences, guidance, demonstration, and supervision

e. Executive and administrative control of all activity within the section, planning of work, and coordination of effort necessary for the efficient and economical operation of the section

f. Coordination of the work of the section with all other sections of the Office in order that consistent, efficient, and economical handling of cases may result

150. *Senior Mortgage Risk Examiner.* The Senior Mortgage Risk Examiner completes Reports of Mortgage Risk Examiner; maintains the Mortgage Insurance Allotment Record; compiles adequate borrower rating data which include credit control files for multiple risk, corporate, and operative builder borrowers; and completes such other assignments as may be required by the Section Chief. While he handles routine cases, those applications involving special problems are referred to him.

151. *Mortgage Risk Examiner.* Mortgage Risk Examiners complete Reports of Mortgage Risk Examiner; maintain the Mortgage Insurance Allotment Record; compile adequate borrower rating data which include credit control files for multiple risk, corporate, and operative builder borrowers; and complete such other assignments as may be required by the Section Chief.

152. Review Section. *The Assistant to the Chief Underwriter* is in charge of the Review Section and is responsible for the quality and efficiency of preliminary examination; the completion of work assigned by the Chief Underwriter, such as review of cases and the preparation of the Report of Chief Underwriter; and, under the direction of the Chief Underwriter, the coordination of the work of all sections of the Underwriting Staff in order that applications for insurance may be speedily and efficiently processed. He further serves as member of and secretary to the Review Committee.

153. *Reviewer.* It is the duty and responsibility of a Reviewer under the supervision of the Chief Underwriter or Assistant to Chief Underwriter to review cases, to prepare Report of Chief Underwriter, and to complete such assignments as may be required by the Chief Underwriter or the Assistant to the Chief Underwriter.

154. *Preliminary Examiner.* The Preliminary Examiner makes the initial survey of each application for insurance for the purpose of determining eligibility for further consideration by the Underwriting Staff, and selecting the procedure to be followed.

155. *Assistant Preliminary Examiner.* The Assistant Preliminary Examiner performs the duties of Preliminary Examiner as set forth above, under the direction and guidance of the Preliminary Examiner.

156. *Junior Preliminary Examiner.* The Junior Preliminary Examiner performs the duties of Preliminary Examiner as set forth above, under the direction and strict supervision of the Preliminary Examiner. This title is used only in the large offices.

157. *Review Committee.* The Review Committee reviews the reports made by the Architectural, Valuation, and Mortgage Risk Sections in those cases where unusual problems are present. The Review Committee is appointed by the Chief Underwriter who may also serve as a member. In large offices it usually consists of the Assistant to the Chief Underwriter, who acts as secretary, the Chief Valuator, the Chief Architectural Supervisor, and the Chief Mortgage Risk Examiner. In small Offices the Chief Underwriter appoints the committee from qualified Staff members who are available for such work.

158. Reassignment of Personnel. The following rules govern the reassignment of Underwriting Staff employees to duties:

a. No Architectural Inspector, Mortgage Risk Examiner, or Preliminary Examiner may complete and sign Report of Valuator, unless specifically authorized to do so by the Underwriting Division, Washington, D. C.

b. No Valuator, Mortgage Risk Examiner, or Preliminary Examiner may complete and sign Report of Architectural Inspector, unless specifically authorized to do so by the Underwriting Division, Washington, D. C.

c. Any member of the Underwriting Staff may complete and sign Compliance Inspection Reports, provided he is instructed to perform these duties by the Chief Underwriter and, in the opinion of the Chief Architectural Supervisor, is qualified to perform such duties. No specific authorization is necessary from the Underwriting Division, Washington, D. C.

The Chief Underwriter is held responsible for the enforcement of the above rules. However, the Underwriting Division is willing to consider requests for specific authorization where the individual employee possesses the necessary qualifications and experience.

159. Deputizing Staff Members. The Chief Underwriter may deputize the Chief Valuator, the Chief Architectural Supervisor, the Chief Mortgage Risk Examiner, or the Assistant to the Chief Underwriter to act in his stead during a temporary absence on his part from the office, or in the event he is ineligible to act on a given case, as for example, because of some personal interest he has had in the property involved. A Section Chief, with the approval of the Chief Underwriter, may deputize a Staff member to act in his stead during a temporary absence on his part from the office, or in the event he is ineligible to act on a given case. A deputy shall sign documents as follows:

HENRY JONES, Chief Valuator
By JOSEPH DOE, Deputy.

160. In certain cases it will be advisable for the Chief Underwriter to request the Underwriting Division, Washington, D. C., to designate a deputy to assume the Chief Underwriter's duties and responsibilities. This delegation of authority may apply to the processing of a single case, to a group of cases, or to all cases to be handled during a period of time.

161. Modification of Reports. The Chief Underwriter or his authorized deputy has the power to modify any and all Section reports, including individual feature ratings of the various categories, except that his power to raise valuations is limited in the manner outlined in paragraph 162 and the waiving of violations of Property Standards shall have the approval of the Chief Architectural Supervisor and the Chief Valuator. Each Section Chief or his authorized deputy has the power to modify reports prepared by personnel attached to his section, including ratings ascribed various features of the various categories. However, in accordance with the provisions of paragraph 162, the Chief Valuator is limited in altering valuations. The Chief Architectural Supervisor may not waive requirements of Property Standards except with the approval of the Chief Underwriter and Chief Valuator. In all instances where reports are modified in any manner by the Chief Underwriter or his deputy, or the Section Chiefs or their deputies, such modifications shall be made in accordance with the prescribed procedures set forth in Section 2, Underwriting Procedures.

162. The prescribed rules covering the authority to establish the Federal Housing Administration Valuation are as follows:

a. The Valuator makes an estimate of value in the Report of Valuator and submits it to the Chief Valuator.

b. The Chief Valuator shall submit an approved valuation. In determining his approved valuation he has four alternatives:

1. He may accept the estimate of value made by a Valuator and establish it as his approved valuation.

2. He may establish his approved valuation at an amount lower than the estimate of value made by a Valuator.

3. He may order another Valuator to render a new Report of Valuator and he may then establish, on the basis of either report, his approved valuation in accordance with the foregoing two alternatives.

4. He may, himself, complete a Report of Valuator based upon his own personal inspection and examination of the property.

c. The Chief Underwriter shall fix the Federal Housing Administration Valuation. The Federal Housing Administration Valuation is distinguished from the Chief Valuator's approved valuation in that it is final. In fixing the Federal Housing Administration Valuation the Chief Underwriter has four alternatives:

1. He may fix the Federal Housing Administration Valuation at an amount equal to, or less than the approved valuation submitted by the Chief Valuator. He may not fix the Federal Housing Administration Valuation at an amount in excess of the Chief Valuator's approved valuation, except as provided in (*3*) below.

2. In any case the Chief Underwriter may return the Report of Valuator to the Chief Valuator for reconsideration and may require him to cause a revaluation of the property to be made. In instances where revaluations are required, regular field investigations of the property shall be made. Such revaluations shall be reviewed in the established manner by the Chief Valuator.

3. The Chief Underwriter has the authority to fix the Federal Housing Administration Valuation at an amount in excess of the Chief Valuator's approved valuation, provided the increase does not exceed 5% of the Chief Valuator's approved valuation. In no case, however, may the increase exceed $500 in the aggregate. He shall not exercise this authority more than once in connection with any one property. It is recognized that valuations are based on judgment and cannot be regarded as precise measurements. Relative accuracy is obtained when the estimate of value falls between limits which are reasonable. The right of the Chief Underwriter to raise a valuation in an amount not to exceed 5% of the approved valuation, is based upon the assumption that any one of several estimates may be plausible provided it is within these limits. The purpose of granting such privilege is to correct inconsistencies from case to case. However, it is recognized that this privilege will be used in most instances when a discrepancy, within the limits of reasonableness, exists between the amount of loan usable by the mortgagor and the amount of loan permitted by the Chief Valuator's approved valuation. It shall be understood that the Chief Underwriter will be directly and personally responsible for the reasonableness of every Federal Housing Administration Valuation fixed by him.

4. In a case where the Chief Valuator cannot conscientiously supply an approved valuation that is satisfactory to the Chief Underwriter, the Chief Underwriter may completely relieve the Chief Valuator and the Valuation Section from all responsibility. He may then make a complete Report of Valuator, based on his own personal inspection and examination of the property and sign the report as "Chief Underwriter". In such a case his valuation is fixed as the Federal Housing Administration Valuation. All previous copies of Report of Valuator are marked "Superseded by Chief Underwriter's Report of Valuator". When a Chief Underwriter has thus preempted the prerogatives of the Chief Valuator and the Valuation Section, and has recommended the issuance of a commitment, he shall forward the complete Case Binder to the Underwriting Division, Washington, D. C., for review. This does not prevent the issuance of a commitment prior to the review of the case by the Underwriting Division.

163. Relationship of Underwriting Division to Underwriting Organization in Field Offices. The primary function of the Underwriting Division is to assist the underwriting organization in field offices in the conduct of underwriting activity. Procedures and techniques for the processing of applications are developed by this Division. A constant effort is made to eliminate duplication of effort and to improve the methods, techniques, forms, and guides to judgment required in underwriting analysis of applications, so that uniform attitudes and interpretations will be assumed and rendered by all members of the Underwriting Staff. The instruction and guidance extended by the Underwriting Division to the field underwriting organization is accomplished by correspondence and personal supervision. Correspondence takes the form of individual and general letters and, in emergency cases, telegrams and telephone conversations. All correspondence emanating from the Underwriting Division is over the signature of the Director of the Underwriting Division.

164. Personal supervision supplies assistance and guidance concerning all phases of underwriting activity including the following:

a. Underwriting decisions on particular cases
b. Interpretation of established underwriting practices
c. Interpretation of established underwriting techniques
d. The executive control of sections and entire Underwriting Staffs.

165. These activities are accomplished by two types of personal supervision: general underwriting supervision, and specialized underwriting supervision. For the purpose of ascertaining quality of work, obtaining information for training activity, and for other purposes, field verification of completed cases is made by Underwriting Supervisors and Underwriting Examiners.

166. Underwriting supervision represents an over-all check of the performance of an Underwriting Staff from the points of view of both quality and efficiency. An effort is made to solve the particular problems confronting Sections of the Underwriting Staff. Instruction is given to underwriting personnel, and an effort is made in the interest of efficiency and economy to improve the executive performance of Section Chiefs and Chief Underwriter. Underwriting supervision embraces all phases of personal assistance given by the Underwriting Division and is based on training activities rather than disciplinary control, except under extreme conditions. General underwriting supervision involves periodic inspections by Underwriting Supervisors to whom certain offices are assigned. General underwriting supervision is made for the purpose of analyzing over-all performance, coordinating activities, improving executive control and management, determining soundness of underwriting decisions, and general training in all phases of the activity of the Underwriting Staff. Specialized underwriting supervision involves occasional inspections by Underwriting Supervisors to whom are assigned specific underwriting techniques. Specialized underwriting supervision is usually made after the discovery of an important problem or need for training involving a specific technique and usually takes the form of a most intensive examination and instruction program for the particular section involved.

UNDERWRITING PERSONNEL

167. The underwriting organization is comprised of selected and duly accredited staff employees and fee consultants. No persons are permitted to engage in underwriting activities before they are duly accredited by the Underwriting Division, Washington, D. C. Staff personnel of the underwriting organization are compensated in accordance with established scales of salary determined by the responsibility and technical requirements of each position. Per diem personnel are compensated in accordance with established scales. Fee consultants are paid for each assignment completed, according to an established scale of fees.

168. The rules applying to salaried staff personnel shall apply to per diem personnel, except that paragraphs 189–191 in connection with the writing of hazard insurance shall apply to per diem personnel and paragraph 178 shall not apply.

169. **Salaried Staff Underwriting Personnel.** Applicants for positions on the salaried staff in the underwriting organization are expected to have the qualifications outlined in paragraphs below. These are presented here to guide the judgment of Directors and Chief Underwriters when recommending applicants for positions.

170. Applicant for the position of *Architectural Inspector* should have at least the following qualifications:

a. Educational Requirements. Academic and technical training of such nature that he has acquired a thorough and sound knowledge of residential design or construction, and business practice

b. Professional Background.

1. A number of years of actual experience in the design and supervision of residential construction of all classes, including:

(*a*) Record of successful field operation and supervision of actual construction of residential properties

(*b*) Record of routine architectural or practical training in design or cost estimating

2. Reputation for personal integrity and ethical conduct.

c. Personal Attributes. Flexibility of mind, power of analysis, sound judgment, industry and application, cooperative attitude, willingness to accept suggestions and training, resistance to outside influences, and pleasing personality

171. Applicants for the position of *Architectural Aide* should have at least the following qualifications:

a. Educational Requirements. Academic and technical training of such nature that he has acquired the groundwork for residential design or construction

b. Personal Attributes. Flexibility of mind, power of analysis, industry and application, cooperative attitude, pleasing personality, and willingness to learn

172. Applicant for the position of *Valuator* should have at least the following qualifications:

a. Educational Requirements. Academic and technical training of such nature that he has acquired a thorough and sound knowledge of residential valuation techniques, and business practices

b. Professional Background.

1. A number of years actual experience in the valuation of residential properties of all classes, including:

(*a*) Extensive general real estate experience, handling sales, rentals, or property management

(*b*) Practical knowledge and experience in residential construction

(*c*) Mortgage lending experience, including valuation of residential properties for mortgage-lending purposes

(*d*) Ability to apply properly, comparative and income capitalization valuation methods

2. Reputation for personal integrity and ethical conduct

c. Personal Attributes. Flexibility of mind, power of analysis, sound judgment, industry and application, cooperative attitude, willingness to accept suggestions and training, resistance to outside influences, and pleasing personality

173. Applicants for the position of *Mortgage Risk Examiner* should have at least the following qualifications:

a. Educational Requirements. Academic and technical training or experience of such nature that he has acquired a thorough and sound knowledge of business practices and credit analysis preferably in connection with mortgage lending

b. Professional Background.

1. A number of years actual experience in credit analysis, including:

(*a*) Ability to assemble credit and character data (*b*) Ability to analyze credit data and financial statements

(*c*) Mortgage lending experience, including fairly extensive knowledge of general real estate sales, rental and property management practices

2. Reputation for personal integrity and ethical conduct.

c. Personal Attributes. Flexibility of mind, power of analysis, sound judgment, industry and application, cooperative attitude, willingness to accept suggestions and training, resistance to outside influences, and pleasing personality

174. Applications for salaried positions on an Underwriting Staff shall be directed to the Insuring or Underwriting Office. Before appointment can be made, the Underwriting Division, Washington, D. C., must be able to certify that the applicant is qualified for the position and that additional personnel is necessary. Such certification shall be denied unless:

a. The applicant's experience meets with the requirements for the particular position

b. There is a definitely demonstrated need for additional personnel

c. The recommendation for appointment bears favorable comments and signatures of the Insuring Office Director or Manager, the Chief Underwriter, and the Chief of the Section in which the appointee will work

d. The file includes the proper forms accompanied by the required letters of recommendation

e. The file, in the case of an applicant for a position in the Valuation Section, other than Valuation Aide, includes a copy of a residential appraisal report in narrative form made solely by the applicant. Applicants will not be permitted to submit appraisal reports on forms such as those used by financial institutions or government agencies

f. The file, in the case of an applicant for a position in the Architectural Section other than Architectural Aide and Junior Architectural Aide, contains evidence that the applicant has designed or supervised the construction of residential buildings

175. Staff members are required to refuse assignments in connection with any case in which they have directly or indirectly any present or prospective personal interest. In such event, the Staff member shall promptly notify his immediate superior.

176. In no case shall a Staff member accept an assignment on a case or property if he has been previously employed by the mortgagee, the applicant, the borrower, the builder, the contractor, or the broker in connection with the same case or property. The rendering of an appraisal or similar report, not in connection with the pending mortgage transaction, shall not in itself, disqualify a Staff member.

177. Staff members are not allowed to engage in political activities or be candidates for or hold any political office except one of minor nature, and then only with the approval of the Underwriting Division, Washington, D. C. Such activities, even though purely informal, are prohibited where there is any possibility of causing embarrassment to the Federal Housing Administration.

178. No member of the underwriting staff in any Insuring or Underwriting Office shall—

a. Place, as agent, broker, or otherwise, any new hazard insurance on properties on which mortgages are insured or on which there is application for mortgage insurance

b. Endeavor to influence any party to a mortgage insured or submitted for insurance to place hazard insurance on the property involved, with or through him or any particular agent, broker, or company

c. Enter into any agreement or arrangement, formal or informal, with an insurance agent, broker, or company to furnish any information or do anything to assist in the writing of new hazard insurance on properties on which there are mortgages insured or applications for mortgages to be insured by the Federal Housing Administration

179. It is the intention of the Federal Housing Administration that none of its staff members shall use any information coming into their possession through the channels of the Administration for their own personal gain, or use it in any way that may interfere with the activities of private persons or corporations engaged in hazard insurance or other lines of business.

180. Fee Consultants. Fee Consultants are engaged to supplement the salaried underwriting staff. Fee Architectural Inspectors discharge the duties outlined for Architectural Inspectors. Fee Valuators discharge the duties of Valuators.

181. Fee Consultants may not be used except for the purpose of processing cases in remote locations at lower expense or to expedite the processing of cases when there is an unusual rush of business. They shall not be used unless the Chief Underwriter can demonstrate that such action is necessary either to save travel expense or to expedite the processing of cases during an emergency.

182. Applicants for approval and appointment to positions as fee consultants in the underwriting organization are expected to have the same qualifications as those outlined for salaried staff underwriting personnel. Applicants for approval as Fee Architectural Inspectors should have the qualifications outlined in paragraph 170. Applicants for approval as Fee Valuators should have the qualifications outlined in paragraph 172.

183. Application for appointment as fee consultant shall be directed to the Insuring or Underwriting Office. The procedure is the same as that outlined in paragraph 174 above.

184. Upon appointment as Fee Consultant, appointee shall be notified immediately that assignments to him, if any, may be made only when there is volume of business in an area beyond the ability of staff employees to handle properly, or when the property covered in the application lies at a remote location.

185. Reports and contents of reports made for the Federal Housing Administration by fee consultants are confidential and may be made known only to the Chiefs of Sections or the Chief Underwriter except with the authority and approval of the Chief Underwriter or Director. A Fee Architectural Inspector may make his findings known to the Valuator assigned the same case.

186. Fee consultants are required to refuse assignments in connection with any case in which they have directly or indirectly any present or prospective personal interest. In such event, the fee consultant shall promptly notify the Chief Underwriter.

187. A fee consultant shall not accept an assignment on a case or property if he has been previously employed by the mortgagee, the applicant, the borrower, or broker in connection with the same case or property. The rendering of an appraisal or similar report, not in connection with the pending mortgage transaction, shall not, in itself, disqualify a fee consultant.

188. Fee consultants are not allowed to engage in political activities or be candidates for or hold any political office except one of minor nature, and then only with the approval of the Underwriting Division, Washington, D. C. Such activities, even though purely informal, are prohibited where there is any possibility of causing embarrassment to the Federal Housing Administration.

189. No fee consultant shall:

a. Place, as agent, broker, or otherwise, any new hazard insurance on properties on which mortgages have been insured during the previous 12 months, or on which there is application for mortgage insurance

b. Endeavor to influence any party to a mortgage insured, or submitted for insurance, during the previous 12 months, to place hazard insurance on the property involved, with or through him or any particular agent, broker, or company

c. Enter into any agreement or arrangement, formal or informal, with an insurance agent, broker, or company to furnish any information or do anything to assist in the writing of new hazard insurance on properties on which there have been mortgages insured during the previous 12 months or applications for mortgages to be insured by the Federal Housing Administration

190. Fee consultants engaged in the business of soliciting or writing hazard insurance of any kind may rewrite policies they have previously written on properties involved in mortgage insurance applications, but their appointments as fee consultants for the Federal Housing Administration will be immediately terminated if they violate the instructions promulgated hereinabove.

191. It is the intention of the Federal Housing Administration that none of its fee consultants shall use any information coming into their possession through the channels of the Administration for their own personal gain, or use it in any way that may interfere with the activities of private persons or corporations engaged in hazard insurance or other lines of business.

192. Chief Underwriters and Section Chiefs shall take special precautions to avoid favoritism in the assignment of cases to fee consultants. The use of fee consultants is purely for the purpose of economy and efficiency. In cases where a large number of similarly constructed houses is involved such as in a subdivision or an operative builder's project, it is evident that use of the flat fee system based on the number of houses might lead to criticism. In all instances, decisions with respect to assignments shall be made by determining the most economical procedure. It is obvious that in most cases of this character, the use of staff personnel will prove to be more economical and, therefore, obligatory.

193. Training of Underwriting Personnel. It is the declared policy of the Federal Housing Administration to train its underwriting personnel. This is considered to be a continuing activity and to apply to all ranks within the organization. Fee consultants are trained in schools conducted by Underwriting Staffs and by instruction in the field while processing cases. Schools for instruction of staff men recently employed are conducted periodically. Each man, regardless of position, is instructed in every phase of underwriting principles, methods, and procedure. At the conclusion of each school, each individual is thoroughly examined and rated according to his ability, experience, and aptitude. Men found to be unsatisfactory are not retained. Such schools are under the direct supervision of the Underwriting Division, Washington, D. C.

PART I

SECTION 2

UNDERWRITING PROCEDURES

CONTENTS

Effective February, 1938
Federal Housing Administration

PART I

SECTION 2

UNDERWRITING PROCEDURES

PRESCRIBED PROCEDURES

201. The operations of the Underwriting organization comprise a variety of investigations and examinations of properties, prospective borrowers, and contemplated mortgage transactions. They are of three kinds, as follows: (*a*) the examination of the mortgage transactions offered for insurance to determine whether commitments to insure may be issued and to determine conditional requirements precedent to acceptance for insurance, (*b*) the inspection of properties after the issuance of commitments, but before insurance is granted, to determine whether there is compliance with the conditional requirements specified in the commitments, and (*c*) the examination of cases and the inspection of properties, after insurance of mortgages.

202. The prescribed procedures for non-farm mortgages insured or to be insured under the provisions of Section 203 of the National Housing Act are classified as follows:

a. Procedures prior to Commitment

1. Regular Procedure
2. Modified Procedure
3. Unknown Borrower Procedure
4. Wholesale Operation Procedure
5. Undeveloped Subdivision Procedure

b. Procedure after Commitment

1. Compliance Inspections

c. Procedures after Insurance

1. Partial Release Procedure
2. Damage Inspection Procedure
3. Substitution of Mortgagor Procedure
4. Tendered Property Inspection Procedure

APPLICATION OF PROCEDURES

203. The procedures described herein are prescribed to control and encourage the orderly conduct of business. They are described as applied by the typical large Insuring Office. Minor

variations from the prescribed procedures are permitted if the Chief Underwriter can demonstrate that such variations serve to adapt the procedures more effectively to local problems and to expedite the processing of cases.

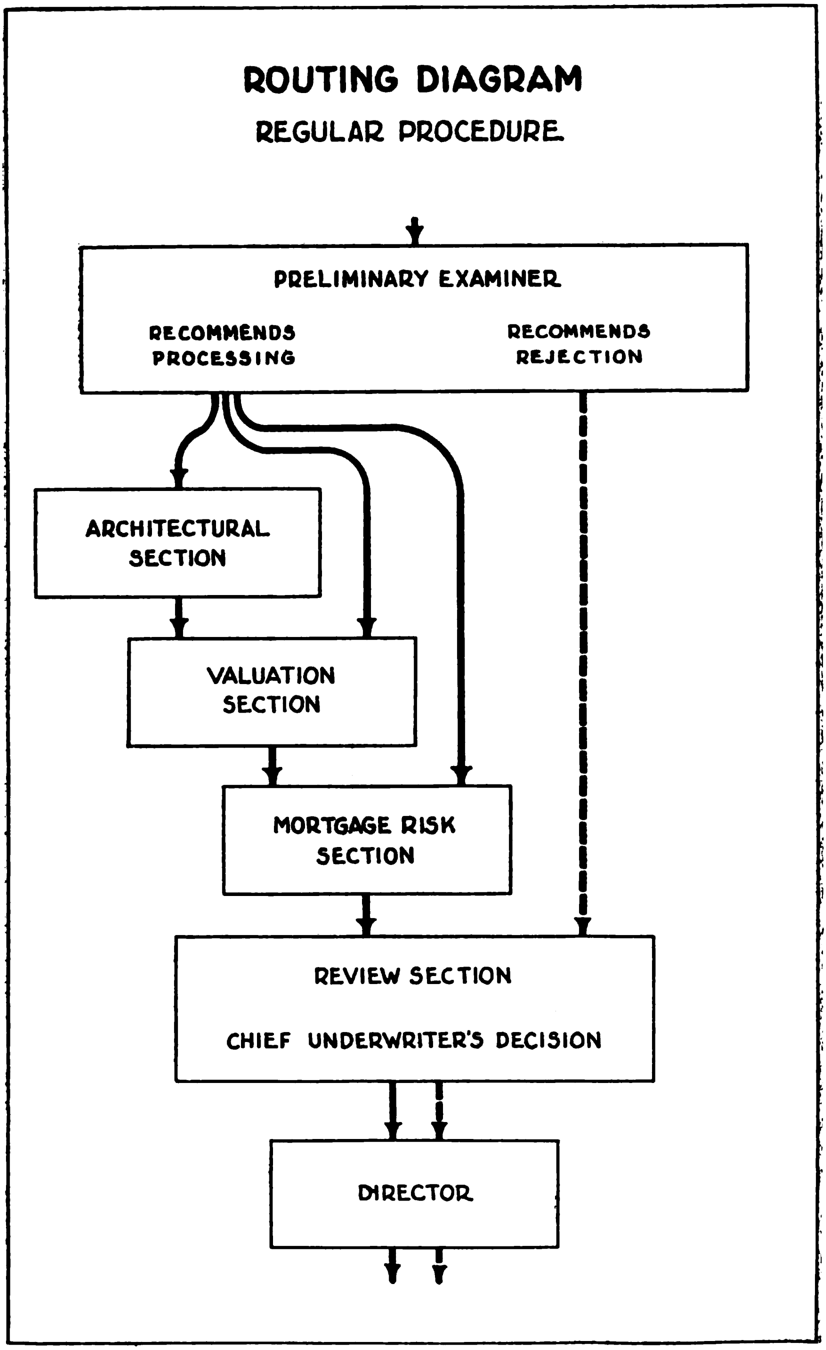
204. Regular Procedure. This procedure applies to all cases where a mortgagee makes application for formal commitment to insure a mortgage involving:

a. Proposed construction
b. Partially completed construction
c. Recently completed structures, where there is a probability of unsatisfactory building practices
d. Existing structures where repairs, alterations, or additions affecting major structural quality, are contemplated or required
e. Existing structures which present unusual architectural, structural, or cost problems

Regular procedure is described in paragraphs 220 to 240, and 246 to 266.

205. Modified Procedure. This procedure applies to all cases of existing construction where a mortgagee makes application for a commitment to insure a mortgage, with the exception of those cases involving existing construction as described in paragraph 204 *c*, *d*, and *e*, which are handled according to Regular Procedure. Modified Procedure differs from Regular Procedure only in that the case is not routed to the Architectural Section. Under Modified Procedure, the Valuation Section performs the duties assigned to the Architectural Section. Modified Procedure is described in Paragraphs 241 to 245.

206. Unknown Borrower Procedure. This procedure applies to those cases where a mortgagee makes application for a conditional commitment predicated upon the subsequent submission of an eligible mortgagor, except those cases which are processed under Wholesale Operation Procedure. Unknown Borrower Procedure eliminates analysis by the Mortgage Risk Section. In all other respects it is the same as Regular or Modified Procedure. If a conditional commitment is issued and if the mortgagee subsequently makes application for a formal commitment, naming a mortgagor, analysis is completed by the Mortgage Risk and Review Sections. If a notice of rejection is issued in connection with the named mortgagor, the status of the conditional commitment is not affected and another application for formal commitment may be entertained. Unknown Borrower Procedure is described in Paragraphs 269 to 270.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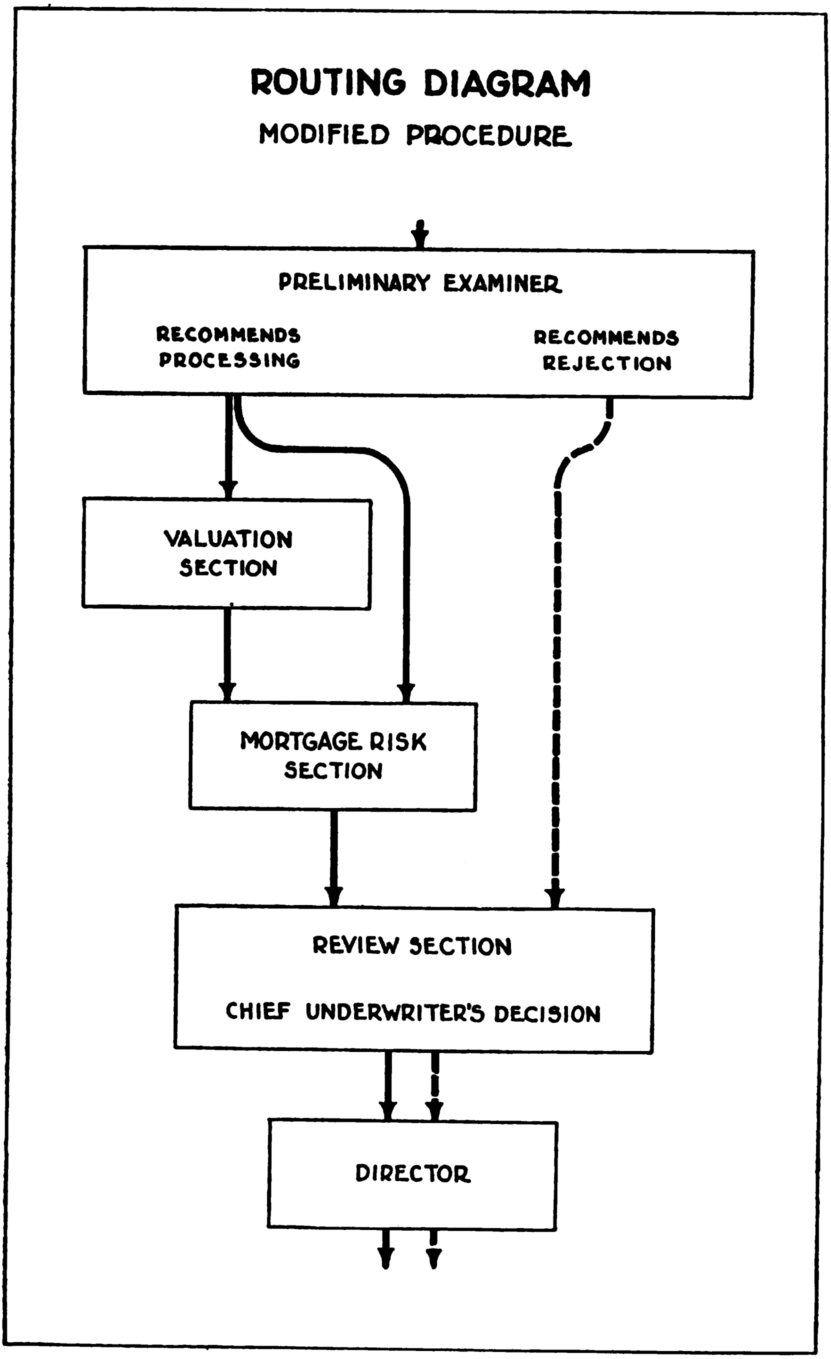
REGULAR PROCEDURE
PRELIMINARY EXAMINER
RECOMMENDS PROCESSING
RECOMMENDS REJECTION
ARCHITECTURAL SECTION
VALUATION SECTION
MORTGAGE RISK SECTION
REVIEW SECTION
CHIEF UNDERWRITER'S DECISION
DIRECTOR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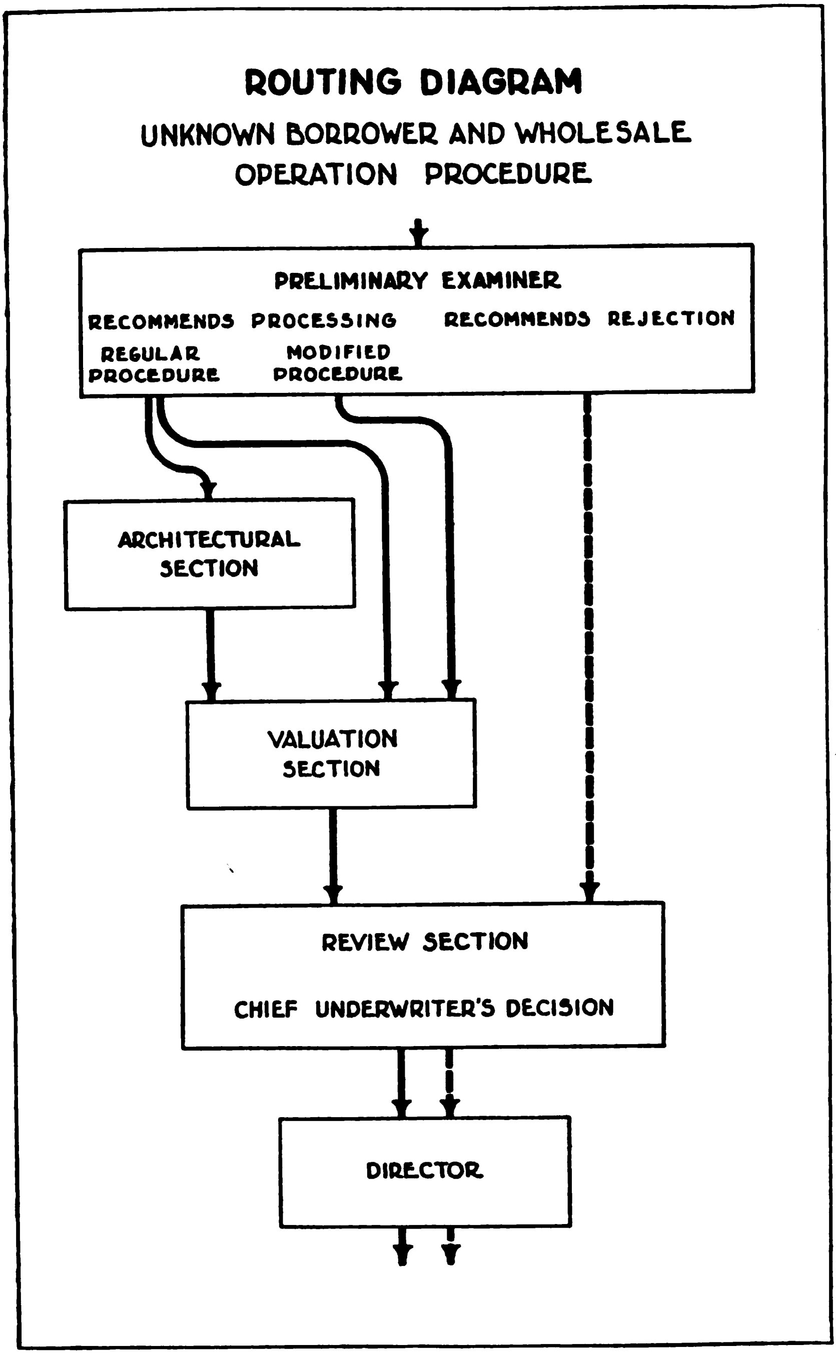
VALUATION SECTION
MORTGAGE RISK SECTION
REVIEW SECTION
CHIEF UNDERWRITER'S DECISION
DIRECTOR


ROUTING DIAGRAM
UNKNOWN BORROWER AND WHOLESALE OPERATION PROCEDURE
PRELIMINARY EXAMINER
RECOMMENDS PROCESSING
REGULAR PROCEDURE
MODIFIED PROCEDURE
RECOMMENDS REJECTION
ARCHITECTURAL SECTION
VALUATION SECTION
REVIEW SECTION
CHIEF UNDERWRITER'S DECISION
DIRECTOR

207. Wholesale Operation Procedure. This procedure applies to those cases where a mortgagee makes application for volume analysis of a large group of mortgages, or real estate owned, or both. If a conditional commitment is issued and if the mortgagee subsequently makes application for a formal commitment, naming a mortgagor, analysis is completed by the Mortgage Risk and Review Sections. If a notice of rejection is issued in connection with the named mortgagor, the status of the conditional commitment is not affected and another application for formal commitment may be entertained. Wholesale Operation Procedure is described in Paragraphs 271 to 273.

208. Undeveloped Subdivision Procedure. This procedure applies to the additional steps required to assist in the determination of location eligibility in undeveloped subdivisions, as defined in Paragraph 274. It serves two purposes. It provides the sponsor of undeveloped subdivisions with constructive suggestions, and it determines compliance with certain minimum eligibility requirements. The application of the procedure is mandatory. Undeveloped Subdivision Procedure is described in Paragraphs 274 to 282.

209. Compliance Inspection Procedure. This procedure applies to all cases of proposed or partially completed construction, and to those cases of existing construction where commitments have been issued containing requirements to complete additions, alterations, or repairs before insurance may be granted. Compliance Inspections are made to determine compliance with the requirements. Compliance Inspection procedure is described in Section 4.

210. Partial Release Procedure. This procedure applies to mortgages previously insured where the mortgagee requests approval to release a portion of the mortgage security. Partial Release Procedure is described in Paragraphs 283 to 287.

211. Damage Inspection Procedure. This procedure applies to those cases where the physical security under an insured mortgage has been damaged. In those cases where the mortgagee requests assurance that the correction of the damage is acceptable under the contract for insurance, the Federal Housing Administration is willing, after inspection, to render its opinion. Damage Inspection Procedure is described in Paragraphs 288 and 289.

212. Substitution of Mortgagor Procedure. This procedure applies to insured mortgages where the mortgagee requests permission to release the present mortgagor and to substitute another mortgagor. Substitution of Mortgagor Procedure is described in paragraph 290.

213. Tendered Property Inspection Procedure. This procedure applies in those cases where the mortgagee tenders a deed for debentures and certificate of claim. Prior to the acceptance of the deed an inspection is made for the following purposes: (*a*) to ascertain if the property is physically acceptable under the contract of insurance, (*b*) to present data and recommendations in connection with management and resale, and (*c*) to determine present eligibility of the security for an insured mortgage incidental to a resale transaction. Tendered Property Inspection Procedure is described in Paragraphs 291 to 294.

PROCEDURE IN PRELIMINARY EXAMINATION

214. Upon receipt of an application from an approved mortgagee it is recorded and the case routed to the Preliminary Examiner for a survey to determine whether the case appears eligible and in proper form for further analysis by the Underwriting Staff. If the Preliminary Examiner finds the case to be in proper form and satisfactory for further analysis, he routes it in accordance with the applicable procedure. The selection of the applicable procedure is determined in accordance with the instructions contained in subsequent paragraphs. If a deficiency incapable of correction is found, he shall recommend rejection of the case. If the case is not in proper form or a deficiency which may be remedied is found, he endeavors to have the condition corrected. If the condition is not corrected, he shall recommend rejection, but may suggest reconsideration upon correction of the existing deficiency.

215. Preliminary Examination results in the following:

a. A determination that the information presented by the mortgagee is, or is not, sufficient to make processing possible
b. A determination whether there is, or is not, possibility of underwriting analysis resulting in a recommendation for the issuance of a commitment to insure a mortgage
c. A selection of the applicable procedure

The instructions necessary to make the first two determinations are described in Section 3, Preliminary Examination. Those necessary to make the selection of the applicable procedure are described in the two paragraphs immediately following.

216. The mortgagee's application, if made on the proper form, establishes the type of procedure to be applied, with the exception that it does not indicate whether Regular or Modified Procedure is applicable. To ascertain whether Regular or Modified

Procedure is applicable, the Preliminary Examiner shall follow the instructions below:

a. All cases involving proposed or uncompleted construction shall be routed according to Regular Procedure

b. All cases involving repairs, alterations, or additions, affecting major structural quality, shall be routed according to Regular Procedure

c. All cases of existing construction involving unusual structural, architectural, or cost problems shall be routed according to Regular Procedure

d. All cases involving recently completed structures shall be routed according to Regular Procedure with the exception of the type of case described in Paragraph 218.

e. All other cases shall be routed according to Modified Procedure.

217. Under Regular Procedure each case is routed to the Architectural, Valuation and Mortgage Risk Sections simultaneously, so that the Valuator can make his investigations while the Architectural Inspector is preparing his report, and the Mortgage Risk Examiner can initiate his investigation.

218. It is a rule that all cases involving recently completed structures shall be routed according to Regular Procedure, except cases in which there is little probability of unsatisfactory building practices. These are routed according to Modified Procedure. The Chief Underwriter shall interpret this rule by analyzing building practices previously encountered in local communities. The Preliminary Examiner shall be guided by such interpretations. The purpose of the rule is to save unnecessary expense and to expedite the processing of cases.

219. If the Preliminary Examiner recommends rejection of a case, he records his reasons for rejection on FHA Form No. 2004a, FHA Form No. 2201a, or FHA Form No. 2201 Wholesale, and routes the file to the Chief Underwriter. If the Chief Underwriter approves the recommendation, he signs the report and routes the case to the Director. The Chief Underwriter or Director may order a case, recommended for rejection by the Preliminary Examiner, to be completely processed. Further instructions are given in Section 3, Preliminary Examination.

PROCEDURE IN ARCHITECTURAL SECTION

220. The Architectural Section is responsible for the completion of the Report of Architectural Inspector. Upon receipt of a case in the Architectural Section, the Chief Architectural Supervisor requests an Architectural Inspector to make an investigation and report the results on Report of Architectural Inspector, FHA Form No. 2014. The assignment is made by transmitting to the Architectural Inspector a copy of the property description which accompanied the application and one set of drawings and specifications, if any.

221. The report form indicates whether the property was improved at the time of inspection, and the report must show whether the Architectural Inspector made an inspection of an existing building or worked from drawings and specifications. The Architectural Inspector is required to make a thorough personal inspection of the premises when reporting on existing or partially completed structures. In addition to inspecting the main building, he is required to make a thorough inspection of the entire property and report on all other improvements, including driveways, garages, and other accessory buildings. Working drawings and specifications, if submitted with the application, are transmitted to the Architectural Inspector for his use in making analyses and risk ratings. In cases where drawings and specifications are not submitted, the Chief Architectural Supervisor shall advise the Architectural Inspector as to the nature and character of any sketches that shall accompany the report.

222. In cases where proposed new structures are to be erected the Architectural Inspector may not find it necessary to visit the site. The drawings and specifications are given him with the assignment of the case, and he bases his ratings and conclusions upon these documents and such other pertinent information as may be supplied by the Valuation Section.

223. The Architectural Inspector makes an estimate of the Replacement Cost of the Building Improvements in New Condition in accordance with the instructions in Section 16, Methods of Dwelling Cost Estimation, and Section 17, Application of Cost Estimation Methods, and indicates the distribution of his total estimate among the major items of which it is composed. He also makes the Rating of Physical Security in accordance with the instructions in Section 8, Rating of Property. After the Architectural Inspector completes and signs the report, he submits it to the Chief Architectural Supervisor for review.

224. The Chief Architectural Supervisor may modify a Rating of Physical Security by changing the individual feature ratings and, also, the Estimate of the Cost Required to Replace Building Improvements in New Condition when he believes that errors have been made. Such changes are made by the Chief Architectural Supervisor by notations in red on the report in the proper spaces. He shall indicate the date of such modifications and sign his initials

in red. The Chief Architectural Supervisor likewise may modify by notations the Architectural Inspector's estimate of remaining physical life if it appears incorrect. When possible, the Chief Architectural Supervisor should consult with the Architectural Inspector before making modifications. In all cases of new construction the Chief Architectural Supervisor shall qualify his approval by making a requirement, in the Report of Architectural Inspector, to the effect that the construction shall equal or exceed the Federal Housing Administration's minimum construction requirements. When the Chief Architectural Supervisor has completed his review he indicates his conclusions on the report and routes it to the Valuation Section.

225. The Architectural Section is responsible for the making of compliance inspections according to the procedure described in Section 4. The Chief Architectural Supervisor shall indicate in the space provided on the Report of Architectural Inspector the number and kind of compliance inspections which shall be required in order that the proper "Request for Compliance Inspection" cards can be transmitted to the mortgagee.

226. The Architectural Section makes cost data available for the use of Valuators in accordance with the instructions contained in Section 16, Methods of Dwelling Cost Estimation.

227. If a local office receives a block of applications involving simultaneous construction of identical building improvements, a first Report of Architectural Inspector, FHA Form No. 2014, shall be completed. The various Underwriting Sections may then, at the discretion of the Chief Underwriter, use the first report as a basis for the remaining reports which may be partially completed, provided sufficient cross references are made, and provided the cost estimate, the Rating of Physical Security, and the estimate of remaining physical life, the date made, signature, and such other information that is pertinent, are included on every report. Each report made by an Architectural Inspector shall be based on personal inspection of the building improvements or the drawings and specifications.

228. Rulings on New Methods of Construction. If a case is received in which the method of construction used is not customary or is not the generally accepted practice, it is required that the method shall receive the approval of the Technical Division, Federal Housing Administration, Washington, D. C., before a commitment may be issued. In general, request for approval of a new method of construction shall be made only in conjunction with an application for mortgage insurance. However, where there is assurance that the method of construction will have a broad market, or that it is contemplated that a number of houses will be built using the method, request for approval may be made without submitting an application for mortgage insurance. In the event the request for approval of the method of construction is made by the sponsors, it may be directed to the Technical Division, Federal Housing Administration, Washington, D. C. However, in the event the request for approval originates in the local office, it shall be forwarded to the Underwriting Division, Federal Housing Administration, Washington, D. C., over the signature of the Chief Underwriter.

229. In general, the following customary methods of construction are acceptable when good materials and good workmanship are applied.

a. Wood frame with wood siding or shingles
b. Wood frame with masonry veneer
c. Wood frame with stucco
d. Brick masonry or masonry block
e. Poured in place concrete
f. Adobe brick

230. The sponsor of a new method of construction is required to demonstrate that the method proposed is a dependable and durable type of construction. Evidence will usually be required to show adequate tests demonstrating the characteristics of the materials and method used. Evidence supporting the claims of the sponsor should be submitted with each request for approval together with descriptions, drawings, photographs, and samples of the materials. The presentation should include a description of the materials, their composition and size, and the method of assembling, together with other pertinent data. Attested reports of tests performed by recognized laboratories or authorities may also be included. Drawings should include wall sections showing footings, foundations, floor intersections, roof intersections, partitions, framing about doors, windows, and other openings, structural details, flashing, and other pertinent details. Drawings should indicate sizes and materials at a scale large enough to permit examination. Photographs should show the various stages of construction. Samples of materials not in common use should be submitted. If possible, a construction assembly either in full size or as a model should be submitted.

231. After a thorough examination, a ruling on the method of construction will be issued by the Technical Division for the guidance of all offices. Rulings concerning new methods of construction will be limited to those methods which have been tried out in actual construction by the erection of at least one house from which definite conclusions may be drawn regarding structural soundness, resistance to use, and resistance to elements. These rulings are not to

be construed as general acceptance of the types of construction. Each individual property, in order to qualify for an insured mortgage, shall be considered on its own merits.

REGULAR PROCEDURE IN VALUATION SECTION

232. The Valuation Section is responsible for completion of the Report of Valuator. Upon receipt of a case in the Valuation Section, the Chief Valuator requests a Valuator to make an investigation and report the results on Report of Valuator, FHA Form No. 2015. If the property classifies as a rental income dwelling in accordance with the instructions in Section 15, Valuation of Rental Income Dwellings, the Valuator completes both a Report of Valuator, FHA Form No. 2015, and a Supplementary Report of Valuator, FHA Form No. 2015a. The assignment is made by transmitting to the Valuator a copy of the property description which accompanied the application, together with one set of drawings and specifications, if any, and such pertinent data as may be available and necessary to complete the report. The Valuator is required to make a valuation of all the property described in his assignment unless he concludes that all the property described, considered as a whole, would not comprise eligible security. In such a case, he delineates and describes the eligible security and makes a valuation of it.

233. In Regular Procedure the Valuator does not fill in those parts of the report which cover items appearing on Report of Architectural Inspector, FHA Form No. 2014. The items left blank are marked "See 2014".

234. The Valuator is required to make a thorough personal inspection of the premises, and the surrounding neighborhood. He shall verify the statements made on FHA Form No. 2004a, FHA Form No. 2201a, or FHA Form No. 2201 Wholesale, but is not required to verify the correctness of the legal description. The Valuator shall compare the submitted photographs with the subject property for identification.

235. The Valuator shall have the Report of Architectural Inspector, FHA Form No. 2014, for use in completing his report. The Total Rating of Physical Security, as approved on the Report of Architectural Inspector, but not the individual feature ratings, shall be shown on the Report of Valuator. The Valuator is required to study any drawings and specifications until he is able to visualize the structure in completed condition. If the Valuator's inspection of the site discloses any unusual features which may affect the ratings and conclusions of the Architectural Inspector, he shall make memoranda of such conditions for guidance of the Architectural Section.

236. After the Valuator has made an investigation of the property and neighborhood, he is required (*a*) to make a rating of the feature, Adjustment for Non-Conformity, in accordance with instructions contained in Section 8, (*b*) to complete the computation of the Rating of Property, and (*c*) to make the Rating of Location in accordance with instructions contained in Section 9. The Rating of Location of the subject property shall be based on, and compared with, a comparable Established Rating of Location, FHA No. 2082, furnished to the Valuator with the assignment. In the event no comparable Established Rating of Location has been made, the Valuator shall make an Established Rating of Location in accordance with instructions continued in Section 9, and record his conclusions on FHA Form No. 2082.

237. The Valuator is required to make a valuation of the property which he delineates and describes as eligible security for an insurable loan. In making a valuation of an amenity income dwellings, he shall be guided by instructions contained in Sections 13 and 14 and report his conclusions on Report of Valuator, FHA Form No. 2015. In making a valuation of a rental income dwellings, he shall be guided by the instructions contained in Sections 13 and 15 and report his conclusions on Report of Valuator, FHA Form No. 2015, and on Supplementary Report of Valuator, FHA Form No. 2015a. In all cases he shall distribute the total valuation between the major items of which it is composed. In completing his report, a Valuator has access to all available information except the Mortgagee's Application for Insurance. When the Valuator has completed and signed the Report of Valuator, he submits it to the Chief Valuator for review.

238. The Chief Valuator reviews the conclusions in the Report of Valuator. He may modify them in certain respects. In no event may the Chief Valuator approve a valuation in an amount in excess of the valuation reported by the Valuator. Specific rules governing the authority to approve the Federal Housing Administration Valuation are prescribed in Section 1.

239. The Chief Valuator may modify the rating ascribed to Adjustment for Non-Conformity or features of the Rating of Location in the Report of Valuator, FHA Form No. 2015, and the features of the Rating of Earning Expectancy in Supplementary Report of Valuator, FHA Form No. 2015a, when he believes errors have been made. Such changes are made by the Chief Valuator by notations in red on the report in the proper spaces. He shall indicate the date of such notations and sign his initials in red. The Chief Valuator likewise may modify, by similar notation, the Valuator's estimate of remaining economic life if it appears incorrect. When possible, the

Chief Valuator should consult with the Valuator before making modifications. When the Chief Valuator has completed his review of the Report of Valuator, he indicates his conclusions on the report and routes it to the Mortgage Risk Section.

240. If an office receives a block of applications involving simultaneous construction of identical building improvements, a Report of Valuator shall be completed for each case.

MODIFIED PROCEDURE IN VALUATION SECTION

241. Modified procedure differs from Regular Procedure in that the case is not routed to the Architectural Section and Report of Architectural Inspector, FHA Form No. 2014, is not used. All portions of Report of Valuator, FHA Form No. 2015, and in certain cases, Supplementary Report of Valuator, FHA Form No. 2015a, are completed by the Valuator. Under Modified Procedure the services of the Architectural Section are used in an advisory capacity.

242. Upon receipt of a case in the Valuation Section, the Chief Valuator requests a Valuator to make an investigation and report his conclusions on Report of Valuator, FHA Form No. 2015, and, in addition, for cases involving rental income dwellings, Supplementary Report of Valuator, FHA Form No. 2015a. The assignment is made by transmitting to the Valuator a copy of the property description which accompanied the application, and such pertinent data as may be available and necessary to complete the report. Under Modified Procedure the Valuator completes the entire report form and is required to follow the procedure outlined for Architectural Inspectors and Valuators as described in Paragraphs 220 to 240, except as provided in Paragraph 244 below.

243. When the Valuator has completed and signed the report, he submits it to the Chief Valuator. The Chief Valuator reviews the conclusions in the Report of Valuator. He may modify the report in accordance with the authority granted to the Chief Architectural Supervisor and Chief Valuator under Regular Procedure. When the Chief Valuator has completed his review of the Report of Valuator, he indicates his conclusions on the report and routes it to the Mortgage Risk Section.

244. If investigation by the Valuation Section discloses that the property presents unusual architectural, structural, or cost problems, the Chief Valuator shall return the case to the Preliminary Examiner, indicating his reasons for requesting that the case be routed to the Architectural Section. The applicable procedure requiring analysis by the Architectural Section will be followed, when the case is rerouted.

245. It is desirable that the Valuator prepare rough sketches of certain types of structures. The Chief Valuator shall determine the types of structures in connection with which sketches shall be required and shall also determine the character of sketches to be made. Structures presenting complex problems may require detailed sketches and plot plans.

PROCEDURE IN MORTGAGE RISK SECTION

246. The Mortgage Risk Section is responsible for the completion of Report of Mortgage Risk Examiner. Upon receipt of the required reports in the Mortgage Risk Section, the Chief Mortgage Risk Examiner assigns the case to a Mortgage Risk Examiner for analysis. The Mortgage Risk Examiner reports his conclusions on Report of Mortgage Risk Examiner, FHA Form No. 2016, or No. 2016a, in accordance with instructions in Section 10, Rating of Borrower, or Section 11, Rating of Commercial Borrower. Staff personnel only are used for Mortgage Risk Examination.

247. Upon completion of Report of Mortgage Risk Examiner it is submitted to the Chief Mortgage Risk Examiner for review. The Chief Mortgage Risk Examiner may modify the Rating of Borrower by changing the individual feature ratings. Such changes are made by the Chief Mortgage Risk Examiner by notations in red on the report in the proper spaces. He shall indicate the date and such modifications and sign his initials in red. The Chief Mortgage Risk Examiner likewise may modify by similar notation the other conclusions in the report if he believes errors have been made. When the Chief Mortgage Risk Examiner has completed his review of the Report of Mortgage Risk Examiner, he indicates his conclusions on the report and the case is routed to the Review Section.

248. In some instances the Mortgage Risk Examiner may find that a mortgage would be eligible for insurance but in an amount less than applied for. If he determines that modifications of the reports within the prerogatives of the Chief Underwriter will make the mortgage eligible for insurance, the case shall be routed to the Review Section for consideration and decision. It is then returned to the Mortgage Risk Section for completion of the Report of Mortgage Risk Examiner.

249. There are instances in which the Chief Underwriter finds it necessary to suggest counter-proposals. Revision of the Report of Mortgage Risk Examiner is necessary when such counter-proposals involve major changes of the conditions and provisions of the mortgage described in the application. Such cases are returned to the Mortgage Risk Section, where modifications consistent with the conditions of the counter-proposal are made by indicating

the revised items in red. The revisions are initialed by the Chief Mortgage Risk Examiner and the case resubmitted to the Review Section.

250. Factual data reports on mortgagors are made available to the Mortgage Risk Section. These reports, when necessary, shall be obtained from commercial credit reporting agencies approved by Washington Headquarters. The Preliminary Examiner, cooperating with the Chief Mortgage Risk Examiner, may order a factual data report from one or more of the approved agencies at the time of preliminary examination, provided he recommends that the case be processed. In the event that the mortgagee submits an adequate credit report with the application, the securing of a factual data report may be unnecessary.

251. In cases involving commercial Borrowers, the Mortgage Risk Section makes an analysis in accordance with the instructions contained in Section 11 and reports the conclusions on Report of Mortgage Risk Examiner, FHA Form No. 2016a. All cases involving eligible Commercial Borrowers, other than operative builder borrowers, shall be completely processed, and the case containing all completed report forms with supporting data, shall be submitted to the Underwriting Division, Federal Housing Administration, Washington, D. C., for final decision before commitment is recommended.

252. Washington Headquarters establishes maximum credit allotments for individual borrowers and operative builder borrowers, and cases may be recommended for commitment within the limitation of the allotment, in the discretion of the Mortgage Risk Section. In the event that it is desired to increase the established allotment, in every instance the case involved shall be completely processed, except that the Chief Underwriter does not sign his report form. It shall then be submitted to the Underwriting Division, Washington, D. C., for decision. If more than one case is involved, only one shall be processed until Washington Headquarters renders its decision. The submission should be accompanied by:

a. A list of all other pending cases involving the same borrower, by serial number, showing the amount requested
b. A current financial statement in detail
c. A current operating statement in detail
d. A commercial report, or factual data report, or both
e. A detailed memorandum covering investigation as to the mortgagor's professional and financial standing and the economic soundness of the project
f. The original Mortgage Insurance Allotment Record, FHA Form No. 2211, showing all previous transactions

g. A list of the number and amount of outstanding conditional commitments, if any

253. The Mortgage Risk Section is responsible for maintaining on a current basis Mortgage Insurance Allotment Record, FHA Form No. 2211. An individual record shall be maintained for each mortgagor to whom more than one formal commitment has been issued.

PROCEDURE IN REVIEW SECTION

254. The Review Section is responsible for the preparation of the applicable form of Report of Chief Underwriter. The process of examining cases results in a recommendation by the Chief Underwriter to issue:

a. A formal or conditional commitment to insure the mortgage for the amount and term described in the application
b. A formal or conditional commitment to insure the mortgage for a modified amount or term
c. A formal or conditional commitment to insure the mortgage for the amount and term described in the application subject to specified conditional requirements
d. A formal or conditional commitment to insure the mortgage for a modified amount or term and subject to specified conditional requirements
e. A notice of rejection indicating the terms on which the case could be reopened.
f. A notice of rejection

If a formal commitment is recommended in connection with an eligible amenity income dwelling, Report of Chief Underwriter, FHA Form No. 2017a, is used. If a formal commitment is recommended in connection with an eligible rental income dwelling, Report of Chief Underwriter, FHA Form No. 2017b, is used. For every case where application for a conditional commitment is made, Interim Report of Chief Underwriter, FHA Form No. 2203, is used. For every case where rejection of an application for a formal commitment is recommended, Report of Chief Underwriter, FHA Form No. 2017c is used.

255. Upon receipt of the case in the Review Section, the Assistant to the Chief Underwriter, under the direction of the Chief Underwriter, examines all reports and substantiating data, noting any evident inconsistencies or irregularities in the space provided on FHA Form No. 2016 or 2016a. It is contemplated that upon completion of the examination by the Assistant to the Chief Underwriter, except in cases involving unusual problems requiring the decision of

the Chief Underwriter, a pencil copy of the applicable form of Report of Chief Underwriter will be filled out. This facilitates the typing of the final copy of report. All data required for the completion of the Report of Chief Underwriter is transcribed from the various reports to the applicable type of Report of Chief Underwriter. Proper wording for reject phrases or conditions under which a commitment may be issued should be written in full or indicated by proper symbols in their respective places on the applicable form.

256. Upon completion of the review and preparatory work by the Assistant to the Chief Underwriter, he makes comments in the space provided for that purpose on Report of Mortgage Risk Examiner, initials the Report of Chief Underwriter in the lower left hand corner and submits the case to the Chief Underwriter. He segregates those cases which he feels to be complete, except for the final analysis and signature of the Chief Underwriter, from those which he believes warrant consideration by the Review Committee. The Chief Underwriter decides which cases are to be submitted to the Review Committee. No record of the Review Committee's action is required. However, it is permissible for the committee to render signed statements setting forth opinions on a particular case. The Review Committee has no authority, and it has completely discharged its duty when it has expressed an opinion or made a recommendation to the Chief Underwriter. The comments and recommendations of the Review Committee shall be placed in the space provided for that purpose on the Report of Mortgage Risk Examiner. These include any comments and recommendations which the Review Committee considers sufficiently important to be brought to the attention of the Chief Underwriter. They may also contain opinions with respect to factors constituting unusual elements of risk, inconsistencies in reports, and suggested conditional requirements or counter-proposals. After completion of the analysis by the Review Section and after the Chief Underwriter has made his recommendation, the case is routed to the Director.

257. The Chief Underwriter fixes the Federal Housing Administration Valuation in accordance with the authority granted in Section 1. In those instances where the Chief Underwriter increases or decreases the approved valuation, he shall make an entry in red on Report of Valuator, FHA Form No. 2015, or 2015a, immediately below the approved Estimate of Value, as follows:

FHA Valuation $------, ------------, --------------------------
Date Chief Underwriter

If the Chief Underwriter considers increasing the valuation, but does not do so, he may make an entry in red on Report of Valuator, FHA Form No. 2015, or 2015a, immediately below the approved Estimate of Value, as follows:

Increase of valuation considered but not granted.

--------------------, ------------------------------
Date Chief Underwriter

The Chief Underwriter's entry shall be signed in either instance.

258. If any of the reports on the case are predicated on compliance with specified requirements, the Chief Underwriter shall base his findings and shall condition any recommendation for a commitment upon compliance with all such requirements, or return the report to the proper section for reconsideration.

259. In some cases it will be found that the mortgage described in the application, unless modified, will be unacceptable for mortgage insurance. Such cases require thorough analysis to determine the conditions and provisions of a counter-proposal which will make the mortgage eligible for insurance and which in all probability will be acceptable to the mortgagee and mortgagor. This requires the Chief Underwriter to study each case, particularly with respect to the borrower's financial position, and to determine that the counter-proposal, if made, will be usable without recourse to secondary financing, or other action which would violate provisions of this Manual or of the Administrative Rules and Regulations. If it is determined that a counter-proposal may be acceptable, it is incumbent upon the Chief Underwriter to recommend a commitment according to his findings. Such cases may be returned to the Mortgage Risk Section for modification consistent with the terms of the counter-proposal. When the cases are resubmitted to the Review Section, they are processed to completion in the regular manner. In the event that the Chief Underwriter determines that there is no possibility of the counter-proposal being acceptable, he shall recommend rejection and draft a memorandum to the Director, setting forth the amount, term, and conditions on which the case could be reconsidered, in order that the Director may be in a position to inform the mortgagee.

260. It is expressly understood that the Chief Underwriter is responsible for the final decision in every case, and that any duties assigned by him to an Assistant to the Chief Underwriter or other Staff members, are under his supervision. The Chief Underwriter will be held strictly accountable for the reasonableness of the Federal Housing Administration Valuation, for the correctness of his opinion regarding the economic soundness of the proposed mortgage transaction, or for the adequacy of the reasons advanced for his recommendation that a case be rejected.

261. If a case is approved by the Preliminary Examiner for further processing, the Underwriting Staff shall complete its analysis in all respects even though a "Reject" rating is approved by the Chief of any Section. However, if, in the discretion of the Director or Chief Underwriter, unusual circumstances justify final disposition prior to complete processing, completion of the investigations and reports is not necessary. In most cases, completion of the underwriting analysis is mandatory, so that all reasons for rejection may be ascertained. If the Preliminary Examiner recommends rejection of the case prior to processing, the Director or Chief Underwriter may disapprove the recommendation and order the case processed by the applicable procedure.

262. No waiver of a local minimum requirement of Property Standards may be granted unless the Chief Underwriter, Chief Architectural Supervisor, and Chief Valuator unanimously agree that the objective of the local minimum requirement, though not technically complied with, is fully accomplished by other means. To expedite the processing of such cases, the following procedure shall be adhered to in all instances. Under Regular Procedure in the Architectural Section, the Architectural Inspector, when encountering a violation of Property Standards, shall place an X mark in the Reject column of the Physical Security category feature affected, on the Report of Architectural Inspector. If he does not recommend waiver, the grid is completed in accordance with instructions in Section 8, Rating of Property. If waiver is recommended, he shall, in addition, place an X mark in the column which will properly reflect his conclusion. At this time he shall informally calculate the Rating of Physical Security to determine that the total rating will be acceptable provided the waiver is granted. If it will be acceptable under these circumstances, the Rating column for the feature affected is left blank, as is the Rating column for the Total Rating of Physical Security. The applicable paragraph numbers of Property Standards and the Architectural Inspector's reasons, justifying the recommendations for waiver, shall be entered under Remarks on the report form. Upon receipt of the report by the Chief Architectural Supervisor, he considers the recommendation. If he does not concur, the Rating of Physical Security is completed by writing in red the word "Reject" in the feature Rating column left blank by the Architectural Inspector, and likewise, the Rating column on the Total Rating of Physical Security line. If he concurs, he indicates such agreement with appropriate wording in the space provided for his remarks on the report form, but does not complete the Rating of Physical Security category. Upon receipt of a case in the Valuation Section, if the Chief Architectural Supervisor has recommended rejection because of the violation of Property Standards, the Valuator to whom the case is assigned will complete the Rating of Property in accordance with prescribed procedure. If the Chief Architectural Supervisor has recommended waiver of a violation of Property Standards, the Valuator to whom the case is assigned shall make the rating of the feature, Adjustment for Non-Conformity, on the Report of Valuator in accordance with the instructions in Section 8, but he shall not complete the Total Rating of Property. The Chief Valuator indicates his concurrence with the recommendation of the Architectural Inspector by appropriate wording in the space for his remarks on the report. If the Chief Valuator does not concur, he completes the Report of Architectural Inspector in a manner similar to that prescribed for the Chief Architectural Supervisor, and completes the Rating of Property on the Report of Valuator by writing in the word "Reject" in the Rating column on the Total Rating of Property line. Upon receipt of the case in the Review Section, consideration of the waiver is again made. If the recommendation has been concurred in by the Chief Architectural Supervisor and the Chief Valuator, and is also concurred in by the Chief Underwriter, the Rating of Physical Security on the Report of Architectural Inspector is completed by carrying over to the extreme right hand column of the grid, the figure in the square marked by the Architectural Inspector as his rating provided the recommended waiver is granted. The Total Rating of Physical Security is then obtained. The Rating of Property on the Report of Valuator is completed next by transcribing the Total Rating of Physical Security, deducting the Adjustment for Non-Conformity, if any, and determining the Total Rating of Property. In accomplishing this procedure, the notations shall be in red, dated, and signed by the Chief Underwriter. The completion indicates agreement on the part of the Chief Underwriter. If the Chief Underwriter does not concur, he completes the Report of Architectural Inspector and the Report of Valuator in a manner similar to that outlined for the Chief Architectural Supervisor and the Chief Valuator. Under Modified Procedure, the Valuator, when encountering a violation of Property Standards, proceeds in accordance with the instructions to Architectural Inspectors under the procedure described above. Upon receipt of the report by the Chief Valuator, he determines whether he will concur in the recommendation, and indicates his decision in the same manner as prescribed for the Chief Architectural Supervisor. If the Chief Valuator recommends waiver of the violation of Property Standards, the report is then routed to the Architectural Section for consideration of the waiver by the Chief Architectural Supervisor, who indicates his decision by appropriate wording in red in the space for the Chief Valuator's remarks. His decision shall be dated and signed. Treatment in the Review Section under Modified Procedure is the same as under Regular Procedure. When violations of requirements of Property Standards are waived, the serial number of the case and the paragraph number of the requirement waived shall be reported to the Underwriting Division, Federal Housing Administration, Washington, D. C., on the proper report form.

263. In those cases where additional reports supersede previous reports, the superseded report shall be marked with red "Superseded by New Report, ————, 193—," and signed by the Section Chief having jurisdiction. In cases where a Chief Valuator uses a first Report of Valuator in lieu of a second report, the unused report shall be marked in red, "Unused, ————, 193—," and signed. All superseded and unused reports shall remain in the case binder.

264. All reports and information incidental to the processing of cases by the Underwriting Staff, except the Compliance Inspection Report and the Report of Chief Underwriter, are strictly confidential and for the sole use of the Federal Housing Administration. Where reports are revised, the copy sent to the mortgagee shall indicate final decisions only.

265. The Valuation and Location Record Card, FHA Form No. 2073, is completed after a case has been processed in the Review Section. Upon completion it is routed to the Valuation Section for proper filing.

266. Occasionally, a mortgagee requests that a closed or pending case be reconsidered. Upon receipt of such a request, the case is routed to the Chief Underwriter who shall determine whether reconsideration is merited. If he determines that the case shall be given further consideration, he indicates the additional processing necessary.

DIRECTOR'S DECISION

267. Space is provided on the Report of Chief Underwriter for recording the approval of the Director. The Director may approve or disapprove the Report of the Chief Underwriter. He approves the Report of the Chief Underwriter by making appropriate entries upon the form, thereby authorizing the issuance of Commitment for Insurance, or Notice of Rejection. If the Director disagrees with the conclusions and decisions of the Chief Underwriter, he states the reason justifying his disapproval in a memorandum attached to the Report of Chief Underwriter and forwards the complete case binder to Washington Headquarters, together with all related data and correspondence. In addition, he acquaints the Chief

Underwriter with the reasons for his disapproval. The Chief Underwriter shall likewise forward to Washington Headquarters any supplementary information which he may deem helpful in gaining a full understanding of the conditions and matters to which the divergent points of view relate. When the case is received at Washington Headquarters, it is reviewed, and final decision is made and transmitted to the Insuring Office. A commitment for Insurance or Notice of Rejection shall not be issued in any case referred to Washington Headquarters until the final decision has been made and transmitted to the local office. The Deputy Administrator in charge of Title II makes final decision in cases of this character.

268. The Report of Chief Underwriter contains space for the Director to certify the processing time consumed for each case. Processing time is figured from the date of receipt of application to the date of signing commitment or notice of rejection, and is inclusive of the receipt date, the signature date, and of all intervening days including Sundays and holidays. For cases where conditional commitments were previously issued, the computed processing time shall include the two processing periods (a) before issuance of conditional commitment, and (*b*) after receipt of application for formal commitment.

UNKNOWN BORROWER PROCEDURE

269. Upon receipt of a Mortgagee's Application for Conditional Commitment, FHA Form No. 2201, it is recorded and the case routed to the Preliminary Examiner for a survey to determine whether the case appears eligible and in proper form for further analysis by the Underwriting Staff. If the Preliminary Examiner finds the case to be in proper form and satisfactory for further analysis, he routes it according to the applicable procedure, except that routing to and analysis by the Mortgage Risk Section is eliminated. Upon completion of the analysis by the Valuation Section, it is routed directly to the Review Section. Upon receipt of the case in the Review Section, the same analysis and procedure as described in Procedure in Review Section is applied except that:

a. There is no Report of Mortgage Risk Examiner, and therefore to determine the amount and term of Conditional Commitment to be recommended, a trial calculation of the Mortgage Pattern is used assuming the most plausible Rating of Borrower

b. The decision is recorded on Interim Report of Chief Underwriter, FHA Form No. 2203, for both eligible and ineligible cases

270. Subsequently, upon receipt of a Mortgagee's Application for Insurance, FHA Form No. 2004, it is recorded and the case routed to the Preliminary Examiner for examination to determine if the case is in proper form and eligible for analysis by the Mortgage Risk Section. If the Preliminary Examiner finds that the case is in proper form and satisfactory for further analysis, he routes it to the Mortgage Risk Section where it is processed in accordance with the procedure described in Paragraphs 246 to 253. Upon completion of the analysis by the Mortgage Risk Section, the case is routed to the Review Section where it is processed in accordance with procedure described in Paragraphs 254 to 266.

WHOLESALE OPERATION PROCEDURE

271. A Wholesale Operation originates when an approved mortgagee submits a Mortgagee's Application for Wholesale Operation, FHA Form No. 2281 Wholesale, to the Director in charge of the local Insuring Office. If the Director recommends the acceptance of the application, all copies are forwarded to Washington Headquarters. If the recommendation of the Director is accepted by the Administrator, the original copy of the application is transmitted to the Underwriting Division, Federal Housing Administration, Washington, D. C., for attention. The duplicate and triplicate copies are returned to the Director who retains the duplicate for the local office files and transmits the triplicate to the applicant mortgagee.

272. Upon receipt of an accepted application, the Underwriting Division communicates with the Director by correspondence or by special visit of an Underwriting Supervisor, and in cooperation with the local Underwriting Staff outlines a procedure adapted to the circumstances surrounding the portfolio to be examined and to the Underwriting Staff's facilities. If these facilities permit, cases are processed by the local Underwriting Staff. If not, a Wholesale Operation Office is established, to which a member of the local Underwriting Staff is assigned as Acting Chief Valuator. The Director and Underwriting Supervisor arrange for a sufficient number of Valuators, either by assignment from the staff or by the appointment of qualified per diem personnel. In addition, they contact the mortgagee relative to the details of the Operation. The Underwriting Supervisor assists in organizing the Operation, training Valuators, reviewing cases, contacting the mortgagee, and coordinating the activities in the Wholesale Operation Office with those in the local office. He also maintains general supervision over the Operation until it is completed.

273. The important features of Wholesale Operation Procedure as usually applied, are described below. The mortgagee selects the properties to be analyzed and the staff personnel completes a preliminary survey. This survey consists of an examination of the mortgagee's files and a field check of the properties involved which embraces the eligibility tests of Preliminary Examination. The field check contemplates a cursory inspection of the exterior and no inspection of the interior of the properties. A list of those properties acceptable for further examination is prepared and a notation is made indicating which properties shall be processed under Regular Procedure because they present unusual architectural, structural or cost problems. From the list of acceptable properties the mortgagee prepares Mortgagee's Application for Conditional Commitment, FHA Form No. 2201 Wholesale, for each case it desires to submit for further examination. Upon receipt of a Mortgagee's Application for Conditional Commitment, it is recorded and the case is routed to the Preliminary Examiner. The Preliminary Examiner routes the case in accordance with Unknown Borrower Procedure described in Paragraphs 269 to 270. The notations made during the preliminary survey shall be used by the Preliminary Examiner to guide his routing decision. The case is then completely processed in accordance with Unknown Borrower Procedure, except that conditional commitments when issued shall be in the maximum amount and term consistent with sound underwriting practice.

UNDEVELOPED SUBDIVISION PROCEDURE

274. An Undeveloped Subdivision is defined as a tract of raw land which it is proposed to subdivide into smaller parcels and to market as an area predominantly for residential purposes; or a subdivision or portion of a subdivision, either old or new, in which an insufficient number of homes exist to establish the character of the neighborhood and which is in such a state of development and unified control as to make major changes in layout, restrictions, or other conditions practicable.

275. Opinions as to the eligibility of Undeveloped Subdivisions are not issued by the Administration in any instance, nor are subdivisions either approved or disapproved. However, the Administration welcomes the opportunity of rendering assistance to subdividers in the form of advice and suggestions for the improvement of subdivision projects. Therefore, it is advantageous to developers to submit their contemplated programs for analysis before the point is reached where changes would be difficult or impossible to effect.

276. If the undeveloped subdivision has an area of less than five acres and is immediately adjacent to an established eligible

neighborhood, and if there is evidence or sufficient assurance that the small tract will be laid out, developed, restricted and provided with streets and utilities in an acceptable manner, the special procedure described below is not required. However, it is always desirable to make constructive suggestions which will assist in improving such tracts.

277. An undeveloped subdivision may come to the attention of the Underwriting Staff in either of two ways, (*a*) through an application for mortgage insurance, or (*b*) through a request by the sponsor for advice and suggestions. In either event the applicant or sponsor is requested to furnish the local office with completed Subdivision Information Form, FHA No. 2084, and certain required exhibits.

278. **Application for Commitment.** Where one or more applications for mortgage insurance involving property located in an undeveloped subdivision are received accompanied by the Subdivision Information Form and the required exhibits, the applications are recorded and the cases routed to the Preliminary Examiner. If the Preliminary Examiner finds that the undeveloped subdivision has not been analyzed previously and one of the cases is in proper form and satisfactory for further analysis, he routes it in accordance with the applicable procedure. The other cases are held in Preliminary Examination, pending final disposition of the case routed for processing.

279. Upon receipt by the Valuation Section of a case involving a property located in an undeveloped subdivision which has not been analyzed previously, suitable numbers for filing purposes shall be assigned the subdivision file. In addition to the applicable procedure, Undeveloped Subdivision Procedure shall be applied. The Chief Valuator assigns the case to a Valuator qualified to analyze undeveloped subdivisions. The Valuator shall proceed as follows:

a. Examine Subdivision Information Form, FHA Form No. 2084
b. Inspect the subdivision
c. Complete Subdivision Information Form where necessary and make initialed corrections in red
d. Prepare Chief Underwriter's Subdivision Report, FHA Form No. 2084a
e. Prepare Established Rating of Location, FHA Form No. 2082, indicating thereon the name and number of the subdivision file. In making the Established Rating of Location the Valuator shall be guided by the instructions contained in Section 9, Rating of Location

f. Complete Report of Valuator, FHA Form No. 2015, and in certain instances, FHA Form No. 2015a. Valuations and ratings are predicated upon compliance with requirements embodied in the report

g. Prepare, where advisable, a letter to the mortgagee explaining the requirements of the commitment

h. Assemble the file, for eligible cases only, and prepare a letter for transmittal to the Underwriting Division, Federal Housing Administration, Washington, D. C.

i. Submit the entire file to the Chief Valuator for review, and any necessary modifications, and the file is then routed to the Chief Underwriter.

280. The Chief Underwriter shall review the file and have the proper report form of Chief Underwriter prepared. In those cases involving locations which cannot be made eligible he shall recommend rejection without reference to Washington Headquarters. In all other cases he shall leave the report form of Chief Underwriter unsigned, and upon approval of the other reports forward the complete case and subdivision file to the Underwriting Division, Federal Housing Administration, Washington, D. C. When the instructions are received from Washington Headquarters, the Chief Underwriter shall dispose of the case in accordance therewith. If a commitment is recommended, subsequent recommendations for commitments shall contain all unfulfilled conditions of the original recommendation for commitment. No subdivision shall be approved nor shall any opinion be given as to its eligibility. The only definite decision which can be given is in the form of a commitment or rejection relative to the eligibility of a specific application for mortgage insurance.

281. Request for Suggestions. When a request for suggestions accompanied by Subdivision Information Form and required exhibits is received, it is routed to the Valuation Section and assigned to a Valuator qualified to analyze undeveloped subdivisions. The Valuator proceeds in the same manner as when an application for mortgage insurance is involved, except that a Report of Valuator is not prepared. He prepares, for the approval and signature of the Chief Underwriter, a letter of suggestions for improving the subdivision or a letter discouraging its development. After review and approval, the Chief Valuator routes the file to the Chief Underwriter, who analyzes the data. If the subdivision does not appear sound or otherwise suitable for improvement at the time of consideration, the Chief Underwriter shall send the sponsor a letter discouraging development. If the development of the subdivision appears justified, particular attention shall be given to the letter of suggestions. Each letter of suggestions shall make specific mention of the following subjects:

a. It shall state that Circular No. 5, "Subdivision Standards" and Technical Bulletin No. 5, "Planning Neighborhoods for Small Homes" are enclosed and contain constructive suggestions

b. It shall state that the recommendations in the letter are suggestions only, and fulfillment will not necessarily render any property located in the tract eligible for mortgage insurance

c. It shall state that following the suggestions will, in the opinion of the Administration, serve to create a more sound and stable neighborhood

282. When the Chief Underwriter has completed his analysis, the complete file is forwarded to the Underwriting Division, Federal Housing Administration, Washington, D. C. After review, the Chief Underwriter is notified as to the advice or suggestions to be transmitted to the sponsor. If subsequently an application, involving a property in the subdivision, is received it shall be considered on its merits and processed in accordance with the applicable procedure. Consideration shall be given to previous suggestions when they have a direct bearing on eligibility.

PARTIAL RELEASE PROCEDURE

283. Mortgagees may request approval to grant release of a portion of the property securing an insured mortgage. Partial releases are permitted without invalidating the mortgage insurance, provided there is compliance with the requirements. The entire net proceeds received by the mortgagor, after deducting the necessary expenses in collecting such proceeds, must be applied to the principal of the mortgage or to the permanent improvement of the real estate covered by the mortgage. Any loss in the value of the security as a result of the release must be adequately compensated for by an equivalent reduction of the mortgage principal or an equivalent improvement of the remaining security. In addition, it is required that the property, after severance, shall remain a natural and typical real estate entity.

284. Insuring Offices shall not give consent to a partial release of security until written approval is received from Washington Headquarters.

285. Request for partial release shall be submitted by the mortgage in writing to the local office, and shall include the following:

a. Statement describing the condition of the mortgage loan
b. Complete description of the property to be released
c. Reasons for requesting such release
d. Sketch of the property showing dimensions, portion to be released, location of improvements, relation to surrounding properties, and proposed alterations
e. Specific consideration involved in the sale or transfer of the portion to be released
f. The amount intended to be applied to principal
g. Contemplated use of any land to be released
h. Restrictions to be imposed upon the released portion, if any
i. Adequate drawings and specifications together with estimates of cost for any alterations or additions that are proposed for the mortgaged property remaining

286. When a request for partial release is received, it shall be referred to the Chief Underwriter to determine whether it meets the general requirements. All requests found deficient in any of these requirements shall be declined by the local office with an appropriate letter to the mortgagee. In all other cases, the Chief Underwriter shall cause an examination of the property to be made by the Valuation Section, and, if necessary, by the Architectural Section. The request shall be finally submitted to Washington Headquarters for approval, with the following information and data:

a. The written request of the mortgagee for such release, together with the information and data outlined in Paragraph 285 above
b. Estimate of value of mortgaged property as it is immediately prior to partial release
c. Estimate of value of property which would remain subject to the mortgage lien after partial release, such estimate to include alterations and improvements, if contemplated
d. Estimate of value of the portion of the property to be released
e. Adequate justification of each value estimate
f. Comments on the eligibility of the remaining property, considering contemplated alterations and additions
g. A recommendation of the restrictions to be imposed upon the land to be released

h. Statement of the effect of the transaction upon the marketability of the remaining property and surrounding properties

i. Certification by the Chief Underwriter, and approval by the Director or Manager in charge of the Insuring Office, that the proposed release does not adversely affect the interests of the Federal Housing Administration

j. Recommendation of the Chief Underwriter and approval by the Director or Manager in charge of the Insuring Office. Such recommendations shall be specific in approval or disapproval of the request and in stating all conditions to be imposed

287. A decision will be rendered by Washington Headquarters after a review of the complete file, and the Insuring Office will be informed of the decision so that it can be transmitted to the mortgagee.

DAMAGE INSPECTION PROCEDURE

288. In cases where the physical security under an insured mortgage has been damaged, the mortgagee may request assurance that the repair of the damage is acceptable under the contract for insurance. Upon receipt of a request from a mortgagee for an opinion, as to the acceptability of contemplated or completed repairs to a property damaged by casualty, it is referred to the Chief Underwriter. The Chief Underwriter determines if the request is in proper form and the nature of the inspection necessary to formulate an opinion. If the property securing the mortgage is considerably damaged, suitable drawings and specifications shall be required. If the damage is of little consequence, the Chief Underwriter, with the advise of the Chief Architectural Supervisor, shall decide whether an inspection is necessary. An inspection shall be made in all instances where the damage is in a substantial amount. In the latter instance the Chief Underwriter shall order the preparation of Report of Architectural Inspector and Report of Valuator in accordance with instructions in Paragraphs 220 to 240. The reports shall be made as of the time of the completion of the repairs. In addition, the Architectural Inspector and Valuator are required to express an opinion in writing on their report as to whether the property will be equally or more acceptable for mortgage insurance after completion of the repairs than it was immediately before the damage. In some instances, it may be necessary to complete two reports, one indicating conditions that existed prior to damage, and the other indicating conditions after repair.

289. The Chief Underwriter bases his opinion on the reports rendered. To warrant a favorable opinion, the property shall be equally or more acceptable for mortgage insurance than it was immediately before the damage. The Chief Underwriter shall render a complete opinion in memorandum form to the Director, in order that the Director may be in a position to properly inform the mortgagee.

SUBSTITUTION OF MORTGAGOR PROCEDURE

290. Upon receipt of Consent to Release of Mortgagor, FHA Form No. 2210, and the Mortgagor's Statement on FHA Form No. 2004, they are recorded and routed to the Mortgage Risk Section with the file on the subject case where analysis is made in accordance with the procedure described in paragraphs 246 to 253. Upon receipt of the case in the Review Section, the Chief Underwriter reviews the Report of Mortgage Risk Examiner and indicates his recommendation in the space provided for remarks by the Review Committee on FHA Form No. 2016 or 2016a. The Chief Underwriter shall decide whether to recommend release and substitution of mortgagor. He shall base his recommendation on a recalculation of the Mortgage Pattern, using exactly the same ratios and category ratings previously indicated, except that the rating of the substituted mortgagor shall be used. The Chief Underwriter shall make a favorable recommendation only if the Rating of the Mortgage Pattern, as revised, equals 50 points or more. The case is then routed to the Director for his approval. A recommendation for rejection does not alter the former status of the case.

TENDERED PROPERTY INSPECTION PROCEDURE

291. In those cases where the mortgagee tenders a deed for debentures and certificates of claim, the Tendered Property Inspection Procedure is initiated. Upon request of the Director, the Chief Underwriter shall have the Architectural and Valuation Sections make an inspection of the property and complete the necessary reports and memoranda. This is done by both Sections simultaneously.

292. The Architectural Section shall complete Report of Architectural Inspector, FHA Form No. 2014, in accordance with the instructions contained in Paragraphs 220 to 231. In addition, the Architectural Inspector is required to report his conclusions with respect to the following:

a. The physical condition of the property, including a detailed description of any damage that would prohibit the Administrator from accepting the property under the Regulations in accordance with which the mortgage was insured
b. The apparent cause of any damage described under (*a*) above
c. A list of repairs, if any, required to make the property acceptable to the Administrator. Such list should be in the nature of specifications, with drawings if necessary, and with an itemized cost estimate of required repairs.
d. Specifications and estimates of cost of the repairs required by the Valuator in the event they differ from the list specified for acceptability on Report of Architectural Inspector, FHA Form No. 2014

293. The Valuation Section shall complete Report of Valuator, FHA Form No. 2015, or both 2015 and 2015a, in accordance with instructions in Paragraphs 232 to 240. In addition, the Valuator is required to report his conclusions with respect to the following:

a. General market conditions in the economic background area, and immediate neighborhood
b. The customary local methods of selling and renting properties of this type
c. Any additional information concerning the monthly rental value as reported, stating rental value in present condition and rental value reconditioned
d. The advisability of offering the property for sale in its present condition, and an estimate of the price obtainable
e. Itemized list, together with estimate of cost, of repairs recommended to make the property salable
f. Estimate of price obtainable for the property assuming recommended repairs are made, with explanation if different from Estimate of Value as stated in the report form
g. Possible effect of listing at the prices estimated to be obtainable, items (*d*) and (*f*) above, on the market for other properties in the locality
h. All other information which would be of assistance in developing a management program for the property

294. Upon receipt of the completed reports the Chief Underwriter shall carefully study the file. Whenever feasible, he shall make a personal inspection of the property. In every case the

Chief Underwriter shall comment on the recommendations contained in the file. If the property and location are eligible for mortgage insurance, the Chief Underwriter shall state for what amount and term, assuming a satisfactory purchaser. The file is then transmitted to the Director. He shall forward the complete file to Washington Headquarters with any additional comments and recommendations. Other problems, such as the supplying of a recommended list of brokers and the advertising for bids for reconditioning contracts, shall be handled by the Director under the supervision of the Washington Headquarters. The Underwriting Staff shall assist, when requested, in such matters as compliance inspections and periodic reinspections.

PART I

SECTION 3

PRELIMINARY EXAMINATION

CONTENTS

Effective February, 1938
Federal Housing Administration

PART I

SECTION 3

PRELIMINARY EXAMINATION

METHODS OF PRELIMINARY EXAMINATION

301. Purpose of Preliminary Examination.—Preliminary examination is the initial survey of an application and occurs as soon as possible after the receipt of the application by the Underwriting Staff. Preliminary examination is made for the following purposes:

a. To save mortgagors unnecessary expense for examination fees in cases which are obviously ineligible.
b. To save the Federal Housing Administration the expense of completely processing ineligible cases.
c. To prevent delays in processing, resulting from incomplete presentations.
d. To ascertain whether certain legal requirements, including the suitability of contract documents, are complied with before the issuance of commitments for mortgage insurance.

302. Examination fees are charged by tho Federal Housing Administration to offset the cost of processing cases. Applicants who submit unacceptable cases are required to bear a portion of the expense, but only when the actual expense is incurred subsequent to preliminary examination. Preliminary examination which results in rejection of the case before additional expense has been incurred qualifies the applicant for refund of the examination fee. It follows that preliminary examination, to be fair to the applicant, should be thorough.

303. General Instructions.—The examination requires the following two operations:

a. An examination to ascertain (*1*) whether the case presents conditions which obviously render it ineligible, thereby making it inadvisable to require processing by the Architectural, Valuation, and Mortgage Risk Sections of the Underwriting Staff, or (*2*) whether it seems that the completion of such processing may result in a sound insured mortgage.

b. An examination to ascertain whether the application forms and accompanying exhibits are complete or whether it is necessary to secure corrections and amplifications which will enable the case to be given proper consideration. When necessary, this operation is followed by one or both of the following:

1. The securing of supplemental data to amplify, confirm, or clarify items in the application.

2. The securing of more complete drawings, specifications, and contract documents.

304. Mortgagees expect the Federal Housing Administration to render its decisions in the shortest possible time consistent with sound analysis. It is to their best interests to supply any information which is necessary to assist in processing cases with dispatch. Application forms require only such information as the mortgagee and mortgagor can conveniently present, and there is a sound and adequate reason for the presence of every item on the forms. The completeness of the applications, together with all exhibits, will be reflected in economy of operation and reduction in processing time.

305. It has been found that some prospective home owners permit loose and vague contractual agreements when building their homes. Such practices are likely to lead to unnecessary misunderstandings and avoidable difficulties and may result in loss to one or more of the parties in the transaction. Experience has shown the importance of well executed and complete drawings and specifications upon which the mortgagor, builder, mortgagee, and the Federal Housing Administration can make and carry out binding contracts. Preliminary examination must include a close scrutiny of the adequacy and sufficiency of submitted drawings and specifications.

306. The term "application" is used in this section to describe all the papers, photographs, drawings, and other exhibits, jointly, which are presented by the mortgagee and mortgagor. Complete applications include the following items:

a. Proposed or partially completed construction:

1. Mortgagee's Application for Insurance, FHA Form No. 2004, or Mortgagee's Application for Conditional Commitment, FHA Form No. 2201.

2. Mortgagors' Property Description, FHA Form No. 2004a or Property Description, FHA Form No. 2201a.

3. Photographs showing front view of property, and street view of property with properties adjoining on side.
4. Drawings and specifications.
5. Plot plan showing relationship of proposed improvements to lot.

b. Completed construction:

1. Mortgagee's Application for Insurance, FHA Form No. 2004 or Mortgagee's Application for Conditional Commitment, FHA Form No. 2201.
2. Mortgagors' Property Description, FHA Form No. 2004a or Property Description, FHA Form No. 2201a.
3. Photographs showing front view of property and street view of property with properties adjoining on side.
4. A description of proposed alterations or additions, if any, with the estimated cost and complete drawings and specifications.

307. The Preliminary Examiner shall determine whether an application has any possibility of being the basis of ultimate commitment for insurance. This requires preliminary analysis from all underwriting points of view. For example, the application, with or without drawings and specifications, may indicate that rejection is certain because of lack of adequate access, extremely excessive lot coverage, or insufficient cash equity, or the fact that the security may represent an ineligible type of property such as one designed entirely for commercial use. The detailed instructions contained in paragraphs 310 to 315 are to be followed in order to arrive at a decision as to probable eligibility or the need for additional information.

308. While the Preliminary Examiner makes the quick, initial check for probable eligibility he notes any omissions or errors on the application and exhibits. Minor corrections may be made and initialed in red by the Preliminary Examiner, but information concerning important changes or additions must be received from, or be confirmed by, the mortgagee prior to such alteration of the application. For example, the amount and term of the application may not be changed by the Preliminary Examiner, but the computation of monthly payment may be revised in red pencil or ink and shall be initialed. Discrepancies on the Mortgagors' Property Description, FHA Form 2004a, or 2201a, should be noted on the lower portion, Preliminary Examiner's Report.

309. Inasmuch as preliminary examination has the dual purpose of determining probable eligibility and of preparing the case for undelayed processing, the routine procedure provides for the simultaneous accomplishment of both purposes. Cases fall into four groups according to the most efficient method of handling them. This grouping is described in paragraph 317. The final result of preliminary examination is either, (*a*) a recommendation that the case be rejected and that the examination fee be refunded to the applicant, or (*b*) a decision to process the case by Regular or Modified Procedure. Procedures are described in Section 2. The decision is recorded in the space designated as Preliminary Examiner's Report on the Mortgagors' Property Description, FHA Form No. 2004a or 2201a. Paragraphs 318 to 322 give detailed instructions on the recording of decisions.

PRELIMINARY ELIGIBILITY TESTS

310. Preliminary Examination of Property Eligibility.—Included in eligibility of property are the factors considered in Rating of Property, Section 8, including Property Standards, both national and local, Minimum Construction Requirements, and related Minimum Eligibility Requirements contained in Section 5 of this Manual. This examination does not include a complete analysis of mortgage risk, but it does consist of checking the items contained in an application against definite requirements and past decisions on similar cases. The application contains the following items which are useful for the preliminary determination of property eligibility:

a. Diagram showing size of lot, whether it is corner or inside, presence of alleys or easements, and whether the street is paved
b. Lot dimensions
c. Age of building
d. Number of family units, rooms, and baths
e. Type of construction and number of stories
f. Presence of garage and type of garage, if any
g. Percentage of non-residential floor area
h. Photographs which (*1*) supply a partial check of the above, (*2*) indicate approximate percentage of lot coverage, and (*3*) indicate approximate width of at least one side yard
i. Source of water supply
j. Method of sewage disposal
k. Contemplated improvements, if any

The above items of information make it possible for the Preliminary Examiner to arrange for the revision, withdrawal, or rejection of any case which fails to comply with Property Standards and Minimum Construction Requirements. The Preliminary Examiner should work in close cooperation with the Architectural Section, and the Chief

Architectural Supervisor should advise him as to adequacy of plans and specifications or of the need for additional data to expedite processing of cases.

311. Preliminary Examination of Location Eligibility.—This examination does not include the actual analysis of locations, but it does use predetermined location ratings made by the Valuation Section. The Preliminary Examiner should be able to segregate for rejection many of the applications involving locations not suitable for long-term amortized loans. Comparisons shall be made between the location described in the application and nearby locations previously rated by the Valuation Section. If the accumulated data indicate that the case is on the borderline of location eligibility, preliminary examination shall not result in a recommendation for rejection solely because of location factors.

312. The Preliminary Examiner has the following data with which to check probable eligibility of locations:

a. Street address and legal description of land, on Mortgagors' Property Description, FHA Form No. 2004a.

b. Diagram showing location of lot in block. on FHA Form No. 2004a.

c. Photographs showing street view of property with properties adjoining on side, attached to FHA Form No. 2004a.

d. Material used for street surfacing, indicated on FHA Form No. 2004a.

e. Maps of municipalities prepared by Valuation Section showing outlined neighborhoods, established ratings of locations, and ineligible areas.

f. Location record files, which show ratings and other data on all previous cases.

g. Subdivision files, which indicate whether undeveloped subdivisions have been previously analyzed and, if so, the results of such analysis.

h. Other data files, such as those described in Section 18, Compilation and Recordation of Data.

313. Preliminary Examination of Borrower Eligibility.—This examination may be made with considerable confidence because the Preliminary Examiner uses data supplied by the mortgagor himself on FHA Form No. 2004. When the information indicates obvious ineligibility, a recommendation to reject the application is adequately supported because of the source of the data. In a case in which the ratio of total monthly payment to the stated monthly income or the ratio of property value to stated annual income is seriously excessive, the Preliminary Examiner should recommend rejection to the Chief Underwriter. Preliminary Examiners are required to be familiar with and apply the major principles contained in Section 10, Rating of Borrower, and Section 11, Rating of Commercial Borrower.

314. The Preliminary Examiner shall use data included in the application for the following purposes:

a. To compare mortgagor's stated income with the amount of total payment as previously figured. The Mortgage Risk Section should supply certain outside ratio limits which, if exceeded, would require recommendation to reject.

b. To compare the amount of mortgage applied for, plus current assets, with cash required in cases of purchase or with outstanding liens in cases of refinancing. Proper allowance should be made for advance taxes, special assessments due, delinquent taxes, initial service charges, and other costs of settlement.

c. To ascertain whether the proposed transaction complies with the established cash equity requirements.

315. In addition to the data included on the application, the Preliminary Examiner has the following available:

a. Borrower cards on all previous applications, FHA Form No. 2006b, which make possible ready reference to other office files and the decisions made on cases previously submitted by the same mortgagor.

b. Mortgage Insurance Allotment Cards, FHA Form No. 2211, prepared for every mortgagor in whose name more than one formal commitment has been issued.

c. Data on tax rates, insurance rates, and special assessment areas prepared by the Valuation Section. This information is most useful in checking debt service and the amount of cash required to close the transaction.

ROUTINE OF PRELIMINARY EXAMINATION

316. Speed is essential in preliminary examination. However, preliminary examination shall not consist of a mere stamping of the application with no prior analysis. The routine procedure consists of sorting cases according to a suitable classification and then treating the cases in the several groups so as to expedite preliminary examination and the rendering of the reports of the Preliminary Examiner.

317. Grouping of cases.—A method of quickly classifying cases by a standard routine shall be used by the Preliminary Examiner. Described below is a suggested method of grouping:

Group 1. *Cases meeting preliminary eligibility tests and with complete information.*

Group 2. *Cases meeting preliminary eligibility tests but with certain minor information lacking.*—Examples are cases in which:

a. The legal description does not conform to the lot size.
b. Specifications for repairs are general rather than specific.
c. Minor items are omitted from plans and specifications.
d. The nature of the borrower's assets or income is such that more detailed information will be required by the Mortgage Risk Section.

The cases to be placed in this group must satisfy two tests. First, the case must be one which has a fair chance of finally being committed upon, and, second, the missing information is not essential for processing in the Architectural or Valuation Sections.

Group 3. *Cases with certain major information lacking so that preliminary determination of eligibility cannot be made.*—Examples of cases falling into this group are:

a. Applications which appear ineligible, but cannot be definitely classed as such without further information.
b. Applications where information is lacking which is essential for processing in the Architectural or Valuation Sections.
c. Applications where violations of requirements can be corrected, but not without difficulty or considerable expense to the applicant.

Usually the percentage of cases falling into this group will not be large.

Group 4. *Cases not meeting preliminary eligibility tests.*—This group includes only those cases which are clearly ineligible, and for which remedies are not possible or practical.

318. Procedure after Grouping.—The lower portion of the face of Mortgagors' Property Description FHA Form No. 2004a is used as the Preliminary Examiner's Report. Certain obvious discrepancies in the application may be corrected and initialed in red by the Preliminary Examiner. Paragraphs following require that certain correspondence, investigations, and requests be made. Notations indicating the lines of action should be made on the application. Inasmuch as the two sheets of the application are separated, the Preliminary Examiner should make certain that notations and correspondence of interest to the Architectural or Valuation Sections are noted on or attached to FHA Form No. 2004a, and that similar items of interest to the Mortgage Risk Section are noted on or attached to FHA Form No. 2004. The Preliminary Examiner decides whether Regular or Modified Procedure is to be used. The decision is indicated by a check in the proper space on the "Approved" stamp of the Preliminary Examiner. Instructions concerning the choice of Regular or Modified Procedure are contained in Section 2.

319. When a case has been thoroughly checked, and it has been found that all information necessary for processing has been included and the application has met all the preliminary tests for eligibility (Group 1), the Preliminary Examiner proceeds as follows:

a. He orders a Factual Data Report. This should usually be requested from a credit reporting agency by proper notation on and transmittal of FHA Form No. 2006a. The name of the credit reporting agency and the date of the request shall be noted on FHA Forms Nos. 2004 and 2006b. The request is forwarded to an agency approved by Washington Headquarters. It is not required that a Factual Data Report be requested in every case. The Chief Mortgage Risk Examiner shall indicate to the Preliminary Examiner the policy with respect to such requests. When the mortgagee attaches a copy of an adequate credit report or other satisfactory data on the borrower, the ordering of a Factual Data Report is not required.

b. He sends out such form credit inquiries as are necessary to confirm bank balances, salary statements, and status of other obligations. These form letters are identified as FHA Form Nos. 2016b, 2016c, and 2016d. The Preliminary Examiner notes on the margin of the Mortgagors' Statement that such inquiries have been transmitted.

c. For certain cases, he prepares the headings of FHA Form No. 2217, Certificate of Approval of Private Well, and FHA Form No. 2218, Certificate of Approval of Private Sewage Disposal System. These forms are forwarded to the proper Public Health Authority, and notation of this should be made on the Preliminary Examiner's Report. In some offices these forms are mailed at the time of commitment. This practice is acceptable in areas where private installations are not a frequent cause of rejection.

d. For cases in undeveloped areas, he indicates on the Preliminary Examiner's Report, whether or not subdivision analysis has been made previously. If so, the name or number of the subdivision file should be noted on FHA Form No. 2004a.

e. For cases in built-up areas, he notes the number of the outlined neighborhood on FHA Form No. 2004a.

f. He indicates that the case is approved for processing, designates the proper procedure, Regular or Modified, and transmits the case.

320. When a case has been thoroughly checked, and it has been found that certain minor information is lacking, but the information available indicates probable eligibility (Group 2), the Preliminary Examiner shall follow the instructions in paragraph 319 and shall, in addition, prepare correspondence requesting the required information. The replies should be directed to the attention of the Section Chief concerned. Further correspondence is prepared by that Section Chief, not the Preliminary Examiner.

321. For those cases in which the lacking information is so important that preliminary determination of eligibility is impractical or in which the lacking information is essential to processing in either the Architectural or Valuation Sections (Group 3), correspondence shall be initiated requesting the information. A statement shall be included in the letter to the mortgagee to the effect that rejection will be made if the information is not received by a specified date. No further correspondence should be necessary, and if, on the specified date, the requested information has not been received, the case shall be recommended for rejection according to the procedure described in the following paragraph.

322. For those cases in which preliminary eligibility tests indicate the necessity for recommending rejection (Group 4), the Preliminary Examiner so indicates on the Preliminary Examiner's Report by the standard stamp, "Rejection Recommended." It is required that the amount and term applied for and the reason for rejection be indicated on the stamp. The processing time must also be shown. There should be additional explanation for the information of the Chief Underwriter and Director. All rejections require the approval of the Chief Underwriter and the Director, either of whom has authority to require that the case be completely processed.

PART I

SECTION 4

COMPLIANCE INSPECTIONS

CONTENTS

Effective February, 1938
Federal Hausing Administration

PART I

SECTION 4

COMPLIANCE INSPECTIONS

GENERAL INSTRUCTIONS

401. Purpose of Compliance Inspections. Commitments for mortgage insurance are agreements binding the Federal Housing Administration to insure mortgages. The commitments are based upon certain requirements, including the completion of construction, alterations or repairs. The Federal Housing Administration, for its own interest, makes inspections to determine whether construction, alterations or repairs are made in compliance with the conditions of commitments. Such inspections are termed Compliance Inspections and are made under the supervision of Chief Architectural Supervisors.

402. The Inspector shall keep the purpose of Compliance Inspections foremost in his mind while conducting these inspections. This will guide his actions in any situation for which instructions are not provided in this Manual.

403. In practice, Compliance Inspections result in the accomplishment of three functions:

a. The determination of whether the improvements, alterations or repairs are completed in accordance with the approved drawings and specifications. The term "approved drawings and specifications" as used here and elsewhere in this Manual, means those drawings and specifications including all amendments, which were approved by the Federal Housing Administration and made the basis and terms of the commitment for mortgage insurance.

b. Assistance to builders in the form of advice and suggestions as a means of securing compliance

c. The rendering of reports and securing of photographs of the property as evidence and record of completion

404. Procedure for Compliance Inspections. The Chief Underwriter authorizes Compliance Inspections and notifies the Chief Architectural Supervisor by transmitting a copy of the commitment to the Architectural Section. Record of this is kept in an active file of properties awaiting inspection. These are usually separated into groups according to the types of inspection which are to be made.

405. When the Director transmits the commitment to the mortgagee in a case which requires compliance inspection, there are attached Requests for Compliance Inspections, FHA Forms Nos. 2289, 2289a, 2289b, 2289c, and 2289d, as required. These are postal cards which should be used to inform the Insuring Office of the proper date for the next inspection.

406. When notified that a property is ready for a Compliance Inspection, the Chief Architectural Supervisor assigns an Inspector to the case. In practically all instances, fully accredited Architectural Inspectors will be assigned Compliance Inspections. However, the Chief Underwriter may assign to this work any member of the Underwriting Staff who, in the opinion of the Chief Architectural Supervisor, is qualified.

407. In instances when the Inspector receives the assignment while in the Insuring Office, he may use the office copy of the approved drawings and specifications and, if necessary, a copy of the commitment. When the Inspector receives the assignment by telephone or telegraph, he uses that set of approved drawings and specifications which were forwarded to the mortgagee with the commitment. The most recent Compliance Inspection Report or Memorandum of Compliance Inspection shall be used as a reference.

408. The Inspector executes the Memorandum of Compliance Inspection, FHA Form No. 2200, in duplicate and the original is posted conspicuously at the site of construction. The Compliance Inspection Report, FHA Form No. 2051, is executed in pencil and transmitted to the Chief Architectural Supervisor for his apporval. For final Compliance Inspection Reports, it is the responsibility of the Chief Architectural Supervisor to obtain assurance that all certificates of approval which are necessary for occupancy of the property have been issued. This may include approval by local building authorities or approval of the electrical installation by the public utility company. With the exception of certificates of approval of private water supply and sewage disposal systems, this evidence is not required in writing for inclusion in the case binder, but may be obtained during the final compliance inspection or by telephone. When a Compliance Inspection Report indicates that the construction is finally approved by the Chief Architectural Supervisor, it is transmitted to the Chief Underwriter for final approval, which approval is required before the mortgage may be insured.

409. In the event that the Inspector reports noncompliance which adversely affects the cost estimate or Rating of Physical Security, the Chief Architectural Supervisor shall transmit the Compliance Inspection Report to the Chief Underwriter. If the Chief Underwriter determines that such noncompliance renders the proposed mortgage, in the amount committed, ineligible for insurance, and that compliance is not probable, the Director shall notify the mortgagee that present conditions indicate that it will be impossible to insure the mortgage. If the mortgagee requests that the case be reconsidered, reprocessing shall be completed at the discretion of the Chief Underwriter. In most instances, a complete revaluation, including reexamination of the property, shall be made.

410. On commitments issued for proposed construction, it is required that a First, Second, and Third Compliance Inspection be made, together with such additional inspections as may be necessary. When, at the date of commitment, construction has progressed beyond the stage specified for First Compliance Inspection, the Chief Architectural Supervisor will require that an immediate inspection be made of all completed work. The Inspector will designate whether this is a First, Second, or Third Compliance Inspection, depending upon which is applicable to the existing stage of construction, and will note on the report that there has been no previous inspection. This inspection takes the place of any inspections which ordinarily would have preceded it. For instance, if, at the date of commitment, construction is past the stage prescribed for Second Compliance Inspection but not completed, the initial inspection will be indicated as the Second Compliance Inspection and must include, to the extent possible, examination of all work usually inspected in both the First and Second Compliance Inspections. In such instances it may be advisable to have certain vital portions of the structure uncovered.

METHODS OF COMPLIANCE INSPECTION

411. First Compliance Inspection. The First Compliance Inspection shall be made at either of the two following stages of construction:

a. When excavation is completed and ready for footings and foundations, or

b. When the foundation walls are complete and ready for backfill

An inspection made at the latter stage of construction is designated "Alternate First Compliance Inspection."

412. The Chief Architectural Supervisor shall notify the Chief Underwriter at which stage of construction the First Compliance Inspection is to be made. This decision shall be indicated on the Report of Architectural Inspector, FHA Form No. 2014, in order that suitable notification cards may be selected to accompany the commitment.

413. In deciding at which stage of construction the First Compliance Inspection is to be made, the Chief Architectural Supervisor should consider, (*a*) soil conditions, (*b*) dependability and competence of builder, and (*c*) anticipated construction conditions. In some instances it will be advisable to make inspections at both stages of construction.

414. When making a First Compliance Inspection, the Inspector determines if the construction is proceeding in conformity with the approved drawings and specifications and in conformity with acceptable standards of workmanship and good engineering practice by observing the following:

a. Location of the building lines on the lot
b. The depth and size of the excavation
c. The character and formation of the subsoil including:
  1. Bearing capacity, and
  2. Presence of filled earth or faults
d. The presence of springs or ground water
e. The fall between the house lines and the main sewer as well as the adequacy of drainage for the entire property
f. The condition of footing trenches and the suitability of forms where required

415. If unsatisfactory soil conditions are encountered, the Inspector shall suggest suitable corrective measures, such as the use of specially designed footings and foundations. The suggested corrective measures shall be indicated on the prescribed forms, and the Chief Architectural Supervisor shall determine whether these remedies are adequate. If deemed necessary, the builder may be required to obtain the services of a competent engineer to assist in this work. If no corrective measures are feasible, the Inspector shall report such conditions.

416. When the First Compliance Inspection is deferred until foundation walls are completed and ready for backfill, the Inspector observes, in addition to the items already listed in paragraph 414, the following:

a. Size and shape of footings, foundation walls and piers
b. Quality of the materials and workmanship, particularly the neatness and soundness of masonry

c. Dampproofing and drainage of foundation

d. Location and quality of columns and other substructure

417. Second Compliance Inspection. This inspection is made when the main building is enclosed and all structural members are exposed and while roughing-in is in place and visible. At this time all structural details and materials can be inspected. In addition all heating, plumbing and electrical work that is to be concealed, is installed and ready for inspection.

418. When making a Second Compliance Inspection, the Inspector determines whether the construction is proceeding in conformity with the approved drawings and specifications and in conformity with acceptable standards of workmanship and good engineering practice, by observing the following:

a. Foundations if not inspected during First Compliance Inspection
   1. Size and shape of footings, foundation walls and piers
   2. Quality of the materials and workmanship, particularly the neatness and soundness of masonry
   3. The dampproofing and drainage of foundation
   4. The location and quality of columns and other substructure

b. Superstructure of building
   1. The grade or quality and soundness of all materials used
   2. Structural details, such as plates, spacing of structural members, bridging, corner bracing, sheathing, masonry wall ties or bonding, and the application of roofing and flashing
   3. Methods of assembly and workmanship employed in the construction, including masonry, cutting, fitting and joining of materials, roofing, flashing and insulation

c. Roughing-in for mechanical and convenience equipment
   1. The plumbing and sewerage, with particular attention to venting, size and pitch of pipes and methods of installation
   2. The heating system, with emphasis on the capacity, location, and method of installing piping or duct work
   3. The electrical system, with special attention to the type, method, and adequacy of wiring, distribution of circuits, and location of outlets

419. In the event construction is not proceeding in conformity with the approved drawings and specifications, the Inspector lists the deficiencies or variations on the required forms and suggests a satisfactory remedy to the builder. For example, where the structural strength of joists or other load bearing members are definitely impaired by cutting, drilling or by inherent defects, the Inspector shall indicate that such members will require replacement or adequate reinforcement prior to approval of the construction.

420. **Third Compliance Inspection.** This inspection is made when all improvements are completed and the buildings are ready for occupancy. Walks, drives, grading and accessory buildings are included in the improvements which must be complete.

421. When making a Third Compliance Inspection, the Inspector determines whether all improvements have been completed in accordance with the approved drawings and specifications and the terms of the commitment by observing the following:

a. Plaster and plaster base
b. Mill, cabinet and stair work
c. Floor and wall materials and finishes
d. Painting, wall covering and decorating
e. Glazing, weatherstripping, and caulking
f. Rough and finish hardware
g. Plumbing fixtures and equipment
h. Radiators, ducts and grilles, boilers, heaters, air-conditioning units, stokers, oil burners, and auxiliary devices such as automatic controls.
i. Electrical equipment
j. Certificates of approval if these are on the premises
k. Gutters, downspouts, and other sheetmetal work
l. Walks, drives, and grading
m. Accessory buildings
n. Private water and sewage disposal systems

422. If the Inspector determines that the improvements have been completed in a satisfactory manner, he indicates his approval on the required forms and then photographs the subject property. One street view is taken showing the adjoining properties and a front view showing the completed improvements. In order to identify the photographs it is suggested that the last three digits of the serial number appear in each photograph.

423. In the event the property is not completed in a satisfactory manner the Inspector will indicate his findings on the required forms and withhold his final approval. In such instances, an additional Compliance Inspection may be necessary.

424. Additional Compliance Inspections. The Chief Architectural Supervisor may deem it advisable or necessary to have more than the three regular compliance inspections made. For example, it may be found that additional compliance inspections are necessary in cases where special installations are contemplated that will require more frequent examination, or where certain work will be concealed earlier in the building operations than ordinarily is the case. Additional inspections are also necessary in cases where noncompliance with approved drawings and specifications is discovered during one of the regular compliance inspections, and it is necessary for the contractor to correct variations, defective work, or materials. This will be required only when the method of correcting the noncompliance cannot be examined in a subsequent regular compliance inspection. Reports shall indicate whether such deficiencies have been satisfactorily remedied. Additional inspections may be advisable, and shall be made where certain builders have manifested a tendency toward noncompliance which cannot be observed during a regular compliance inspection. In such cases, unexpected inspections may be used as a device where they are felt to serve specific purposes. When additional equipment or other extras have been installed and the mortgagee requests a commitment in a larger amount, the Chief Underwriter may request the Chief Architectural Supervisor to cause additional inspections to be made.

425. Repair Compliance Inspections. In instances where commitments in connection with existing construction require the completion of alterations, additions or repairs, the Chief Architectural Supervisor shall furnish evidence satisfactory to the Chief Underwriter that the requirements have been fulfilled. Such evidence is necessary before the mortgage may be insured. The Chief Architectural Supervisor may secure such evidence either by having a Repair Compliance Inspection made, or by obtaining from the mortgagee a statement that the alterations, additions or repairs have been fully and satisfactorily completed. In all cases involving alterations, additions or repairs which affect the structural qualities or design of the structure, it is mandatory that a Repair Compliance Inspection be made.

426. Particular care must be exercised in making Repair Compliance Inspections. The Inspector shall determine whether any section or members of the structure have been weakened due to cutting or changing and whether bearing loads have been dangerously increased. He shall further determine whether various structural members have been assembled according to sound and acceptable building practices.

COMPLIANCE INSPECTION FORMS

427. Compliance Inspection Report. The Inspector executes the portion of FHA Form No. 2051 which is allotted to his use and indicates the required information in accordance with the directions contained on the form. Space is provided for the listing of incomplete work, defective materials and variations from the approved drawings and specifications. The question concerning the effect of these items upon the cost estimate or Rating of Physical Security shall be given very careful consideration and shall be answered in definite terms. The Inspector must reflect the actual condition of the property, and recognition must be given equally to favorable or adverse findings. He indicates the amount of the change in the replacement cost estimate, and the effect on the rating of any of the physical security features. If changes have no effect, it is so stated.

428. It is permissible to allow changes or deviations from the approved drawings and specifications, provided that these changes do not adversely affect the original Rating of Physical Security or lower the estimate of replacement cost. Substitution of materials is also permitted, provided that the substituted materials equal or exceed those specified.

429. The Chief Architectural Supervisor reviews the Compliance Inspection Report and reaches a decision, which is indicated in the space provided in his portion of the report. This decision is determined by the information contained in the report and any knowledge based upon previous experience with the builder and conditions surrounding the case.

430. Memorandum of Compliance Inspection. FHA Form No. 2200 is provided for the purpose of avoiding unnecessary delays in construction by giving notice directly to the builder that the construction has, or has not, passed a particular inspection. The Inspector indicates as clearly as possible those items which require correction. These items must correspond with the information set forth in the Compliance Inspection Report, FHA Form No. 2051.

SPECIAL PROBLEMS

431. Relation Between Inspector and Builder. While compliance inspections render an indirect service to mortgagee, mortgagor and builder by securing compliance with approved drawings and specifications, distinction is made between architectural or construction supervision, and compliance inspections as made by the Federal Housing Administration. Compliance Inspections are made by the Federal Housing Administration entirely for its own interest with no direct responsibility to the mortgagee or mortgagor, and these inspections do not in any sense constitute architectural or construction supervision. In the event that compliance with approved drawings and specifications is not evident, the Federal Housing Administration cannot stop construction, nor can it directly demand corrections. Its only action in such cases is to refuse to insure the proposed mortgage, on the grounds of noncompliance with the terms of the commitment, unless proper corrections are made.

432. When a Compliance Inspection reveals a discrepancy which must be corrected to render the property eligible for mortgage insurance under the terms of the commitment, the Inspector shall point out such conditions to the applicant, builder or their agents while on the premises, and shall recommend *any corrective* measures that *are reasonable* and *in accord with good building practice.* This is the quickest and the preferred method of obtaining compliance. The Inspector should make every effort to dispose of these problems by direct communication in a *diplomatic manner.* Future relations may be improved if the Inspector endeavors to give builders a better understanding of the requirements of the Federal Housing Administration.

433. Large Operations. In areas where dwelling construction is conducted on a quantity basis, or where there is a concentration of building activity, it may be necessary for the Chief Architectural Supervisor to amplify the procedure outlined in paragraphs 404 to 410, so that it will be possible to keep pace with the construction. The extent and speed of the operations will determine the policy and procedure to be adopted. During certain stages of work on very large projects, Inspectors may be required to devote full time to the project. In other instances a schedule of daily or periodic visits may be a satisfactory solution.

434. Mortgagee's Assurance of Completion. In order to insure a mortgage when it is impossible to complete the improvements because of weather or conditions beyond the control of the mortgagee and mortgagor, the Federal Housing Administration employs a procedure of which Compliance Inspections are a part. This procedure may be exercised only when all of the following conditions are effective:

a. The mortgaged premises include a dwelling that is habitable and essentially complete *b.* The work to be deferred is such that completion cannot be accomplished within a reasonable period of time, but can be accomplished within the six months period following the presentation of the credit instrument for endorsement

c. The reason for noncompletion is weather or other conditions which make it impractical to proceed. For instance, in the case of street improvements, this may mean the retarding of street surfacing until all of the construction in the block is completed.

435. In order to assure completion of the improvements, the mortgagee withholds from the proceeds of the mortgage transaction an amount sufficient to secure satisfactory completion. The method of conducting this transaction between the mortgagor and mortgagee is not to be construed as a responsibility of the Federal Housing Administration.

436. Upon receipt of a written request from a mortgagee for insurance of a mortgage prior to the completion of required improvements, the procedure is as follows:

a. The Chief Underwriter will require the Architectural Section to make an inspection to determine whether the conditions described in paragraph 434 are present, and to estimate the cost of completing the deferred improvements.

b. The Mortgagee's Assurance of Completion, FHA Form No. 2300, is prepared, setting forth the deferred improvements. The designated period of time for completion shall be as short as is practicable and the sum of money to be withheld by the mortgagee shall be fixed at not less than one and a half times the estimated cost of completing the deferred improvements.

c. When the mortgagee has executed this document and returned it to the Insuring Office the credit instrument is endorsed for insurance in the usual manner.

437. A record of each use of this procedure is kept in the file of pending Compliance Inspections and the Insuring Office endeavors to have the improvements completed as soon as possible. When the deferred improvements are complete and approved, the final Compliance Inspection Report is mailed to the mortgagee which, under the terms of the agreement, disburses the remaining funds. The Insuring Office then requires the mortgagee to furnish written notification of the disbursement.

PART I

SECTION 5

MINIMUM ELIGIBILITY REQUIREMENTS

CONTENTS

Effective February, 1938
Federal Housing Administration

PART I

SECTION 5

MINIMUM ELIGIBILITY REQUIREMENTS

CLASSIFICATION OF ELIGIBILITY REQUIREMENTS

501. The eligibility of mortgages secured by non-farm properties for qualification and acceptance for mutual mortgage insurance by the Federal Housing Administration under the provisions of Section 203 of Title II of the National Housing Act, depends upon compliance with provisions in the National Housing Act, compliance with Administrative Rules and Regulations, compliance with established minimum standards, and compliance with established policies and practices of the Administration. These eligibility requirements may be classified into four groups, as follows:

a. *Fixed Requirements Applied Without Field Interpretation.* These are specific rules governing major matters. As requirements precedent to eligibility, they must be and are applied without interpretation by local offices because they are inflexible and definite as to meaning and intent, which meaning and intent are interpreted by the General Counsel, Federal Housing Administration, Washington, D. C.

b. *Requirements to Discharge Statutory Responsibilities.* These are not specific rules. They are general principles and policies stated in the form of objectives and general responsibilities. When applied as eligibility requirements, they must be translated into reasonable decisions by interpretations and judgment.

c. *Requirements with Established Factual Interpretations.* These are rules stated in specific terms, but require analysis of the effect of factors or combinations of factors and use of precedents and previous factual interpretations when applied to determine minimum eligibility. The interpretations in previous cases become precedents. The precedents themselves become, in effect, eligibility requirements which are applied to new cases.

d. *Secondary Requirements.* These are specific rules and standards governing detailed matters. They are stated in definite terms, but are subject to interpretation and to waiver under certain circumstances. Secondary requirements usually are specified means of attaining desirable objectives. Waiver is permitted only when the desirable objectives are fully attained in spite of technical violation of the stated requirement.

FIXED REQUIREMENTS APPLIED WITHOUT FIELD INTERPRETATION

502. Fixed requirements applied without field interpretation are found in either the National Housing Act, as amended, or in the Administrative Rules and Regulations under Title II of the Act. The more significant of these requirements are summarized as follows:

a. The mortgage must be a first mortgage on real estate in fee simple or on a leasehold (*1*) under a lease for not less than 99 years which is renewable, or (*2*) under a lease having a period of not less than 50 years to run from the date the mortgage is executed

b. The application for insurance must involve a mortgage about to be executed or already executed

c. The mortgage should involve a principal obligation in an amount of one hundred dollars ($100) or multiples thereof but must not exceed sixteen thousand dollars ($16,000) and must not exceed eighty percent (80%) of the appraised value of the property as of the date the mortgage is accepted for insurance except under the following circumstances:

1. If the amount of the mortgage does not exceed $5,400 and there is located upon the property a dwelling designed principally for a single family residence, the construction of which

(*a*) is begun after February 3, 1938, and which is approved for mortgage insurance prior to the beginning of construction, or

(*b*) the construction of which was begun after January 1, 1937 and before February 3, 1938, and which at the time the mortgage is accepted for insurance has not been sold or occupied since completion.

Such mortgage may exceed eighty percent (80%), provided at the time the mortgage is insured the mortgagor is the owner and occupant and has paid on account of the property at least ten percent (10%) of its appraised value, but must not exceed ninety percent (90%) of the appraised value of the property as of the date the mortgage is accepted for insurance.

2. If the amount of the mortgage does not exceed $8,600 and the property complies with all of the conditions set forth in subparagraph *1.* above, except as to the amount of the mortgage, and has an appraised value (as of the date the mortgage is accepted for insurance) in excess of $6,000, but not in excess of $10,000, the amount of such mortgage must not exceed ninety percent (90%) of $6,000 of such value, plus eighty percent (80%) of the balance of such value.

d. The mortgage must have a maturity satisfactory to the Administrator not to be less than four nor more than twenty years from the date of insurance, except that until July 1, 1939 a mortgage of the character described in subparagraph *c.–1.* above may have a maturity not more than twenty-five years from the date of insurance

e. The mortgage must contain complete amortization provisions requiring monthly payments by the mortgagor

f. The mortgage must not bear interest at a rate in excess of 5% per annum

g. The mortgage must be executed upon a form prescribed for use in the jurisdiction in which the property is situated with such modifications as may be approved by the General Counsel, Federal Housing Administration, Washington, D. C.

h. The mortgage must have been made to and held by, a mortgagee approved by the Administrator as responsible and able to service the mortgage properly

REQUIREMENTS TO DISCHARGE STATUTORY RESPONSIBILITIES

503. The accomplishment of the purposes of the National Housing Act is the definite obligation of the Federal Housing Administration. The Act imposes two definite responsibilities on members of underwriting staffs:

a. To determine that all mortgages accepted for insurance are economically sound

b. To further the objective of the Act as stated in the preamble, "------ encourage improvement in housing standards and conditions"

504. In compliance with these responsibilities, the Federal Housing Administration has established broad principles of procedure. These principles serve as general rules of practice. They must be translated into more specific and precise rules which become definite guides to more exact decisions. Among these principles the following have been established for the insurance of mortgages secured by non-farm properties:

a. Eligible properties must possess qualities which indicate sound value, and which promise security and satisfaction to home owners throughout the term of the loan
b. Eligible properties must possess sufficient promise of continued utility to give assurance of enduring as sound investments throughout the life of the mortgage
c. Eligible properties must possess characteristics which will not induce neighborhood blight or threaten to influence adversely the mortgage security in neighboring properties
d. The development of land should be such as to (*1*) comply with sound and accepted principles of land planning, (*2*) create neighborhoods of definite character to meet the demand for definite types of homes, (*3*) conform to the needs of the community for additional home sites, and (*4*) conform to the type of expansion characteristic of, and suitable to, the community
e. Eligible mortgages must involve obligations, the periodic payments on which bear a proper relationship to the mortgagor's income and other expenses
f. An eligible mortgage must be intrinsically a sound investment

REQUIREMENTS WITH ESTABLISHED FACTUAL INTERPRETATIONS

505. Requirements with established factual interpretations also appear as specific rules in either the National Housing Act, as amended, or Administrative Rules and Regulations. To obtain uniform decisions by the underwriting staffs, these requirements must be interpreted, the interpretations being based upon policies formulated by Washington Headquarters. In compliance with the provision of the National Housing Act which specifies that, "no mortgage shall be accepted for insurance unless the Administrator finds that the project with respect to which the mortgage is executed is economically sound", the Federal Housing Administration has developed a method of determining whether a mortgage submitted for insurance is economically sound. The method is referred to as the Risk Rating System, and is described in Section 6, Methods of Mortgage Risk Rating. Mortgage transactions not meeting the requirements of this system shall not be construed to be economically sound and, therefore, shall not be accepted for insurance.

506. Requirements Pertaining to Property. Section 203 of the National Housing Act provides that a mortgage to be eligible for insurance shall be secured by a property upon which there is located a dwelling or dwellings designed principally for residential use for not more than four families in the aggregate, irrespective of whether such dwelling or dwellings have a party wall or are otherwise physically connected with another dwelling or dwellings.

507. *Number of Structures on Plot.* The phrase, "dwelling or dwellings designed principally for residential use for not more than four families in the aggregate", means dwelling accommodations for not more than four families irrespective of whether such accommodations are included in one or more, but not more than four, structures, provided that if the dwelling accommodations comprise more than a single structure, such structures must be located on a single plot or parcel and must be related functionally in such a way as to constitute a readily marketable real estate entity for the use of not more than four families.

508. Functional relationship between the several structures must be present to such a degree that a natural marketable real estate entity is created. This functional relationship may be created by a combination of several factors or conditions such as the layout of walks, driveways, lawns, or the location of the several structures and their relationship to one another. It is important to note that the mere presence of a single heating plant, sewage disposal plant, or common water supply serving two otherwise unrelated dwellings, does not constitute functional relationship as defined above. Parenthetically, it should be noted that where two separate dwellings are served by a single heating plant neither dwelling is eligible for insurance.

509. In analyzing a case where this problem is involved, one very significant approach to a satisfactory solution involves the making of several valuations: (*a*) a valuation of the property as a whole, and (*b*) valuations of the several properties which would be created by a division of the original large property.

510. If the total of the values of the smaller properties is less than the value of the original property before division, there is evidence that the property, as a complete entity, has greater marketability than the smaller properties. If this result is obtained, the property is eligible for insurance as a whole, provided sufficient functional relationship is present, and provided that all other requirements of the Administration are fulfilled. On the other hand, if the total value of the smaller properties which will be created by dividing the property is greater than the value of the whole, greater marketability of the smaller parcels is indicated. If so, it is required that a division be made, and that each resulting smaller property become collateral security for an individual insured mort-

gage, provided that all other requirements of the Administration are fulfilled. It is probable that the higher total value of the several smaller parcels will occur only if the character of the larger property, undivided, is such that it would find a limited market, and only if this fact has been reflected in the valuations.

511. It is the policy of the Administration to require separate mortgages in cases where the property is readily divisible without appreciable loss of marketability or value. Therefore, if the transaction is sound on either basis. a division of the property is required.

512. *Non-residential Use in Addition to Residential Use for Four Families.* The phrase "dwelling or dwellings designed principally for residential use for not more than four families in the aggregate" is further interpreted to mean that a dwelling may include four living units, any one of which may be partially devoted to nonresidential use, but may not include a nonresidential unit in addition to the four living units. For example, a building with four living units, one or two of which may be used in part for physicians' offices, may be eligible, whereas a building with four living units and a professional suite in addition would not be eligible. The computation of the ratio of nonresidential area to total floor area is made on the basis of the entire structure. In other words, a four family structure is eligible even though most of the floor area of a single unit is devoted to nonresidential use, provided, as further defined by Property Standards, the floor area devoted to nonresidential use does not exceed 25% of the total floor area, and provided such nonresidential use does not adversely affect the desirability of the remainder for residential use.

513. *Land Shall Comprise a Single Plot.* Part IV, Property Standards, "Conditions Determining Acceptability", Item 401, "Plot", states, "all the land offered as security for a mortgage shall be contiguous, forming a single plot". "Plot" is defined in Part III, Property Standards, as "a parcel of land including one or more lots or portions thereof". This should be interpreted as follows: All the land offered as security for a mortgage shall be contiguous, forming a single plot, except in such cases where the plot has been bisected by a way offering secondary access to the property and the two resulting parcels comprise a readily marketable real estate entity. This condition generally occurs where the garage or some similar accessory building is located on a parcel adjacent to, but separated from the principal structure by an alley.

514. *Additional Property Offered as Security.* The property constituting the security for an insured mortgage must be a natural and readily marketable real estate entity. Land in excess of

that which is needed to accommodate suitably the building improvements tends toward the creation of an unnatural real estate entity. Where excess land is capable of separate utilization without impairing the marketability of the remainder of the subject property, such excess land should not be included as security for an insured mortgage. That portion of the property which may be included should be separated from the excess portion by delineation and actual changes in the legal description that provide for the necessary separation. This may be accomplished by citing the changed legal description as a condition of the commitment.

515. This policy is established for two reasons:

a. The requirements in relation to the partial release of security make it necessary that substantially all of the sales' price of the portion to be released be applied to the reduction of the mortgage debt. The major portion of requests for partial releases of security involve property either noncontiguous or somewhat unrelated to that portion of the property used for dwelling purposes. If this part of the property were not included as security for the insured mortgage, the mortgagor would be in a better position to manage his property and financial affairs.

b. The success of the Mutual Mortgage Insurance Fund depends partly on the costs of managing and disposing of the properties tendered in exchange for debentures. It is the intention of the Administration that all the security under any single foreclosed insured mortgage may be rented or sold as one single unit, with the correspondingly low management costs.

516. *Subterfuges Resorted to Prior to Mortgage Insurance.* It is imperative that underwriting staffs exercise caution and actively discourage any applicant from resorting to subterfuges for the purpose of circumventing requirements of the National Housing Act, the prescribed rules, regulations, and policies of this Administration. For example, if the design of the building indicates either the intention of, or the adaptability for, conversion into more than four living units, the property is ineligible for mutual mortgage insurance purposes. The same condition is frequently met in connection with nonresidential use.

517. **Requirements Pertaining to Location.** It is not necessary that the mortgaged property be located within the corporate limits of any town or village. However, the property must be situated in a locality which constitutes, or is adjacent to, a stable

residential area. The location must be suitable for use primarily as a residence and must have reasonable marketability.

518. *Isolated Locations.* Estates, country homes, and other residential properties which are not adjacent to land already developed for residential occupation, may be given consideration if the use of the land is for residential sites of comparable size in the area. Generally, land values must derive from residential use rather than agricultural, commercial or industrial use. The eligibility of such locations is determined by the use of the methods described in Section 9, Rating of Location.

519. *Subsidence.* To be eligible for mortgage insurance properties must be free from the risk of damage by subsidence. In all cases where the danger of subsidence is present, the property shall be ineligible for insurance unless satisfactory evidence is submitted to the Insuring Office to demonstrate that the probability of loss from such damage is remote or negligible.

520. Requirements Pertaining to Mortgagors. Section 203 of the National Housing Act requires that the periodic payments by the mortgagor shall not be in excess of his reasonable ability to pay.

521. *Secondary Liens.* A mortgagor must establish that after the mortgage offered for insurance has been recorded, the mortgaged property shall be free and clear of all liens other than such mortgage, and that there will not be outstanding any other unpaid obligation contracted in connection with the mortgage transaction or the purchase of the mortgaged property, except obligations which are secured by property or collateral owned by the mortgagor independently of the mortgaged property.

522. *Cash Investment Requirements.* In a case involving the purchase of property it must be established that the prospective purchaser is, in addition to undertaking the mortgage obligation, advancing cash or the acceptable equivalent thereto at the time of the acquisition of the property. This investment must be in an amount which will provide a sufficient motive for the mortgagor to keep the mortgage in good standing. In any case, the cash investment must be equal to the difference between the net proceeds of the mortgage and the purchase price or cost of the property, and must in no event be less than 10% of the appraised value of the property. If this requirement is not met, the mortgage in such instances shall not be acceptable for insurance.

523. When other property is offered in lieu of cash on account of the purchase price of the property being acquired, the value of the mortgagor's equity in such other property as established by this Administration shall be used as the basis for computing the amount

of the investment. If the applicant has owned the property offered in lieu of cash for less than six months prior to the date of the application, the price actually paid for such property will usually determine the amount of the investment. This is a statement of general principle and the six months period is introduced into the statement solely for the purpose of guiding judgment. It is not an arbitrary rule and compliance with the cash investment requirement is to be determined solely on the merits of the case.

524. Where applicants for insured mortgages own other sound assets, such as realty or sound securities, and pledge such assets for loans, the proceeds of which help establish the required cash investment, such loans will be interpreted as transactions entirely separate and apart from the insured mortgage contract. The mortgages so presented are qualified for insurance in this respect, if it is evident that the borrowed funds, in addition to the insured mortgage, (*a*) will not create a secondary lien, (*b*) are adequately secured by assets other than property securing the insured mortgage, and (*c*) are comfortably within the borrower's ability to pay without impairing payment on the insured mortgage obligation. Interpretations for actual cases shall be made in accordance with instructions contained in Section 10, Rating of Borrower.

SECONDARY REQUIREMENTS

525. Under the provisions of the National Housing Act, the Federal Housing Administration has established certain definite standards embracing detailed matters of compliance with minimum eligibility requirements.

526. **Property Standards.** Property Standards include (*a*) Conditions Determining Acceptability, Part IV, (*b*) General Minmum Requirements, Part V, and (*c*) Local Minimum Requirements, Part VI.

527. Conditions Determining Eligibility describe requirements as to:

a. Plot
b. Accessibility
c. Number of living units
d. Types of eligible dwellings
e. Nonresidential use of dwellings

528. General Minimum Requirements describe minimum conditions precedent to eligibility. These appear under the general headings of:

a. Compliance with local regulations
b. Natural light and ventilation

c. Room arrangement
d. Construction of dwelling
e. Services and equipment

529. Local Minimum Requirements are published separately for each insuring office area, and define for each area the General Minimum Requirements. Individual items are under identical headings and in the same sequence as those in General Minimum Requirements, and are necessarily local adaptations.

530. The only requirements of Property Standards which are subject to waiver are those contained in Part VI, Local Minimum Requirements. Waivers are permitted only in those cases in which the desirable objectives are fully attained in spite of technical violations of the stated requirements. The procedure to be followed in considering waivers is described in Section 2, Underwriting Procedures.

531. **Subdivision Standards.** These standards, in addition to outlining desirable objectives, define, under Minimum Requirements, the essential characteristics which must be present to establish the suitability of the subdivisions as sites for homes eligible for mortgage insurance. These requirements appear in Circular No. 5, Subdivision Standards, Part II, under the following general headings:

a. Convincing Evidence of a Healthy Demand
b. Appropriate Surroundings and Topography
c. Accessibility to Schools, Employment, Shopping and Recreational Centers
d. Suitable Utilities and Street Improvements
e. Compliance with Zoning Regulations and Provisions of Adequate Deed Restrictions
f. Conforming to Planning Regulations
g. Suitability of Subdivision Plan
h. Sound Program with Respect to Mortgage and Tax Indebtedness

532. **Minimum Construction Requirements for New Dwellings.** For the purpose of encouraging improvement in housing conditions and construction practices and for the purpose of minimizing mortgage risk, the Federal Housing Administration has established Minimum Construction Requirements for New Dwellings for each insuring office area. These are definite eligibility requirements for cases involving conventional methods of construction. Individual requirements are listed under the following general headings:

a. Excavation

b. Masonry: (*1*) General, (*2*) Footings, (*3*) Foundations, (*4*) Exterior masonry walls, (*5*) Chimneys, (*6*) Cement floors, driveways and walks

c. Dampproofing

d. Structural Steel and Iron

e. Lumber

f. Wood Framing: (*1*) Floors and Roofs, (*2*) Exterior walls, (*3*) Interior partitions

g. Miscellaneous

h. Termite prevention

i. Roof coverings

j. Sheet metal

k. Lathing

l. Plaster work

m. Stucco

n. Painting

o. Plumbing

p. Heating

q. Electric work

r. General

PART II

SECTION 6

METHODS OF MORTGAGE RISK RATING

CONTENTS

Effective February 1938
Federal Housing Administration.

PART II

SECTION 6

METHODS OF MORTGAGE RISK RATING

DEFINITION OF RISK RATING

601. Mortgage risk rating is the process of thoroughly analyzing the major factors of risk undertaken in the making of a mortgage loan and the rating of the mortgage in accordance with the risk involved in the loan transaction or in connection with the insurance of the mortgage. Risk rating is made necessary by the terms of the National Housing Act. It provides a uniform method for determining whether or not a dwelling mortgage is eligible for mutual insurance under Title II of the National Housing Act. In addition, it serves as a basis for the classification of mortgages in accordance with their quality as investments.

NATURE OF MORTGAGE RISK

602. Mortgage risk is created whenever a mortgage is made and continues throughout the entire life of the loan, although the degree of risk may change. Each and every mortgage investment is hazardous in some degree. However, different mortgages vary as to degree of risk and it is fallacious to presume that mortgages fall into merely two classes, viz, those that are safe and those that are unsafe.

603. Mortgage risk is an entity and can be treated as such. It is essential to so treat it in order to make it possible to express a measurement of risk in simple terms. As an entity, the over-all degree of risk is composed of all the possibilities of trouble, expense, and loss in connection with the lending of mortgage funds. In other words, risk includes probability of:

a. Difficulty in connection with collections
b. Unusual expense in connection with collections
c. Excessive servicing costs
d. Cost of foreclosure
e. Delay in foreclosure
f. Cost of rehabilitation
g. Cost of carrying until sold

h. Cost of resale
i. Loss, if any, on resale

Distinction is made between the above elements which comprise mortgage risk and the factors which cause or contribute to the degree of mortgage risk.

604. The factors contributing to mortgage risk are numerous, complex, and subject to an almost infinite number of possible combinations in practical cases. Included among these factors are various neighborhood and location characteristics. Different types of cities create different types of residential neighborhoods. A variety of factors affects the probable future trends of neighborhoods and of the values of the homes in them. Neighborhoods have varying degrees of stability, and some may be expected to have longer attractive lives than others. In listing factors which contribute to risk, it is necessary to take account of the great variety of architectural styles and designs. They have differing probabilities with respect to structural durability. They will be acceptable in future markets in widely differing degrees. Different methods of dwelling construction, different room arrangements, different sizes of houses, and different provisions for mechanical equipment introduce different degrees of mortgage risk. In general, factors which are vital in mortgage risk measurement in larger communities are sometimes of less significance in smaller communities and towns. That is, the ratings ascribed do not parallel the actual presence of risk factors but rather the intensities with which they contribute to over-all risk. Identical conditions, acceptable in small towns, are frequently unacceptable in larger communities.

605. A most important group of factors which affect mortgage risk is the one which embraces the relationship between the physical property and the neighborhood in which it is located. This relationship directly affects marketability of the property. Marketability is a basically important characteristic of good mortgage loan security. Different degrees of marketability represent different degrees of mortgage risk. There are varying degrees of conformity and non-conformity between neighborhoods and individual houses in them and this must be taken into account in listing factors which contribute to mortgage hazard.

606. Also included are all those elements of risk associated with the earning power of the prospective borrower, his attitude toward obligations, his ability to pay, and his prospects for the future. In the final analysis the probability that a borrower will be able and willing to meet the mortgage obligation represents the first line of defense against trouble with the mortgage investment. Therefore, a poor borrower, when considered in relation to the mortgage transaction, requires a low rating of mortgage risk. At the same time, a good borrower cannot go very far toward replacing the necessity for sound physical security in the real estate itself.

607. All the individual elements which contribute to mortgage risk are presumed, in the final analysis, to combine and constitute the over-all risk involved in the insurance of the mortgage loan. In this sense, mortgage risk is considered to be an entity susceptible to measurement and expression as a single numerical rating.

ESSENTIALS IN THE MEASUREMENT OF RISK

608. The Underwriting Staff utilizes the risk rating procedure (*a*) to determine whether or not a proposed mortgage is eligible for insurance, and (*b*) to rate the risk represented by the mortgage so that it may be grouped correctly for mutual insurance purposes. The risk rating process accomplishes both objectives simultaneously.

609. These two operations require the use of a prescribed system which secures uniform decisions and conclusions when applied by different competent men. It is necessary to deal with many complex elements of risk. It is apparent that these may combine into an almost unlimited number of patterns. In order to secure uniformity and consistency in decisions, the risk rating system prescribes that the elements of risk shall be treated by interrelated groups and then integrated into a final result according to a specified procedure. Adherence to the procedure is mandatory.

610. Mortgage risk lies in the future. Therefore risk rating involves forecasting and prediction. It deals with probabilities. Risk rating involves the determination of the chances and likelihood of default and loss. It seeks to foresee probable ways in which failures and trouble may occur. Risk rating, therefore, is equivalent to predicting chances or likelihoods as seen at the time of analysis.

611. All the factors of risk in mortgage lending are not included in the list of features in the risk rating system. Some have been omitted deliberately; others are included under other designations. For example, reference to the ability of the mortgagee to service a loan properly is omitted but not ignored. The Federal Housing Administration will insure only those mortgages submitted by approved mortgagees, and to gain approval a mortgagee must establish that it is able to service mortgages properly. Other mortgage risk factors of prime importance are future changes in conditions affecting world and domestic trade and changes in price levels. These factors are too complex to be measured in individual cases except in very general terms and do not come within the scope of the risk rating system except insofar as they are considered in valuations. Practically all other factors of risk, regarding which members of the Underwriting Staff can be expected to have significant opinions, are embraced in the system.

612. It cannot be presumed that the relative importance given to the various factors has been determined with the ultimate degree of accuracy. However, reasonableness is held as the objective, and it is anticipated that future research and experience will enable a greater degree of accuracy. Certain weights have been ascribed to the elements of risk considered in the risk rating system. The nature of these weights should be thoroughly understood by the men who use the system. The weights ascribed were fixed by a large number of experienced mortgage men. At the present time the introduction of the weights into the system may be compared with the fire insurance rate system adopted many years ago and gradually corrected through the years as the relative importance of the risk factors became known. Experience to date indicates, however, that the weights used in the risk rating system are sufficiently correct to obtain results which are reasonable and justified.

613. The absolute weights used in the risk rating system do not directly reflect the presumed relative importance of the several features. Certain features are distinguished as readily ratable through a wide range of degrees of quality. Others are of such a character that differences of acceptable quality are not as ratable by degrees. The former features have, in general, been given higher weights than the latter. That is, features which are readily ratable have higher weights than important features in connection with which the choice, presented to the man making the rating, is largely between mere acceptance and a reject rating. Thus, in the Rating of Location, the feature, Protection from Adverse Influences, which is both important and ratable through a wide range of degrees of protection, is ascribed a high weight, while the feature, Level of Taxes and Special Assessments, which is important but is not ratable through a wide range of degrees, is ascribed a relatively low weight. In the latter case the primary consideration is whether the feature warrants a reject rating or whether it warrants any one of the acceptable ratings. The degree of the acceptable rating is of secondary importance. Weighting points are not wasted on features such as the latter. As a consequence the weights ascribed to the several features cannot be construed as representing the actual relative importance of the features in the system unless consideration is given to this treatment of the features.

614. Another characteristic of the risk rating system, evidenced by the mortgage pattern, is that in determining the total measure of risk the weaker elements impose their penalties in greater ratio than do the stronger elements. The relative importance of the various risk factors differs from case to case and the more important factors are always those which happen to be the weakest in particular cases.

615. The risk characteristics and economic soundness of a mortgage transaction cannot be determined on the basis of the loan-value ratio alone. This ratio merely expresses the relationship between the loan and the property value at the time of appraisal. It cannot throw sufficient light on the possibility of default by the borrower nor can it fully indicate what relationship may exist between the loan and the property value at a future time. If the loan is to run for twenty years, but the building which in part constitutes the mortgage security cannot be expected to sustain economic usefulness for that period of time, the loan transaction is not economically sound; and, though the loan-value ratio may be relatively low, a rating of the mortgage risk may indicate that the proposed mortgage is ineligible for insurance. Again, the loan might not be economically sound if the probable rate of decline in property value will be greater than the rate of amortization of the loan principal. Therefore, risk rating is significant because it makes possible the examination of mortgages by other means than the traditional one of determining the ratio between the principal amount of the mortgage and the valuation. This ratio is included in risk rating but is only a part of it.

616. Valuation analyses include consideration of a great number of factors. All of them are also mortgage risk factors, since conditions with regard to them affect value which, in turn, affects the index of risk indicated by the loan-value ratio in any case. Valuation requires the analysis of structural, functional, and esthetic qualities of buildings; the making of estimates of the cost of constructing or reproducing structures; the analysis of the quality and stability of environments in which individual properties are located; the extent to which desirable or undesirable relationships exist between individual properties and their surroundings, and numerous other matters. All these analyses are significant in mortgage risk rating as well as in valuation. However, the valuation of property is for the purpose of establishing an estimate of the price which a purchaser is warranted in paying, while risk rating determines the quality of a mortgage investment. The two processes have different objectives. For this reason it is important to draw a careful distinction between risk rating and valuation. Valuation is used by the

Federal Housing Administration (*a*) to make certain that loans which exceed the maximum prescribed percentage of value are not accepted for insurance, and (*b*) to ascertain the loan-value ratio, which is one of the most heavily weighted features in the risk rating system. In the first instance, possible ineligibility is determined by valuation. In the second instance, valuation is used to assist in the determination of eligibility as dependent upon the presence of economic soundness in the mortgage transaction as revealed by risk rating.

617. The risk rating system is designed to guide the judgment of Underwriting Staffs, to attain a degree of accuracy, and to secure a degree of controlled uniformity. The system requires the exercise of good judgment at every step in the procedure. It is not a formula which can be applied without discrimination.

THE RISK RATING PROCESS

618. The many individual factors which contribute to risk have been grouped into a few significant relationships which are called "features" in the risk rating system. These features are, in turn, combined into larger groups described as "categories."

619. In the risk rating process applied to amenity income dwellings, that is, to properties salable to prospective buyers interested in the direct services of the properties rather than possible monetary incomes, there are 27 features grouped into 4 categories, as follows:

- Rating of Property:
  - Structural Soundness
  - Resistance to Elements
  - Resistance to Use
  - Livability and Functional Plan
  - Mechanical and Convenience Equipment
  - Natural Light and Ventilation
  - Architectural Attractiveness
  - Adjustment for Nonconformity
- Rating of Location:
  - Relative Economic Stability
  - Protection from Adverse Influences
  - Freedom from Special Hazards
  - Adequacy of Civic, Social, and Commercial Centers
  - Adequacy of Transportation
  - Sufficiency of Utilities and Conveniences
  - Level of Taxes and Special Assessments
  - Appeal
- Rating of Borrower:
  - Social and Economic Characteristics
  - Motivation in Relation to Transaction
  - Employability and Earning Stability
  - Relation of Obligations to Transaction
  - Relation of Income to Transaction

Rating of Mortgage Pattern:
- Ratio of Loan to Value
- Ratio of Total Payment to Rental Value
- Ratio of Life of Mortgage to Economic Life of Building
- Lowest Category Rating
- Intermediate Category Rating
- Highest Category Rating

620. In the risk rating process applied to rental income dwellings, there are 34 features grouped into 5 categories, as follows:

Rating of Property:
- Structural Soundness
- Resistance to Elements
- Resistance to Use
- Livability and Functional Plan
- Mechanical and Convenience Equipment
- Natural Light and Ventilation
- Architectural Attractiveness
- Adjustment for Nonconformity

Rating of Location:
- Relative Economic Stability
- Protection from Adverse Influences
- Freedom from Special Hazards
- Adequacy of Civic, Social, and Commercial Centers
- Adequacy of Transportation
- Sufficiency of Utilities and Conveniences
- Level of Taxes and Special Assessments
- Appeal

Rating of Earning Expectancy:
- Rentability of Units
- Occupancy Percentage in Competitive Buildings
- Likelihood of Serious Competitive Construction
- Reliability of Rental Market Data
- Reliability of Expense Prediction
- Rating of Property
- Rating of Location
- Expense Ratio

Rating of Borrower:
- Social and Economic Characteristics
- Motivation in Relation to Transaction
- Employability and Earning Stability
- Relation of Obligations to Transaction
- Relation of Income to Transaction

Rating of Mortgage Pattern:
- Ratio of Loan to Value
- Ratio of Debt Service to Net Income
- Ratio of Life of Mortgage to Economic Life of Building
- Rating of Earning Expectancy
- Rating of Borrower

621. Certain individual elements of risk are incapable of intelligent rating. For example, if an attempt is made to rate a property according to the number of baths, no satisfactory clue to rating is possible unless the number of baths is related to the requirements of the local market and the size of the house. However, when rating a feature such as Livability and Functional Plan, it is possible to form a very definite conclusion. Such a relationship is ratable. The system does not rate the income of the borrower. Instead, it rates the ability of the borrower to pay the debt service. That is, judgment is applied to the relationship existing between the borrower's income and the debt service of the contemplated mortgage. The selected features or relationships are sufficiently different from each other so that an intelligent independent judgment in connection with any one of them can be formed.

622. In the processing of an application for insurance, each feature is given a rating. Each risk feature is either an individual risk factor or comprised of a number of correlated factors which can be analyzed separately but treated as a unit. For example, the feature, Sufficiency of Utilities and Conveniences, requires consideration of the extent and adequacy of street improvements, public utilities, and municipal services. The resulting risk contributed by the presence, absence, cost, or quality of any of these is reflected in the rating of the entire feature.

623. In each of the categories of risk, the individual feature ratings when combined comprise the rating of the category. The Rating of Property is assigned by Architectural Inspectors and Valuators. The Rating of Location is assigned by Valuators. The Rating of Earning Expectancy is also assigned by Valuators. The Rating of Borrower is assigned by Mortgage Risk Examiners. The Rating of Mortgage Pattern is assigned by Chief Underwriters. All ratings are reviewed and finally established by Section Chiefs or Chief Underwriters in accordance with jurisdictions and responsibilities outlined elsewhere in this Manual.

624. In the system used for amenity income dwellings, the ratings ascribed to the first three categories are treated as three features in the Mortgage Pattern category and when combined with three other features in the Mortgage Pattern category result in the final risk rating index of the mortgage. The final result is referred to as the Total Rating of Mortgage Pattern.

625. In the system used for rental income dwellings, the ratings ascribed to the first two categories are treated as features in the Earning Expectancy category. The ratings ascribed to the Earning Expectancy category and to the Borrower category are then treated as two features in the Mortgage Pattern category, and, when com-

bined with three other features in the Mortgage Pattern category, result in the final risk rating index of the mortgage. The final result is referred to as the Total Rating of Mortgage Pattern.

626. The forms used by the Underwriting Staff contain the rating grids, one for each of the categories of risk. Each grid lists the several features in a column at the left hand side. Opposite, on the right hand side, are seven columns headed, respectively, Reject, *1*, *2*, *3*, *4*, *5*, and Rating. The accompanying illustration of a grid indicates the typical arrangement.

Rating of Borrower

	FEATURE	REJECT	1	2	3	4	5	RATING
Attitudes	Social and Economic Characteristics		3	6	9	12	15	
	Motivation in Relation to Transaction		5	10	15	20	25	
Ability to pay	Employability and Earning Stability		4	8	12	16	20	
	Relation of Obligations to Transaction		3	6	9	12	15	
	Relation of Income to Transaction		5	10	15	20	25	
	TOTAL RATING OF BORROWER							

627. In rating the individual risk features, the risk rating system requires differentiation between six degrees of excellence or poorness of conditions. First, differentiation must be made between a condition that results in risk so great as to warrant rejection of the insurance application. Above this, differentiation must be made between conditions ranging from "poor but acceptable" on up the scale of excellence through "fair" and "good" to "excellent." These designations are presented here simply to indicate that the system recognizes that risk measurements are relative. The terms themselves are not used on the forms because they would convey implications beyond the simple idea of rating as suggested by the use of the figures *1*, *2*, *3*, *4*, and *5*. Each feature is rated by placing an X mark opposite it in the grid. Every feature must be rated but not more than one such mark is made for any one feature. A feature rating in the Reject column indicates that conditions relating to it are such that insurance of the mortgage should be refused. A *1* column rating would indicate a very poor condition just above the reject margin. A *5* column rating would indicate that excellent con-

ditions pertain to the feature. Intermediate ratings would cover the range in between.

628. A small numeral or "weight" appears in each rating column after each feature. When all X marks have been entered on the grid, the indicated weights are copied in the right hand column, headed Rating. The sum of the weights carried over and placed in the last column is entered at the lower right hand corner of the grid and becomes the total rating ascribed to the entire category. The only exception is found in the Property grid. In it one feature weight is deducted instead of added in securing the final Rating of Property.

629. The final rating for the mortgage is obtained by recording ratings upon a grid known as Rating of Mortgage Pattern. On this grid there are several features involving certain relationships in the mortgage transaction, such as the amount of the loan and the mortgage term in years, and matters pertaining to the property, such as its estimated value and the estimated remaining economic life of the building. Also listed as features on this grid are the ratings of the other risk categories. Ratings on this grid are made for these last named features according to the amount of the category ratings which have been previously determined. The sum of the ratings made on the Rating of Mortgage Pattern grid is the final index of the relative risk involved in the mortgage.

630. If the sum of the individual feature ratings in any category is less than 50 points, this indicates a degree of risk too great to permit insurance of the mortgage. A large number of low feature ratings will result in rejection of the application for insurance because the resulting category rating will fall below the 50 point margin of acceptability. The range from 50 points to 100 points is intended to represent different degrees of risk above the lower limit of acceptability.

631. The risk rating system is so devised that after the quality of the real estate security and the characteristics of the borrower have been determined and found to be such that no undue mortgage risk is created on their account, then by means of the system it can be determined what is the maximum loan principal and maximum loan term in years which would represent the margin beyond which economic soundness and, therefore, insurability would cease to exist. Thus, after the ratings of Property, Location, and Borrower have been made in a case involving an amenity income dwelling, the Chief Underwriter, in rating the Mortgage Pattern, can determine whether or not the loan described in the application is insurable, and, if not insurable because the loan is too large or the term too long, or both, he can determine how large a loan would be insurable and for what maximum term the loan could be made.

Or in another case, requirements might be made for the purpose of improving the real estate security, with the result that higher category ratings would render unnecessary rejection or a counter-proposal in a reduced amount or term.

632. Under the risk rating system the determination of economic soundness and eligibility of mortgages proceeds in four steps, as follows:

a. Determination as to whether mortgages submitted for insurance are eligible or ineligible for further consideration, as indicated by the application of minimum eligibility requirements described in Section 5.

b. Determination as to whether mortgages accepted for further consideration are insurable or noninsurable, by rating individual risk features and ascertaining if any individual feature receives a "Reject" rating.

c. Determination as to whether mortgages receiving no individual feature reject ratings are insurable or noninsurable, by rating risk categories and ascertaining if any category receives a rating of less than 50 points.

d. Final determination of the degree of economic soundness of mortgages receiving no individual feature reject ratings and no category ratings under 50 points, by means of a Mortgage Pattern rating based on all feature and category ratings.

633. It may be pointed out that the relative importance of the several categories of risk differs from case to case. For example, in a case of an amenity income dwelling in which either the Property, the Location, or the Borrower Category receives a very low rating and the other two categories receive relatively high ratings, the relative importance of the one low rated category in the over-all degree of risk is substantially greater than in a case in which all three categories are rated alike. For this reason the final category, namely, the Mortgage Pattern, includes a device by means of which to take account of this relationship. The category having the lowest rating is more heavily weighted than the other two on the grid of the Mortgage Pattern.

634. The Mortgage Pattern is so arranged that it is possible to determine counter-proposals on a uniformly fair basis. Thus, in a case in which the loan is too hazardous to be acceptable for insurance because the amount of the loan is too great, analysis of the Mortgage Pattern makes it possible to determine how much of a reduction in the amount of the loan is necessary to make it eligible.

635. Detailed instructions in connection with the rating of the features and categories are presented in Part II of this Manual.

CONTROL OF RISK MEASUREMENT

636. In the use of the risk rating system, Underwriting Staffs are instructed to consider the features as a check list. As such, it will tend to prevent them from omitting consideration of any matters of vital importance in the determination of risk. Furthermore, they are expected to rely heavily upon their personal judgment in establishing the ratings. It is specifically suggested that they form an over-all opinion with respect to the proper rating of an entire category and check the rating by a detailed analysis of the features. This will serve to correct any tendency to treat the features and the system as a fetish, and will tend to orient and control judgment in connection with ratings. The minutiae in the system cannot be significant in the absence of the application of broad judgments. On the other hand, broad general judgments are dangerous in that they may fail to give sufficient consideration to important details. Both approaches are necessary to a correct rating.

637. The program of the Underwriting Division, Washington, D. C., includes the preparation and distribution of "instruction blocks" containing illustrations of correctly rated cases for the guidance of the Underwriting Staffs in the Insuring Offices. These illustrations include descriptions of actual cases and outline the specific considerations which resulted in the risk ratings ascribed. It is expected that members of the Underwriting Staffs will consult the illustrations and make comparisons between them and current cases to seek analogies and related situations. Such practice serves to bring a high degree of consistency into the ratings ascribed throughout the entire country and leads to a more correct segregation of mortgages according to risk characteristics in the mutual mortgage insurance groups.

638. Risk rating illustrations are not regulatory. They represent aids to judgment only. Underwriting Staff members are instructed to follow the illustrations insofar as feasible, but they are not accountable for discrepancies between the illustrations and the ratings which they ascribe in particular cases. Where the discrepancies are unwarrantedly great, Underwriting Staff members may be held accountable on the basis of incompetence or lack of integrity, but in such instances the variations between illustrations and actual cases may not be presented as the sole evidence.

639. Risk measurements are also controlled through the provisions for review, described in Section 2, Underwriting Procedures. Every effort shall be made by Section Chiefs and Chief Underwriters to bring consistency into the ratings ascribed to mortgages.

PART II

SECTION 7

RATING OF MORTGAGE PATTERN

CONTENTS

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Federal Housing Administration

PART II

SECTION 7

RATING OF MORTGAGE PATTERN

GENERAL RATING INSTRUCTIONS

Rating of Mortgage Pattern

FEATURE	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value ______%		6	9	12	16	20	
Ratio of Total Payment to Rental Value ______%		2	4	6	8	10	
Ratio of Life of Mortgage to Economic Life of Building ______%		1	2	3	4	5	
Lowest Category Rating (______________) ______pts.		7	12	17	22	27	
Intermediate Category Rating (__________) ______pts.		6	10	14	18	22	
Highest Category Rating (______________) ______pts.		4	7	10	13	16	
TOTAL RATING OF MORTGAGE PATTERN							

701. The term, Mortgage Pattern, refers to the relationships which exist between the mortgage security, the borrower, and the provisions and conditions in the mortgage transaction. The expression, Rating of Mortgage Pattern, refers to the degree to which these relationships are satisfactory, acceptable, proper, and advantageous from the point of view of investment in the mortgage. Therefore, the Rating of Mortgage Pattern is a measurement of the economic soundness of the mortgage. For practical purposes a mortgage is considered to be economically sound when the Mortgage Pattern is rated 50 points or more. If the rating is less than 50 points, the mortgage is not considered to be economically sound, and is ineligible for insurance. Ineligible mortgages must be rejected unless modifications can be introduced which raise the rating to at least the 50 point level.

702. Rating of this category is accomplished by considering the extent to which risk is created by the characteristics of the security, the borrower, and the provisions and terms contained in the mortgage instrument. In determining the eligibility of mortgages secured by amenity income dwellings, the Rating of Mortgage Pattern combines the Rating of Property, the Rating of Location, the Rating of Borrower, and the major factors in the mortgage transaction. The six features which are embraced in the Mortgage Pattern, applied to amenity income dwellings, are listed below with the weights which have been ascribed to them:

a. Ratio of Loan to Value	20
b. Ratio of Total Payment to Rental Value	10
c. Ratio of Life of Mortgage to Economic Life of Building	5
d. Lowest Category Rating	27
e. Intermediate Category Rating	22
f. Highest Category Rating	16

In determining the eligibility of mortgages secured by rental income dwellings, the Rating of Mortgage Pattern combines the Rating of Earning Expectancy, the Rating of Borrower, and the major factors in the mortgage transaction to arrive at a final conclusion. The five features which are embraced in the Mortgage Pattern applied to rental income dwellings, are listed below with the weights which have been assigned to them:

a. Ratio of Loan to Value	20
b. Ratio of Debt Service to Net Income	20
c. Ratio of Life of Mortgage to Economic Life of Building	5
d. Rating of Earning Expectancy	40
e. Rating of Borrower	15

The ratios which comprise the first three features are expressed, in all cases, in whole numbers, except as stated below. All decimals and fractions are dropped. Thus, if the ratio of total payment to rental value is 78.8%, the ratio is recorded as 78%; if 102.3%, it is recorded as 102%. However, if the ratio of loan to value is any amount in excess of the legal limit, the exact percentage to one decimal place must be recorded. This, of course, will occur only where no counterproposal is feasible.

703. Rating of Mortgage Pattern is accomplished by rating each feature separately. At the left side of the Mortgage Pattern grid is a column for the various ratios and ratings used in rating the features in this category. The Chief Underwriter transcribes or computes these figures and places them in this column. On the Mortgage Pattern grid for amenity income dwellings, three blank spaces are provided opposite the last three features in which to place the abbreviations, "Property", "Location", and "Borrower",

in the order applicable in the particular case. On the grid used for rental income dwellings, no such provision is necessary. The features on either grid have been weighted upon a scale of 100 points in order to retain the relative importance of each when all are combined to obtain the Total Rating of Mortgage Pattern. Each feature is rated on a scale of from *1* to *5*, *5* being the highest rating. The rating grid, which appears on Report of Chief Underwriter, enables this rating to be recorded easily and quickly. For example, assume that the Chief Underwriter is ready to rate the various features. The first is Ratio of Loan to Value. If the ratio is less than 60%, he puts an X mark in the *5* column. He immediately carries over to the extreme right hand column of the grid the figure appearing in the marked square, in this case *20*. If the mark is in the *1* column, the number in that square would be carried over, *6* in this case. If the ratio is more than the legal limit, or more than is considered economically sound, the Chief Underwriter determines the amount he is willing to recommend for insurance and then rates the feature, Ratio of Loan to Value, in the appropriate column. One reject rating anywhere in any risk category will necessitate a recommendation for the rejection of the application for insurance. In the event an X mark appears in the Reject column, the word "Reject" must be written in the Rating column opposite the feature so rated and again on the Total Rating line. If no such rating appears after any of the features, the final rating of the Mortgage Pattern is obtained by adding the figures in the right hand column. Paragraphs 706 to 721 describe the rating of the six features in the Mortgage Pattern grid applied to mortgages on amenity income dwellings. Paragraphs 722 to 730 describe the rating of the five features in the Mortgage Pattern grid applied to mortgages on rental income dwellings.

704. If repairs, alterations, or additions are contemplated by the mortgagor, or if the Underwriting Staff determines that such work is necessary to make the loan acceptable for insurance, the Chief Underwriter shall base his findings upon the assumption that the work has been satisfactorily completed. Architectural Inspectors and Valuators, in all cases, give due credit in risk rating and valuation for such necessary repairs or contemplated improvements. The conditions which must be complied with if insurance is to be granted are stated on the Report of Chief Underwriter, and, in turn, on the commitment to insure.

705. Where lack of economic soundness is evident but does not appear to be properly reflected by the normal operation of the Mortgage Pattern, the Chief Underwriter is authorized to recommend a reduction in the principal amount or term of a proposed mortgage. In such instances he shall use lower loan-value ratios or lower ratios of life of mortgage to economic life of building. He need not modify category ratings in these cases.

RATIO OF LOAN TO VALUE

706. The ratio of the mortgage loan to the value of the property has been used in traditional mortgage lending practice as the most important and, in some instances, as the sole test for determining investment quality and risk. Its significance is not underestimated in the risk rating system of the Federal Housing Administration. It may be noted that a relatively low rating in this feature requires considerable compensation in other Mortgage Pattern features if a high final rating of the category is to be obtained. It is a basic assumption of the National Housing Act that high percentage, long term loans are adequately secured when they are made in good, stable neighborhoods on properties owned by borrowers who themselves are good risks.

707. The element of safety is increased as the ratio of loan to value is lowered. This enhances the chance of full recovery of the money invested in the mortgage if the property is sold in a forced market. Default is usually preceded by a period of financial distress of the owner. During this period the property may be allowed to deteriorate through lack of proper maintenance. It is, therefore, self evident that the wider the margin between the amount of the loan and the value, the less is the chance for loss. A further advantage of the lower ratio is that should default be threatened, an owner will be better able to dispose of the property before default, and thus relieve the lending institution or the Federal Housing Administration from acquiring the property.

708. This feature is rated according to the ratio of the amount of the loan to the Federal Housing Administration valuation of the property. In cases involving leasehold estates, the ratio is calculated by dividing the sum of the amount of the loan and the value of the leased fee by the valuation of the property unencumbered by lease. The following instructions are used in rating this feature:

If the ratio is—	*Place X in column*
Less than 60%	5
60% to 64%	4
65% to 69%	3
70% to 74%	2
75% to legal limit	1
Over legal limit	Reject

Inasmuch as the Mortgage Risk Section rates the borrower either on the basis of the application or on the basis of the highest amount apparently allowed by the valuation and other factors, whichever is the lower, the feature Ratio of Loan to Value shall be calculated on the same basis. For this reason reject ratings of this feature will be recorded only when a ratio in excess of the legal limit is accompanied by a reject rating of a category other than Rating of Borrower.

RATIO OF TOTAL PAYMENT TO RENTAL VALUE

709. As a feature in the Mortgage Pattern, the Ratio of Total Payment to Rental Value is only partially analogous to the foregoing feature, Ratio of Loan to Value. The Ratio of Total Payment to Rental Value introduces another aspect, namely, the ability of the income of the property itself to pay the total monthly payments as they become due. The ability of the monthly rental to pay the total monthly payment will not only encourage the owner to fulfill his obligation, but will better enable him to do so in the event his financial condition becomes distressed. A favorable ratio of the total payment to the rental value will also assist the lending institution or the Federal Housing Administration in recovering the investment in the event of acquisition of the property.

710. As the monthly gross rental increasingly exceeds the total monthly payment, the degree of security increases. By the same token, as the monthly gross rental becomes insufficient to meet the total monthly payment, the risk becomes correspondingly greater. For the purpose of this analysis, the total payment is always construed to be the total monthly payment which would apply to the maximum term of loan acceptable to the Federal Housing Administration as economically sound, rather than the payment applicable to a shorter term of loan for which application may have been made.

711. *Total Payment.* The total monthly payment consists of all the estimated charges which the mortgagor would pay each month of the first year, calculated on the maximum term of loan which the Federal Housing Administration can accept as economically sound. Regardless of the actual term of the loan under consideration, the Chief Underwriter determines the total monthly payment, for the purpose of rating this feature, by assuming the loan to run for a term equal to the maximum term considered economically sound, but not to exceed the maximum term legally insurable. The total monthly payment is composed of the following:

a. Monthly payment of principal and interest
b. Taxes and special assessments
c. Ground rentals (if leasehold)
d. Fire and other hazard insurance
e. Mortgage insurance premium

712. *Rental Value.* The rental value figure, used in connection with the computation of Ratio of Total Payment to Rental Value is the monthly rental value reported by the Valuator on Report of Valuator. The rental value of a property will be computed on the basis of the typical rental being received for similar properties in accordance with the instructions contained in Section 13, Methods of Dwelling Valuation.

713. The Chief Underwriter calculates the ratio of the total monthly payment to the monthly rental value by dividing the former by the latter to secure a percentage. Having established this percentage, the feature Ratio of Total Payment to Rental Value is rated in the Mortgage Pattern according to the following table:

If the ratio is—	*Place X in column*
Less than 60%	5
60% to 75%	4
76% to 92%	3
93% to 110%	2
111% to 130%	1
Over 130%	Reject

714. If the ratio of total payment to rental value is more than 130%, the Chief Underwriter may recommend a commitment for a smaller loan amount. This has the effect of cutting down the total payment. However, the rejection point, over 130%, is liberal and it is seldom that a slight lowering of the loan amount will appreciably lower the high ratio. The mere fact that the total monthly payment is 130%, or slightly less, of the monthly rental value and results in a rating in the *1* column is not sufficient evidence that the loan is sound in that respect. If there are other low feature ratings, lack of economic soundness may be indicated if the ratio of total payment to rental value is rated in the *1* column. If the latter rating is caused by unusual circumstances, and is compensated by strong ratings of other features, the Chief Underwriter must use his judgment in determining whether or not economic soundness is present and what counter-proposal, if any, shall be made.

715. The point of rejection for this feature has been placed at a fairly low level, namely, where the ratio of total payment to rental value is more than 130%. It is so placed because properties of higher value tend to have relatively low rental values.

RATIO OF LIFE OF MORTGAGE TO ECONOMIC LIFE OF BUILDING

716. The relationship expressed by the ratio of the "life" (that is, the term, in years) of the mortgage to the estimated remaining economic life of the building results in a high or low rating of

this feature according to the extent to which the remaining economic life of the building exceeds the life of the mortgage. In rating this feature, the Chief Underwriter uses the estimate of remaining economic life recorded on Report of Valuator.

717. The Ratio of Life of Mortgage to Economic Life of Building is significant because it deals with the extent of the period within which there is time to recover the mortgage investment. It recognizes a strong probability, in practically all cases, that the value and usefulness of properties will decline. The mortgage pattern should take account of such declines. It might appear axiomatic that loans for shorter terms are more attractive as investments and subject to less risk. If this were universally true it would be feasible to rate the life of a mortgage rather than the ratio of its life to the remaining economic life of the building. It is not feasible to rate a mortgage directly in accordance with its life, because the factors which together increase or decrease risk do not affect risk in the same direction simultaneously. For example, shortening the life of a loan reduces risk by reducing the hazards which result from rapid declines in value. At the same time, shortening the life of a loan increases the total monthly payment, and thereby increases risk. However, the ratio of the life of the mortgage to the remaining economic life of the building is ratable, and changes in the ratio always affect risk in the same direction. Thus, while the ratio is admittedly subject to some criticism because the estimation of the economic life of a building is a matter of considerable conjecture, the use of the ratio as a factor in the Mortgage Pattern is justified.

718. The ratings shall be made in accordance with the following instructions:

If the ratio is—	*Place X in column*
Less than 50%	5
50% to 56%	4
57% to 65%	3
66% to 79%	2
80% to 100%	1
Over 100%	Reject

CATEGORY RATINGS

719. The final ratings ascribed to the Property, the Location, and the Borrower categories are used to establish the ratings of the last three of the six features in the Mortgage Pattern. The relative importance of these three categories differs from case to case. If, in a given case, the Property and the Borrower have received fairly high ratings and the Location has received a fairly low rating, the relative importance of the Location category rating is

great. If, in another case, the Property receives a low rating and the other two categories receive high ratings, the relative importance of the Property category is greatly increased. If, in still another case, the three categories receive ratings which are about the same, there is no great difference in their relative importance. In the last case, this is true whether the ratings are high or low.

720. In order to reflect the changes in relative importance of the Property, Location, and Borrower categories, the last three features in the Mortgage Pattern are weighted differently. The first of these three features, Lowest Category Rating, is the most heavily weighted and the rating ascribed to it is based on the rating of the category which has the lowest rating. The second of the three features, Intermediate Category Rating, is less heavily weighted and the rating ascribed to it is based on the rating of the category which has the next to lowest rating. The third of the three features, Highest Category Rating, is given the smallest weight and the rating ascribed to it is based on the rating of the category which has received the highest rating. If the three ratings are exactly alike it does not matter how they are arranged for the purpose of rating the last three features of the Mortgage Pattern. The same is true if two are alike, provided the third one is used for the rating of the first or third feature, depending upon whether it was rated lower or higher than the other two.

721. In rating the three features, the Chief Underwriter enters the names of the categories and the ratings ascribed to them on the grid in the spaces provided. The following table is used in rating these features:

If category rating is—	*Place X in column*
80 to 100	5
70 to 79	4
60 to 69	3
55 to 59	2
50 to 54	1
Under 50	Reject

RENTAL INCOME DWELLINGS

Rating of Mortgage Pattern (Rental Income Dwelling)

FEATURE	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value ______%		8	9	12	16	20	
Ratio of Debt Service to Net Income ______%		4	8	12	16	20	
Ratio of Life of Mortgage to Economic Life of Building ______%		1	2	3	4	5	
Rating of Earning Expectancy ______pts.		8	16	24	32	40	
Rating of Borrower ______pts.		3	6	9	12	15	
TOTAL RATING OF MORTGAGE PATTERN							

722. When the property which secures the mortgage is a rental income dwelling, the grid illustrated above is used to determine the Rating of Mortgage Pattern. The following rules apply to the rating of the five features in the grid.

723. Ratio of Loan to Value. This feature is rated in accordance with the instructions contained in paragraphs 706 to 708.

724. Ratio of Debt Service to Net Income. This feature is a direct measure of mortgage risk in rental income dwellings. It differs considerably from the second feature in the Mortgage Pattern applied to amenity income dwellings and is relatively much more important as a determinant of the final index of risk. In rental income dwellings, the motives of borrowers are controlled by the returns actually anticipated from equity investment. Furthermore, the marketability of such properties is determined largely by such a consideration.

725. For the purpose of establishing the rating, the monthly debt service shall be calculated on the basis of the maximum term of loan which the Federal Housing Administration can accept as economically sound. The calculation shall include all the estimated charges which the mortgagor would pay each month of the first year on the insured mortgage, but not including taxes and special assessments, ground rentals (if leasehold), and fire and other hazard insurance. The monthly debt service is composed of the following:

a. Monthly payment on principal and interest
b. Mortgage insurance premium

726. The average monthly net income used to determine the ratio is the Estimated Net Earnings upon reaching maximum occupancy reported by the Valuator on FHA Form 2015a. As indicated in Section 15, this estimate of net earnings is a figure determined by deducting from the estimated effective gross revenue (after allowance for vacancies and contingencies), all operating expenses, management expenses, taxes and special assessments, ground rentals (if leasehold), and fire and hazard insurance. Therefore, net income is an estimate of the actual returns available for mortgage debt service.

727. In rating this feature, the Chief Underwriter shall calculate the ratio of the monthly debt service to the average monthly net income by dividing the former by the latter to secure a percentage. Having established this percentage, Ratio of Debt Service to Net Income will be rated in the Mortgage Pattern according to the following table:

If the ratio is—	*Place X in column*
Less than 50%	5
50% to 59%	4
60% to 69%	3
70% to 77%	2
78% to 83%	1
Over 83%	Reject

728. **Ratio of Life of Mortgage to Economic Life of Building.** This feature is rated in accordance with the instructions contained in paragraphs 716 to 718.

729. **Rating of Earning Expectancy.** This, the most heavily weighted feature, is rated after the category, Rating of Earning Expectancy, has been rated. The method used to rate this category is described in Section 12. The following table is used in rating this feature:

If the category rating is—	*Place X in column*
80 to 100	5
70 to 79	4
60 to 69	3
55 to 59	2
50 to 54	1
Under 50	Reject

730. **Rating of Borrower.** This feature is rated after the category, Rating of Borrower, has been rated. The method used to rate this category is described in Sections 10 and 11. The table given in Paragraph 729 is then used in the rating of this feature in the Mortgage Pattern.

REJECTIONS AND COUNTER-PROPOSALS

731. The Rating of Mortgage Pattern is made from results already determined, and is therefore a more or less mechanical process or recapitulation of the risks. If reject ratings of any one of the features have occurred in one of the risk categories, that category rating will have been recorded on one of the other report forms as "Reject" in accordance with instructions in this Manual. In such cases the applicable Mortgage Pattern on Report of Chief Underwriter shall be filled out according to the following example:

RATING OF MORTGAGE PATTERN

FEATURE	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value 80 %		6 X	9	12	16	20	6
Ratio of Total Payment to Rental Value 122 %		2 X	4	6	8	10	2
Ratio of Life of Mtge. to Economic Life of Bldg. 100 %		1 X	2	3	4	5	1
Lowest Category Rating (Location... Reject pts.	X	7	12	17	22	27	Reject
Intermediate Category Rating (Property.........) 59 pts.		6	10 X	14	18	22	10
Highest Category Rating (Borrower.........) 70 pts.		4	7	10	13 X	16	13
TOTAL RATING OF MORTGAGE PATTERN							Reject

RATING OF MORTGAGE PATTERN (Rental-Income Dwelling)

FEATURE	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value ....%		6	9	12	16	20	
Ratio of Debt Service to Net Income ......%		4	8	12	16	20	
Ratio of Life of Mtge. to Economic Life of Bldg. ......%		1	2	3	4	5	
Rating of Earning Expectancy ...... pts.		8	16	24	32	40	
Rating of Borrower ...... pts.		3	6	9	12	15	
TOTAL RATING OF MORTGAGE PATTERN							

RATING OF PROPERTY .... pts. RATING OF LOCATION .... pts.

732. If a category rating is less than 50 points, the applicable Mortgage Pattern shall be filled out as follows:

RATING OF MORTGAGE PATTERN

FEATURE	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value 80%		6 X	9	12	16	20	6
Ratio of Total Payment to Rental Value 122%		2 X	4	6	8	10	2
Ratio of Life of Mtge. to Economic Life of Bldg. 100%		1 X	2	3	4	5	1
Lowest Category Rating (..Location.....) ...42 pts.	X	7	12	17	22	27	Reject
Intermediate Category Rating (..Property.....) ...59 pts.		6	10 X	14	18	22	10
Highest Category Rating (..Borrower.....) ...70 pts.		4	7	10	13 X	16	13
TOTAL RATING OF MORTGAGE PATTERN							Reject

RATING OF MORTGAGE PATTERN (Rental-Income Dwelling)

FEATURE	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value ....%		6	9	12	16	20	
Ratio of Debt Service to Net Income ......%		4	8	12	16	20	
Ratio of Life of Mtge. to Economic Life of Bldg. ......%		1	2	3	4	5	
Rating of Earning Expectancy ...... pts.		8	16	24	32	40	
Rating of Borrower ...... pts.		3	6	9	12	15	
TOTAL RATING OF MORTGAGE PATTERN							

RATING OF PROPERTY .... pts. RATING OF LOCATION .... pts.

It is intended that the Mortgage Pattern grid shall show a rating only for each category in which no reject feature ratings occur, and that the need for rejection in any case shall be made apparent by entry of the word "Reject" after any category rating which is less than 50 points. A total is never to be recorded on the Total Rating line when reject feature ratings or category ratings less than 50 points occur.

733. In instances in which the Rating of Mortgage Pattern, when based on the loan described in the application, is less than 50 points, Chief Underwriters are required to determine whether or not a modified loan having (*a*) a smaller principal amount and a shorter life, or (*b*) simply a smaller principal amount, will qualify as economically sound. If a counterproposal appears feasible, the Chief Underwriter recommends it and modifies the Rating of Mortgage Pattern to correspond with the counter-proposal. The alternative proposal should be made for the largest principal amount and longest life of mortgage which trial ratings of the Mortgage Pattern show as eligible. Where the Rating of Borrower is affected, the Report of Mortgage Risk Examiner is amended. In many cases the counter-proposal requires the re-rating of all three of the first three features in the Mortgage Pattern. In other instances only the first two will be affected. In cases where no feasible counter-proposal will result in a Rating of Mortgage Pattern of 50 points or more, the word "Reject" is entered on the line provided for the Total Rating of Mortgage Pattern.

734. Following are two examples of correctly filled out Mortgage Pattern grids. It will be noted that whole numbers only are recorded on the grid, and all fractions or decimals are dropped. This practice is to be followed in all instances except that if the ratio of loan to value is in excess of the legal limit, it shall be computed to one decimal place and so recorded. In the first example the result of examination revealed the following conclusions:

Principal Amount of Loan	$3,800
FHA Valuation	$5,000
Total Monthly Payment	$36.08
Rental Value of Property	$40.00
Life of Mortgage	20 years
Remaining Economic Life of Building	40 years
Rating of Property	73.
Rating of Location	85.
Rating of Borrower	55.

RATING OF MORTGAGE PATTERN

FEATURE		REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value	76 %		6 X	9 70-74	12 65-69	15 60-64	20 Under 60	6
Ratio of Total Payment to Rental Value	90 %	Over 120%	2 111-120%	4 93-110	6 X 76-92	8 60-75	10 Under 60	6
Ratio of Life of Mortgage to Economic Life of Building	50 %	Over 100%	1 80-100%	2 68-79	3 57-68	4 X 50-56	5 Under 50	4
Lowest Category Rating (Borrower)	55 pts.	Under 50 pts.	7 50-54	12 X 55-59	17 60-69	22 70-79	27 80-100	12
Intermediate Category Rating (Property)	73 pts.	Under 50 pts.	6 50-54	10 55-59	14 60-69	18 X 70-79	22 80-100	18
Highest Category Rating (Location)	85 pts.	Under 50 pts.	4 50-54	7 55-59	10 60-69	13 70-79	16 X 80-100	16
							TOTAL RATING OF MORTGAGE PATTERN	62

In the second example the result of examination revealed the following conclusions:

Principal Amount of Loan	$2,000
FHA Valuation	$4,000
Total Monthly Payment (15 years)	$21.72
Total Monthly Payment (20 years)	$19.10
Rental Value of Property	$37.50
Life of Mortgage	15 years
Remaining Economic Life of Building	45 years
Rating of Property	91.
Rating of Location	65.
Rating of Borrower	82.

RATING OF MORTGAGE PATTERN

FEATURE		REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value	50%	[illegible]	6 [illegible]	9 [illegible]	12 [illegible]	16 [illegible]	20 [illegible] X	20
Ratio of Total Payment to Rental Value	50%	Over 120%	2 111-120%	4 [illegible]	6 [illegible]	8 [illegible]	10 Under 60 X	10
Ratio of Life of Mortgage to Economic Life of Building	33%	Over 100%	1 90-100%	2 [illegible]	3 [illegible]	4 [illegible]	5 Under 50 X	5
Lowest Category Rating	(Location) 65 pts.	Under 50 pts.	7 [illegible]	12 [illegible]	17 [illegible] X	22 [illegible]	27 [illegible]	17
Intermediate Category Rating	(Borrower) 82 pts.	Under 50 pts.	6 [illegible]	10 [illegible]	14 [illegible]	18 [illegible]	22 [illegible] X	22
Highest Category Rating	(Property) 91 pts.	Under 50 pts.	4 [illegible]	7 [illegible]	10 [illegible]	13 [illegible]	16 [illegible] X	16
					TOTAL RATING OF MORTGAGE PATTERN			90

735. If the ratio of loan to value exceeds the prescribed legal maximum, and there are no reject feature or category ratings, the Chief Underwriter recommends a counter-proposal for the largest principal amount which can be insured. In this connection, reference is made to Section 2, Underwriting Procedures. This procedure will preclude rejection of any case solely on account of excessive ratio of loan to value.

PART II

SECTION 8

RATING OF PROPERTY

CONTENTS

Effective February, 1938
Federal Housing Administration

PART II

SECTION 8

RATING OF PROPERTY

GENERAL RATING INSTRUCTIONS

Rating of Property

	PHYSICAL SECURITY FEATURES	REJECT	1	2	3	4	5	RATING
Durability	Structural Soundness		5	10	15	20	25	
Durability	Resistance to Elements		2	4	6	8	10	
Durability	Resistance to Use		1	2	3	4	5	
Function	Livability and Functional Plan		4	8	12	16	20	
Function	Mechanical and Convenience Equipment		2	4	6	8	10	
Function	Natural Light and Ventilation		2	4	6	8	10	
	Architectural Attractiveness		4	8	12	16	20	
	Total Rating of Physical Security							
	Adjustment for Nonconformity		12	9	6	3	0	
	TOTAL RATING OF PROPERTY							

801. Rating of Property is determined by rating eight features of risk according to the principles outlined in this section and in Section 6, Methods of Mortgage Risk Rating. The first seven features are described as the Physical Security Features and are so weighted that the Total Rating of Physical Security may be as high as 100 points. The eighth feature, Adjustment for Nonconformity, is separately rated and the result deducted from, not added to, the Total Rating of Physical Security to determine the Total Rating of Property.

802. The Total Rating of Physical Security, which is obtained by rating the first seven features, presumes that the subject property is free from any detrimental influence resulting from

nonconformity with typical properties in the immediate neighborhood. The Total Rating of Physical Security presumes a hypothetical condition. Because nonconformity definitely affects the marketability of properties, it is important to compare the subject property with surrounding properties and make any necessary adjustment in order to convert the Total Rating of Physical Security into the Rating of Property. Specific instructions for making this adjustment are in paragraphs 860 to 875 of this section. The Total Rating of Property represents a measurement of the mortgage risk introduced by the characteristics of the physical property and by its relation to its actual environment. The Rating of Property does not include consideration of those risk factors introduced by the characteristics of the neighborhood and location. These are included in the Rating of Location, Section 9.

803. Rating of Physical Security shall be accomplished by rating separately each of seven features. The seven features have been weighted on a scale of 100 points in order to retain the relative importance of each when all are combined to obtain the Total Rating of Physical Security. Each feature is marked on a scale from *1* to *5*, *5* being the highest rating. After analysis of the factors comprising a feature, an X mark is placed in the column which is determined to reflect the degree of risk involved. If the X mark is placed in any column other than Reject, the figure appearing in the marked square is carried over to the extreme right hand column of the grid. If the X mark is placed in the Reject column, the word "Reject" is carried over to the extreme right hand column of the grid. One such rating in any feature will necessitate a recommendation for rejection of the application for insurance. When the word "Reject" appears in the Rating column, it must also be written in that column on the Total Rating line. If no such rating appears after any of the features, the final rating of the category is obtained by adding the figures in the Rating column. The system is so designed that this figure will be an indication of the rating on a numerical basis.

804. The seven features which are rated to determine the Total Rating of Physical Security are listed below with the weights which have been ascribed to them:

a. Structural Soundness	25
b. Resistance to Elements	10
c. Resistance to Use	5
d. Livability and Functional Plan	20
e. Mechanical and Convenience Equipment	10
f. Natural Light and Ventilation	10
g. Architectural Attractiveness	20

An eighth feature appears on the grid, but it is not a Physical Security Feature. It is designated "Adjustment for Nonconformity." Instructions for rating this eighth feature are given in paragraphs 860 to 875.

805. The seven features are analyzed from several points of view. The first three features, namely, Structural Soundness, Resistance to Elements, and Resistance to Use are studied in terms of durability. The next three features, namely, Livability and Functional Plan, Mechanical and Convenience Equipment, and Natural Light and Ventilation, are studied in terms of function. The words "Durability" and "Function" have been placed at the left edge of the grid to remind the inspector to assume the proper points of view. The last feature, Architectural Attractiveness, is studied in terms of lasting appeal.

806. Invariably, the physical security features are rated by assuming the conditions which will exist at the time the mortgage is insured. In connection with existing construction the rating is based on the property in its present condition unless the borrower contemplates alterations, additions, and repairs, or unless the Federal Housing Administration requires certain alterations, additions, and repairs. If alterations and repairs are contemplated or required, then the rating is based on the conditions which will exist when the mortgage is insured. No hypothetical conditions may be assumed unless they are specifically defined in Report of Architectural Inspector, FHA Form No. 2014, or in Report of Valuator, FHA Form No. 2015. In the case of new construction the submitted drawings and specifications are analyzed in detail and the rating reflects the relative degree of excellence or poorness which the property will exhibit upon completion according to these drawings and specifications. In cases involving either existing or new construction the rating is based on possibilities and probabilities of what may happen to the structures in the future. The past experience and present condition with respect to the first seven features in this category are significant only to the degree to which they indicate the likelihood of future difficulty. Surface indications are invaluable clues to hidden defects or deficiencies.

807. To obtain consistency from case to case and to insure uniform analyses of physical security features, it is essential to identify conditions which form the basis for ratings in the various columns of the several features. This is accomplished by comparing subject structures with structures of similar type and size in the same general area. For this purpose, the words "type and size" refer to classification of dwellings, such as a single family, detached,

five room, basementless dwelling containing 1,000 square feet of livable area. Price ranges or differences in cost of structures of similar type and size shall not be used as criteria in the selection of other structures for comparison purposes. Such ranges or differences in costs usually reflect differences in quality, condition, effects of age, and degrees of obsolescence. These factors affect the Rating of Physical Security and are considered and reflected in the individual feature ratings. A *5* column, or highest rating, is warranted for any physical security feature when conditions for the particular feature are found to be comparable to the best conditions ordinarily exhibited by structures of the same type and size. A *5* column rating in any one feature does not demand the acme of perfection but denotes relative excellence of a reasonably high order considering the limitations of the size of the structure and its type. It is imperative to remember that even small structures may possess sufficient excellence to warrant *5* column ratings for any or all the physical security features. For example, in rating Livability and Functional Plan this will occur when there has been incorporated in the design a high degree of livability considering the floor area available. Physical security feature ratings will vary in the entire range between the Reject column and the *5* column, by the degree of excellence or poorness resulting from the actual building practices, functional planning, and esthetic design.

808. In determining whether a reject rating is warranted, the inspector must take into account the provisions in established Property Standards as they affect the individual features by considering them to be the minimum requirements necessary to avoid such reject ratings. Those properties that barely comply with these requirements usually warrant a low rating, and the degree to which they surpass them will be favorably reflected by higher column ratings. In view of the fact that the provisions in Property Standards apply to structures of every type and size, it is recognized that for certain of the requirements small structures that barely comply with the individual requirements may receive *4* or *5* column feature ratings, while large and more pretentions structures that just barely comply with the same requirements would receive low ratings. In cases where a waiver of any Property Standards requirement is recommended because of a technical violation but the objectives of the particular requirement have been fully accomplished by means other than those specifically stated, the feature rating shall receive the same consideration as it would have under ordinary circumstances. Instructions for recording ratings in such cases are contained in Section 2, Underwriting Procedures. For

cases involving proposed construction the requirements of both Property Standards and established Minimum Construction Requirements shall apply.

809. Experience has indicated, and a national comparison has demonstrated, that conditions affecting the individual features that can be considered "average" or "typical" may warrant ratings in either the *3* or the *4* column, depending upon, (*a*) the effectiveness of local building code requirements and their enforcement, (*b*) the caliber of local building customs or practices, and, (*c*) the demands of the market. A structure might possibly create an over-all impression of being "average" or "typical", but it must not be deliberately assumed, by reason of such an impression, that every feature should be rated in the same column. Rather, the degree to which conditions affect each particular feature must be recognized and duly reflected in the feature rating. Further, in rating the features, personal preferences and prejudices must be subordinated, except insofar as they are commonly shared by informed persons. It is not intended to nullify personal judgment, but to obtain disinterested, uniform analyses of the mortgage security. The inclination to alter design or to change drawings on the basis of personal tastes should be avoided and not allowed to influence decisions.

810. The physical conditions prevailing in the structure directly affect the ratings of a number of the physical security features and the Total Rating of Physical Security. This is especially true with regard to the three features relating to structural durability and to the features, Livability and Functional Plan and Mechanical and Convenience Equipment. Poor physical condition will tend to result in low ratings of these five features. The ratings bear a direct relationship to the estimate of remaining physical life of the building. Inspectors are required to give estimates of remaining physical lives of buildings and it is important to relate these estimates to the ratings ascribed to these five features. Thus, if Structural Soundness is given a low rating because of physical deficiencies of the building, the estimate of the remaining physical life should be shorter than if a high rating had resulted from the analysis. Inasmuch as the actual remaining physical life of a building is a matter of considerable conjecture, it is evident that estimates of physical lives are largely significant only in relation to one another. For example, an inspector cannot be expected to have any very definite opinion as to the actual remaining physical life of a building, but he can have a very significant opinion as to which of several structures may be expected to have longer or shorter lives. It is suggested, therefore, that well-built newly completed buildings be ascribed re-

maining physical lives of from 50 to 60 years, and that other buildings be ascribed lives in relation to these arbitrarily established lives.

811. In cases where repairs, alterations, or additions are contemplated by the mortgagor, or where such work is found to be necessary if reject ratings are to be avoided, the instructions stated in Section 2, Underwriting Procedures, must be followed in making the physical security feature ratings in the Rating of Property category.

STRUCTURAL SOUNDNESS

812. The rating of this feature is an index of the ability of all structural members, materials, and methods of assembly incorporated in a structure to withstand the imposed loads with the minimum acceptable amount of settlement and deflection. Careful consideration is given to the adequacy of the structural fabric, the size, quality, and durability of the materials comprising the structural members, the quality and methods of workmanship in the assemblage, and, finally, the extent to which physical deterioration has created unsoundness or weakness.

813. The list of questions in subsequent paragraphs serves to indicate the principal considerations which enter into the formation of a judgment with regard to a proper rating of this feature.

814. Foundation.

a. *Soil:* Is the nature and condition of the soil such as to withstand imposed loads?

b. *Footings:* Do footings possess adequate width and thickness to distribute properly the weight on the soil? Are footings of sufficient distance below grade to resist upheaval by frost? Has adequate reinforcing been provided where necessary?

c. *Foundation Walls or Piers:* Are foundation walls or piers adequately designed and do they possess sufficient strength to carry the imposed loads and resist outside earth pressure, movement, and hydrostatic pressure?

d. *Columns and Piers:* Are columns and piers of sufficient size and strength to carry beam loads?

815. Floors.

a. *Basement Slab:* Is basement slab designed and reinforced so as to resist hydrostatic pressure, if any?

b. *Porch and Terrace Slabs:* Has adequate reinforcing been provided to carry the load?

c. Beams and Sills: Are beams, wall sills, and plates of adequate size and construction, and do they possess sufficient bearing surface?

d. Joists: Are floor joists of sufficient size and properly spaced for their span so that there will be no undue deflection? Are they adequately bridged and unimpaired by the installation of the mechanical equipment? Is there sufficient bearing area on supports? Is there adequate support for joists abutting headers?

e. Openings: Are openings properly framed, trussed, and headed?

f. Sub-Floors: Is sub-flooring so employed as to provide additional bracing to the structure?

816. Exterior Walls.

a. Are structural members of sufficient size to carry the imposed load and properly braced or sheathed to resist wind pressure?

b. Are frame walls well tied to masonry?

c. Have all openings been properly framed and linteled?

817. Interior Walls and Partitions.

a. Are structural members of adequate size, properly spaced and braced?

b. Have all load-bearing openings been properly framed or trussed and double studded at jambs?

818. Ceilings.

a. Are ceiling joists of adequate size, properly spaced and bridged?

b. Is there sufficient bearing area on supports, and is the tie continuous between outside walls?

819. Roofs.

a. Are main valley and hip rafters of adequate size, properly tied, and seated so as to carry the roofing material and resist wind and snow loads?

b. Is roof properly braced with supports and collar or wind beams?

c. Are all rafters unspliced and continuous between bearing points?

820. Accessory Buildings. Are foundations, floors, walls, and roof of such materials and construction as to assure a physical life for the accessory buildings equal to that of the main building?

821. Although a fire-proof building, properly designed and constructed, deserves the highest rating under Structural Soundness, this does not imply that a building of frame or masonry veneer construction, when properly designed and constructed, could not possess sufficient quality to warrant the highest rating. The determination is dependent upon whether the methods of assembly, materials used, and workmanship are such as to assure a long life for the structure.

822. A low or reject rating is warranted in cases involving existing construction if defects such as sagged beams, floor joists, or rafters, excessive settlement, or cracked basement walls are present in a serious degree. The fact that it has been necessary for the present or previous owners to install additional piers and beams in the basement, or to patch cracked basement walls, or to install additional roof bracing should serve as a warning to the inspector. It would also indicate that a close analysis should be made of the structure to discover other hidden faults which may be expected in the low quality construction thus reflected. For cases involving new construction, a reject rating is warranted where the construction does not equal (or exceed) the established Minimum Construction Requirements for such items as are included under Excavation, Masonry, Footings, Foundations, Exterior Masonry Walls, Chimneys, Cement Floors, Driveways and Walks, Structural Steel and Iron, Lumber, Wood Framing, Floors and Roofs, Exterior Walls, Interior Partitions, and Miscellaneous.

823. Certain regions of the United States are subject to tornadoes, earthquakes, and other natural hazards, and in these areas Structural Soundness is rated according to the degree with which the building was designed and erected in order to minimize the danger from these special natural hazards.

824. In the final analysis it is necessary to consider the loads which will be imposed upon the structural fabric by the use for which it is designed, and to estimate the degree to which it will be able to withstand these requirements. The cost range of the structure under analysis should not enter into the consideration of its structural soundness.

RESISTANCE TO ELEMENTS

825. The rating of this feature reflects the degree of resistance exhibited by the structure to the deteriorating and damaging effects produced by the elements. These effects may in themselves lessen the durability and may render the entire building or certain portions of it uninhabitable. The inspector shall bear in mind that the excellence of resistive ability in one material may

be off-set by poorness in adjacent materials and in such cases the rating will be adversely affected. Conditions entering into the rating of this feature are discussed below under three headings, Resistance to Weather, Resistance to Fire, and Resistance to Decay, Corrosion, and Insect Hazards. Resistance to special natural hazards such as earthquakes and tornadoes is primarily a structural resistance and is considered under the feature Structural Soundness. The following list of questions serves to indicate the principal considerations which enter into the formation of a judgment with regard to the proper rating of this feature.

826. Resistance to Weather.

a. Roof:

1. Is the roof correctly pitched and are the slope and angles of the roof of such a nature as to afford proper drainage and to avoid "snow pockets"? Have crickets or saddles and snow guards been provided where necessary?
2. Is roofing material of such quality and condition so as to resist rain, snow, ice, and sun effectively, and to withstand high winds in areas where these climatic conditions occur, and to withstand exposure and rapid temperature changes without resulting damage?
3. Are ridges properly protected?
4. Are the materials and construction of roof decks of such nature as to withstand the elements?

b. Sheet Metal:

1. Have ferrous and non-ferrous metals been used in combination so that contact corrosion will result?
2. Is the material of all valleys of such quality as to have a life equal to that of the roofing materials?
3. Are flashing and counter-flashing of proper quality and workmanship installed where necessary?
4. Have gutters and down-spouts been provided where necessary and are they so designed as to dispose of the water adequately and so constructed as to resist snow loads?

c. Walls or Piers:

1. Are foundation walls or piers adequately designed and constructed to resist penetration of moisture?
2. Are the principal walls so constructed and in such condition as to effectively withstand the elements of the section of the country in which they are erected and to resist driving rains and rapid freezing and thawing?

3. Where more than one type of material is used in principal walls, are the different materials properly tied together and has provision been made for the absorption of their different coefficients of expansion?

d. *Insulation and Weatherproofing:*

1. Have the methods of insulation and insulation materials been incorporated in such a way so as to result in adequate comfort and economy of operation?
2. Has weatherstripping and caulking been provided where necessary?
3. Have storm doors, storm windows, and vestibules been provided in regions where climatic conditions warrant?

827. Resistance to Fire.

a. Do the materials and structural methods used offer a high or low degree of fire resistance to both the exterior and interior construction?

b. Has fire resistance been aided by proper framing around chimney, by the use of flue tiles, and by adequate firestopping?

828. Resistance to Decay, Corrosion, and Insect Hazards.

a. *Decay and corrosion:*

1. In unexcavated portions is there ample circulation of air around wood or metal members?
2. Is there adequate provision to exclude surface water?
3. Are materials subject to decay or corrosion adequately protected?

b. *Insect Hazards:* In regions where termites or borers are prevalent, have suitable protective measures been provided, such as ample circulation of light and air, sufficient clearance from grade, and metal shields under all frame bearings? Have timbers been impregnated?

829. A reject rating is warranted in cases involving new construction where the construction does not equal (or exceed) the established Minimum Construction Requirements for such items as are included under Excavation, Footings, Foundations, Exterior Masonry Walls, Chimneys, Cement Floors, Driveways, and Walks; Dampproofing, Lumber, Wood Framing, Exterior Walls, Termite Prevention, Roof Coverings, Sheet Metal, Stucco, Painting, and Miscellaneous.

RESISTANCE TO USE

830. In rating this feature the inspector reflects the degree to which the workmanship and the quality and condition of the materials will withstand the wear and tear to which they will be subjected through continued use. The inspector must bear in mind that the expense of maintenance of a dwelling is directly correlated to the factors considered in rating this feature. Since the interior of the structure contains the major portion of the wearing surfaces, the considerations entering into the rating of this feature are concerned primarily with the interior of the main structure and of accessory buildings. Considerations must also include the surfaces of walks, drives, porches, and terraces. The heaviest wear resulting from use is experienced by flooring, wall and ceiling finish, doors, sash, trim, and hardware. The inspector must consider whether or not the material and workmanship, in both the finish and base of the following items, are of such a quality as to be highly resistant to the wear to which they will be normally subjected:

a. Floors, Utility Areas:
- *1.* Basement floor
- *2.* Kitchen, pantry and service porch floors
- *3.* Baths and lavatory floors

b. Floors, Living Areas:
- *1.* First, second, and third floors
- *2.* Porch and terrace floors

c. Walls:
- *1.* Exterior walls
- *2.* Interior walls
- *3.* Bathroom and lavatory walls and wainscot
- *4.* Kitchen walls and wainscot

d. Ceilings

e. Millwork:
- *1.* Doors, jambs, and trim
- *2.* Windows, frame, and trim
- *3.* Finish hardware

f. Accessory Buildings:
- *1.* Floors, walls, and ceilings
- *2.* Doors, windows, frames, trim, and hardware

g. Walks and Drives, including base and surface

831. A reject rating is warranted in cases involving new construction when construction does not equal (or exceed) the established Minimum Construction Requirements for such items as are included under Cement Foors, Driveways, and Walks, Lumber, Wood Framing, Lathing, Plaster Work, Painting, and Miscellaneous.

832. The materials and workmanship of both plaster base and plaster must be noted. The best wall finish is no stronger than its base, and the best painting or wall covering applied to poor plaster may result in an unsatisfactory wearing surface. The quality of interior painting, tinting, or wall covering must be carefully considered. Doors and sash, either of wood or metal, that are of light, flimsy construction will not withstand constant use, and for this reason will affect the rating unfavorably. The wearing qualities possessed by all such items, assuming ordinary maintenance, shall be weighed against the severity of wear and tear to which they will be subjected.

LIVABILITY AND FUNCTIONAL PLAN

833. In rating this feature it is necessary to determine the degree of practical usefulness for residential purposes to the typical family likely to occupy properties of similar type and size. If the property has been planned and constructed so that a high degree of livability and functional efficiency exists, then a high rating for this feature is warranted.

834. The inspector must determine the degree to which the layout of the structure is economical, practical, and efficient. An economical layout is one which presents the greatest proportion of usable floor area in relation to the gross floor area. An excess of unusable space makes a house less desirable. For example, if the hall area is larger than is necessary in view of the uses to which it will be put, and perhaps because of this the sizes of other rooms in the house where increased area is desirable have had to be restricted, then the layout would to some degree be uneconomical. Again, if space is provided which is not readily and conveniently usable, economy is sacrificed because of unwarranted additional cost of construction and maintenance together with the attendant increased labor involved in the occupancy and use of such a structure. It is recognized that large entrance halls, galleries, and similar spaces are considered desirable and necessary in dwellings in the higher cost range. Where such spaces properly serve a functional purpose they do not indicate inefficiency of plan.

835. The rating of this feature must reflect the functional qualities, adequacy of sizes, and efficiency of the individual rooms. The relation of the location of the service or utility portion of the house to the living quarters also definitely affects the rating of this feature. Lower ratings will be warranted if any of the following objectionable conditions are present:

a. Sleeping quarters with insufficient privacy
b. Dark or poorly ventilated rooms

c. Bathrooms not readily accessible, or accessible only through a major room
d. Kitchen inadequate for or ill-arranged for food storage, food preparation, and dish washing
e. Insufficient provision for hanging clothes, or for storage of linens, blankets, and brooms

836. If future occupants are likely to have laundry work done in the home, the rating will be affected by the relative adequacy of the provision for laundry work. This is to be judged, not merely on the presence or absence of laundry trays and convenience outlets, but also upon the space available for drying, and access to outdoor drying.

837. The rating is influenced by the convenience of arrangement. The most desirable conditions occur where access from room to room is according to logical sequence, where there are no long, dark, or winding corridors, where movements into and out of the various rooms or units cause the least disturbance, where staircases are sufficiently wide, not too steep, and in such locations as to permit moving of furniture readily. Ratings of this feature will be favorably affected in the case of houses having rooms of such sizes and shapes as to accommodate furniture readily in proper grouping for convenient living. Shape is very important as well as size. Broken or short wall areas do not permit flexibility in furniture arrangement. Protruding radiators that are in the way are objectionable. Windows should be spaced in relation to internal function as well as to exterior appearance. The rating of this feature must reflect the practical quality of the interior layout. This factor will contribute to the rating, favorably or unfavorably, depending on the existence or absence of agreeable proportions of the rooms.

838. The plan of improvement of the site is another factor in livability. Consideration should be given to the suitability of the size, shape, and topography of the lot in relation to the type and size of the dwelling and accessory buildings. Buildings, walks, plantings, and terracing may be laid out or arranged on the plot so that either a high degree of livability or an opposite condition may result. The rating of this feature will be favorably affected if the general plan of improvement is excellent, and the resultant effect gives the property a strong appeal for those who ordinarily would be attracted as purchasers of such property. In any such case the buildings will be found located upon the site in the most advantageous and desirable positions. Structures will be found so placed on the lot as to take the fullest advantage of sunshine, ventilation, scenic outlook, privacy, and safety. Where high ratings of this feature are warranted, it is also found that the grounds have been laid out so that opportunity is afforded for effective landscaping and gardening. Furthermore, in such cases there exists a high degree of accessibility to garage buildings and other accessory structures, and the placing of buildings, walks, and drives does not result in cutting the grounds into small and unusable areas. A favorable condition is also present if accessory buildings are so located upon the site as not to create hazardous conditions affecting the safety of the occupants of the property, and if they are so placed that the convenience of the occupants is served in the most advantageous manner. In cases where customary accessory buildings have not been provided, the rating of this feature will be influenced by the size and location of the available area of the site upon which accessory buildings might be erected.

839. The following list of questions will assist in the proper rating of this feature:

a. Does the arrangement of the plan present an economical layout in relation to the ratio of usable floor area to gross area?

b. Is the separation and relation of living units arranged to provide ease of circulation and privacy?

c. Has the separation and relation of service units been considered from a circulation and utility standpoint?

d. Do the ingress and egress both from living and service units contribute to livability?

e. Are rooms of adequate size for their intended purposes? Are wall spaces of such size and location, and are openings and radiators arranged to provide for convenient and customary furniture placing?

f. Are there sufficient baths and lavatories for the number of persons, including servants, likely to occupy the property?

g. Has the interior been planned to take the fullest possible advantage of orientation and the facilities offered by the plot?

h. Is the plot of suitable size, shape, and topography, and is the utilization of the plot of such character as to afford a high degree of livability to the occupants of the property from the standpoint of service, convenience, and safety?

840. If the property under consideration is intended for more than one family, certain matters are considered in rating this feature that do not necessarily pertain to single family dwellings. To be warranted in giving such a building a high rating as to Livability and Functional Plan the following are pertinent: (*a*) that there is separate access to each family unit without undue annoyance to other families, (*b*) that the plan is so arranged that families do not look into each other's windows across narrow intervening space, (*c*) that adequate venting has been provided to remove objectionable odors properly and effectively, (*d*) that provision has been made to retard sound transmission from one unit to another. If the heating of such a building is accomplished by means of separate installations, rather than a common plant, the rating of this feature is favorably influenced when there is, (*a*) proper provision for access by each family to the heating rooms, (*b*) separate fuel storage facilities for each family unit, and (*c*) adequate and efficient facilities for fuel delivery.

841. Reject ratings will be warranted in cases in which the design fails to equal (or exceed) Property Standards requirements for such items as Accessibility, Types of Eligible Dwellings, Nonresidential Use of Dwellings, Lot Coverage, Dimensions of Front and Rear Yards, Living Unit, Separation of Living Units, Privacy, Ceiling Heights, Storage, and Stairways.

MECHANICAL AND CONVENIENCE EQUIPMENT

842. The rating of this feature reflects the degree of adequacy, durability, and operating economy of the mechanical and convenience equipment in the subject property to perform the functions for which this equipment is designed, considering the number and type of people likely to occupy property of this class. Analysis of this feature requires the consideration of three subjects: plumbing and sewerage, heating, and electric light and power. The second subject, heating, is construed to include such equipment and systems as are popularly referred to as air-conditioning systems.

843. Only such items of mechanical and convenience equipment as are definitely identified as a part of the real property, either by custom or State law, can be included for consideration. The definition which governs the identification is given in Section 16, Methods of Dwelling Cost Estimation.

844. In general, public water supply, public sewerage, and public utility electric supply systems are preferable to private systems on the property itself. Consideration must be given to the dependability of all supplies and services. Rejection under this feature is mandatory in cases that do not comply with the requirements of established Property Standards for approval of wells and approval of sewage disposal systems.

845. Items of mechanical equipment for which replacement parts and service are readily obtainable will affect the feature rating favorably because of probable lower maintenance costs. In new construction, particular attention should be given to any evidence of the use of antedated, secondhand, or rebuilt equipment. Such equipment will necessitate a low rating. Systems in which equipment and fixtures are of poor quality and design, and improperly installed will show more rapid deterioration and obsolescence and give rise to frequent damage and heavy repair costs. It is axiomatic that the rating will be affected by the age and condition of the equipment. The economical operation and maintenance of mechanical and convenience equipment has a direct bearing upon its functional qualities.

846. The following list of questions serves to indicate the principal considerations which enter into the formation of a judgment with regard to a proper rating of this feature.

847. Plumbing.

a. Baths and Lavatories: Are fixtures of proper design, material, and workmanship for this class of structure? Are trimmings suitable for the class of fixtures? Are trimmings readily accessible and adjustable?

b. Service Facilities:

1. Are the plumbing facilities in kitchen, pantry, and laundry adequate to perform the service required?

2. Are fixtures of proper design, material, and workmanship for this class of structure with trimmings readily accessible and adjustable?

c. Supply, Waste, Drains, and Accessories:

1. Are supply pipes properly graded as to size, of durable material, good workmanship, and provided with sufficient conveniently placed stop and drain valves?

2. Are soil, waste, and vent pipes of adequate size, of durable material, and good workmanship? Are soil and waste lines properly trapped and vented?

3. Is the domestic hot water supply system of proper size, kind, design, and workmanship to combine adequate service with economy, and is the storage tank properly installed and insulated?

4. Are the cellar, area, and roof water drains of sufficient size, and properly designed and installed so as to function properly and without excessive maintenance?

5. Is there an ample supply of pure water, preferably from public, or municipal utility source?

6. Has adequate provision been made for the disposal of sewage, preferably by public or municipal systems?

848. Heating.

a. Heating plant, including air-conditioning systems:

1. Is the plant of ample size, design, and construction to operate conveniently, economically, and efficiently under all conditions, and is the furnace insulated?

2. Are the pipes or ducts properly pitched, sized, of good material and workmanship, and insulated against heat losses?

3. Is the type of heating plant and is the fuel used suitable to the class of dwelling?

b. *Radiators and Registers:*

1. Are the radiators or registers of sufficient size and properly placed so that they most effectively distribute the heat and air throughout the various rooms?

2. Are the radiators or registers effectively designed, of good material and workmanship, and properly valved and controlled?

849. Electric Light and Power.

a. *Supply and Accessories:*

1. Are the feeders, switches, and panels of sufficient size to fulfill the requirements to which they are put, without the overloading of circuit or switch capacities, and do they conform to the Underwriters' Code and local ordinances?

2. Are power circuits provided where needed, and separated from light circuits?

3. Is there an adequate and dependable supply of electric energy available, preferably from public utilities?

b. *Fixtures and Outlets:* Is there a sufficient number of fixtures and outlets to distribute illumination properly and are fixtures of suitable design and construction?

850. In order to avoid a reject rating all properties must equal (or exceed) the provisions of established Property Standards for such items as Compliance With Laws, Plumbing Fixtures, Water Supply, Approval of Wells, Cisterns, Sewage Disposal, Sewage Disposal Systems, Approval of Sewage Disposal Systems, Heating, and

Electric Wiring. In addition, for cases involving new construction a reject rating is warranted where the construction does not equal (or exceed) the established Minimum Construction Requirements for such items as are included under Plumbing, Heating, and Electrical Work.

NATURAL LIGHT AND VENTILATION

851. The rating of this feature is an index of the degree and adequacy of natural light and ventilation provided for the various rooms of a dwelling under ordinary conditions. Orientation of the structure and proper orientation of the individual rooms to obtain maximum benefit from sunlight and exposure contribute to sustained marketability. Therefore, if the plan is such that the principal rooms have the most desirable exposure with respect to sunlight and prevailing winds, a favorable influence upon the rating results. The rating will be adversely affected if in northern regions, a sun porch is placed on the shaded side of the building, or if in regions subject to extreme heat, a living portion is not shielded from the sun during the hotter part of the day. Unsatisfactory orientation in the case of proposed new structures can frequently be corrected by the reversal or rearrangement of the plan. The rating will be adversely affected if accessory and adjoining buildings are in too close proximity to the main structure, or if a kitchen is so poorly lighted and ventilated as to impair its usefulness, convenience, and comfort.

852. The following items are considered in ascribing the rating:

a. The ratio of glass area to floor area
b. Location of openings with respect to size and shape of room
c. Reduction in light due to obstructions such as other buildings and shaded porches
d. Orientation of the building upon the site
e. Cross ventilation in the individual rooms, particularly bedrooms
f. Double exposure in principal rooms
g. Natural light and ventilation of stairways, corridors, and halls
h. Mechanical ventilating equipment to remove odors from service area
i. Proximity to lot lines and adjoining buildings
j. Relation of accessory buildings to principal structure

853. Reject ratings will be warranted in cases in which Property Standard requirements are not equalled (or exceeded) for such items as are covered under Lot Coverage, Dimensions of Front,

Rear, and Side Yards, Dimensions of Courts, Windows, Ventilation of Bathrooms and Water Closet Compartments, Ventilation of Basement, Laundry, and Utility Rooms, Ceiling Heights, and Basement Rooms.

ARCHITECTURAL ATTRACTIVENESS

854. In rating this feature, the inspector must be guided by "taste". However, he must disregard, insofar as it is humanly possible, his prejudices and preferences where they are not in substantial agreement with the evident trends of likes and dislikes of the market. The inspector shall consider attractiveness in relation to the property as a whole and to the exterior and interior characteristics of the buildings. Mortgage risk is presumed to be lessened in those instances in which architectural treatment may be expected to remain attractive to the market for sustained periods of time. Acceptance of architectural styles may be transient. Simplicity, proportion, and character are qualities which are permanently attractive.

855. The general impression created by the entire property is of primary importance. The degree to which there is unity is a first consideration. The highest rating is warranted when the architectural treatment of site, planting, and buildings comprise a harmonious entity. Such combinations of improvements and land attain the maximum degree of desirability possible from the standpoint of design. In such cases the structures are most effectively and pleasingly accommodated by the width, depth, or area possessed by the sites upon which they are erected, and topography has been permitted to contribute to the agreeable impression which is created when the property is viewed in its entirety.

856. Accessory buildings impair or contribute to the degree of unity attained. Unless they are planned as integral parts of the design and ensemble of the house and grounds, a condition will result which will tend to cause a reduction in the rating of this feature. Garages and other accessory buildings are too often conceived as afterthoughts without the proper regard for the resulting effect. The planting upon the site may either be carefully laid out in an attractive arrangement, or it may be placed upon the site without proper consideration for usefulness of the entire plot of ground. Planting should also be considered with reference, (*a*) to the measure in which it serves the purpose of forming a desirable and harmonious setting for the buildings, (*b*) to the measure in which it permits the occupants of the buildings to secure the maximum enjoyment possible from the use of the lot, and, (*c*) to the measure in which it succeeds in screening out and protecting the property from unsightly objects and surroundings.

857. It is necessary in making a rating of Architectural Attractiveness to give consideration to architectural style. Attention must be given to the relative excellence or poorness of the particular design and to the refinements, or lack of them, incorporated in the subject property. The architectural attractiveness of the interior should be viewed with consideration of pleasing proportions of rooms, materials and textures of walls and floors, and the design of important details such as mantels, staircases, and woodwork. No consideration should be given to the degree to which the style is in conformity with the architectural styles prevailing in the neighborhood. If nonconformity with styles in the surrounding environment is of such a character that it increases mortgage risk, it is taken into account in the feature Adjustment for Nonconformity.

858. A structure of the so-called "shirt-front", or one-sided treatment design, calls for a low rating of this feature because the remaining side walls of the building give it an unattractive exterior appearance. Architectural designs that are considered freakish, or those characterized as hybrids, should be penalized in this feature rating. To receive the better ratings, all design motifs should be in good taste, have a utility basis, or add structural value and attractiveness to the general scheme. An elaborate use of motif and detail, the inclusion of an unnecessary variety of materials, and straining for the picturesque cannot increase the rating. Use of false effects of roofing, false half-timber work, or the unusual handling or combination of materials, or materials inappropriately used in the particular case involved, usually affect the rating of this feature adversely.

859. In assigning a final rating to this feature, the inspector shall consider the subject property on its merits and in the same manner as individuals of reasonable tastes, likely to become interested in the property as tenants or owners, will view it. The following questions will aid in determining the proper rating of this feature:

a. Do the elevations express frankly the plan contained therein or is the design of a freakish nature straining for the picturesque?

b. In whatever style the building has been designed, does it express, to a reasonable degree, refinement and proper interpretation of that style, or does the design indulge in the use of superfluous ornament or an improper use of materials as they relate to each other?

c. Is the fenestration arranged so as to result in a pleasing effect?

d. Are room proportions pleasing? Are interior details so designed as to be appropriate and attractive?
e. Is the entire ensemble, including the arrangement of buildings and the plot plan, attractive?
f. Do the accessory buildings tie in to the composition of the entire project?
g. Has the entire project a pleasing appeal to the typical potential purchaser?

ADJUSTMENT FOR NONCONFORMITY

860. The last feature of the Rating of Property category is designated "Adjustment for Nonconformity". It is rated in the same manner as are the other features in the risk rating system. However, it will be noted that the weights in the columns in the rating grid for this feature are in reverse order. Thus, in the *1* column the weight is 12, while in the *5* column it is zero. A *5* column rating indicates either that nonconformity is not present at all, or if present, it does not affect adversely the desirability or marketability of the property. The feature rating is always deducted from the Total Rating of Physical Security, thereby accomplishing whatever adjustment is necessary because of adverse effects attributable to conditions of nonconformity. The Reject column is used in cases involving such extreme nonconformity that the property would be practically unmarketable. In the event the X mark appears in the Reject column, the word "Reject" is written in the Rating column, and also on the Total Rating of Property line.

861. The Rating of Physical Security does not consider the relationship of the subject property to its immediate environment, but is based on the hypothetical assumption that the physical improvements are appropriate for the site and the neighborhood. Where an unsuitable property-neighborhood relationship exists, marketability is to some degree affected and mortgage risk is increased. Factors that restrict marketability because of nonconformity are considered in the feature Adjustment for Nonconformity so that all elements of mortgage risk attributable to physical improvements will be reflected in the Total Rating of Property.

862. A residential property of good physical characteristics may not necessarily be good security for a mortgage loan, even though situated in a good location. It may be extremely unmarketable if it is not in conformity with the desires and needs of those who would ordinarily want to occupy or purchase properties in the neighborhood. It may be that such a property would be entirely appropriate at another location, but decidedly out of favor at its actual location. It may be displeasing when viewed in relation to its surroundings; it may be too costly for the typical purchaser to own; or it may not conform in other respects to the use which would be most marketable.

863. Many kinds of nonconformity adversely affect the marketability of properties. Mere lack of similarity of physical properties, however, may not necessarily restrict marketability. Factors other than similarity must be considered in determining the effect of property-neighborhood relationships on marketability. Such other factors include a study of the characteristics, needs, desires, and financial capacities of the neighborhood occupants and those likely to be attracted to the location. The degree of marketability depends upon the extent to which the particular property under analysis is adaptable to such needs and desires.

864. It is apparent that the ease with which a residential property can be marketed depends largely upon the degree of appropriateness of the property to its location. A study of the neighborhood and the attitude of its present and prospective occupants provides an acceptable basis upon which to determine degrees of appropriateness. These factors are clues as to the nature of the predominating market for dwellings in the neighborhood. By observing the extent and nature of the departure from that which is appropriate for the location, it is possible to draw conclusions as to the effect on mortgage risk.

865. The various ways in which building improvements may deviate from that which is appropriate are discussed under the following headings:

a. Suitability of use-type
b. Appropriateness of functional characteristics
c. Harmony of design
d. Relation of expense of ownership to family income levels

866. Suitability of Use-Type. The term use-type, as applied here, refers to the use for which a property is designed, such as single family, two family, multiple family, and nonresidential. In some neighborhoods the suitable use-type is governed by zoning ordinances, deed restrictions, or both. However, in some neighborhoods no such controls of land utilization exist. In many neighborhoods the appropriate use-type is clearly evident upon an inspection of the neighborhood because of the predominance of a single use-type. Frequently, however, neighborhoods are very heterogeneous, and in such cases several different use-types may be found to be suitable.

867. It is plain that the marketability of a single family residence will be limited if it is located in a neighborhood of multiple family buildings. The erection of a multiple family dwelling in a single family area, on the other hand, will usually adversely affect the desirability of nearby residences. If a transition to multiple family use is in process, the multiple family dwelling may not be restricted in marketability.

868. **Appropriateness of Functional Characteristics.** The term "functional characteristics" refers to the pattern of living facilities provided in a dwelling. It relates to the number of rooms, the arrangement and sizes of rooms, and the plot arrangement. Usually well defined standards are observable with regard to these characteristics in individual neighborhoods.

869. Considerable difficulty might be experienced in the effort to market a twelve room dwelling in a neighborhood of five or six room dwellings simply because the greater number of rooms may be ordinarily useless to the typical purchaser.

870. The arrangement and sizes of rooms frequently conform to certain definite preferences in individual neighborhoods. For example, in some districts it may be evident that the families prefer residences having six large rooms: a living room, dining room, kitchen, three upstairs bedrooms, and two bathrooms. In such a neighborhood a two story residence with only two bedrooms and one bath, or a residence with all rooms on one floor may be inappropriate, hence of limited marketability. A building with rooms that are too small might be similarly restricted in marketability.

871. The characteristics of the lot, insofar as they affect livability, are considered a part of the functional pattern of the property. The advantages of the side yards, and the front and rear yards, should conform in desirability with the conditions found to be typical and appropriate in the neighborhood. Nonconformity is frequently evidenced by the placement of the house upon the site. Where general building lines are recognized, any deviation from the accustomed or accepted practice should be carefully considered to determine the resultant effect upon desirability. If the site of a residence is substantially smaller than the size found to be desirable in a certain neighborhood—for example thirty feet wide where the customary width is fifty feet—marketability may be seriously restricted. Similar effects on marketability may result in some cases where the shape or topography of a particular lot makes the dwelling less desirable than those that are typical of the area.

872. Harmony of Design.—The degree of conformity of the design of a structure with other structures in the immediate neighborhood is not important except insofar as it fails to blend harmoniously with them. There may be a considerable variety of designs of residences in a neighborhood and yet each dwelling may present a pleasing appearance when viewed in relation to its surroundings. On the other hand, a building may be without any architectural faults and yet clash so violently with neighboring properties that marketability may be seriously restricted. For example, if a two story Colonial residence were erected in a neighborhood characterized by one story Spanish bungalows, it is probable that this property would be difficult to sell, irrespective of the excellence of its individual design. In cases involving structures which depart from the conventional insofar as design is concerned, a more pleasing appearance may be created if they are erected in a group and not mixed with buildings of conventional architecture. Appropriateness may well be questioned, in the absence of any effective demand for such properties, in the particular community where they are erected or proposed.

873. Relation of Expense of Ownership to Family Income Levels.—Families of similar financial means generally choose places of residence in similar neighborhoods. Because of this tendency a residential property must be of such character that the expense of owning or renting it is in proper relation to the incomes of families for whom the location is a suitable place of residence. A home that is too costly to purchase and maintain will not suit the requirements of the typical family, and would therefore have limited marketability.

874. In many residential developments there are restrictions against the erection of structures below a certain minimum cost or size. This provides some control over the minimum cost range of buildings but does not prohibit the building of homes which are overimprovements. Determination of the cost range which is proper in a given case will depend upon the costs of structures in the district and the income range of present and prospective occupants. The range of family incomes is the more significant of these two criteria. The cost of existing properties may not be a reliable indication of the costs which are most suitable for the market. This condition is sometimes encountered in new developments where builders start their operations with houses that are too costly, and after experiencing delay in selling, are forced to build for purchasers of smaller incomes.

PART II

SECTION 9

RATING OF LOCATION

CONTENTS

Effective February, 1938
Federal Housing Administration.

PART II

SECTION 9

RATING OF LOCATION

GENERAL RATING INSTRUCTIONS

Rating of Location

FEATURE	REJECT	1	2	3	4	5	RATING
Relative Economic Stability							
Protection from Adverse Influences		4	8	12	16	20	
Freedom from Special Hazards		1	2	3	4	5	
Adequacy of Civic, Social, and Commercial Centers		1	2	3	4	5	
Adequacy of Transportation		2	4	6	8	10	
Sufficiency of Utilities and Conveniences		1	2	3	4	5	
Level of Taxes and Special Assessments		1	2	3	4	5	
Appeal		2	4	6	8	10	
TOTAL RATING OF LOCATION							

901. Rating of Location shall be accomplished by rating separately each of eight features according to the principles outlined in this section and Section 6, Methods of Mortgage Risk Rating. The eight features have been weighted on a scale of 100 points in order to retain the relative importance of each when all are combined to obtain the Total Rating of Location. Each feature is marked on a scale of from *1* to *5*, *5* being the highest rating. After analysis of the factors comprising a feature, an X mark is placed in the column which is determined to reflect the degree of risk involved. If the X mark is placed in any column other than the Reject column, the figure appearing in the marked square is carried over to the extreme right hand column of the grid. If the X mark is placed in the Reject column, the word "Reject" is written in the extreme right hand column of the grid. One such rating in any feature will necessitate a recommendation for rejection of the application for insurance. If the word "Reject" appears in the Rating column, it must also be written in that column on the Total Rating line. If no such rating appears after any of the features, the final rating of the category is obtained by adding the figures in the Rating column. The system is so designed that this figure will be an expression of the rating on a numerical basis.

902. The eight features, together with the weights assigned to them, are listed below:

a. Relative Economic Stability	(40)
b. Protection from Adverse Influences	20
c. Freedom from Special Hazards	5
d. Adequacy of Civic, Social, and Commercial Centers	5
e. Adequacy of Transportation	10
f. Sufficiency of Utilities and Conveniences	5
g. Level of Taxes and Special Assessments	5
h. Appeal	10

903. Definitions. The following definitions are used:

a. Location is defined as the actual site of a property viewed in terms of relationship with its immediate neighborhood and general economic background.

b. Rating of Location is defined as the process of determining the degree of mortgage risk attributable to location. Rating of Location also refers to the numerical index of risk which results from the process.

c. Established Rating of Location is defined as the rating of a selected location which is used as a basis of comparison in connection with the rating of other locations in the same outlined neighborhood.

d. Neighborhood is defined as a single area composed of locations separated only by publicly used land, the residential portions of which exhibit a degree of homogeneity. In general, a neighborhood is available for, or improved with, dwellings of more or less similar character, age, and quality.

e. Outlined Neighborhood is defined as a neighborhood in which the approximate borders have been established for the purpose of indexing and classifying Location and Valuation Data, Real Estate Market Data, and Established Ratings of Locations.

f. Immediate Neighborhood is defined as an area surrounding a location and embracing the most direct influences from which the significant characteristics of the location are determined. It is generally smaller in area than an Outlined Neighborhood.

g. Economic Background Area is defined as an area within which the conditions of industry, trade, labor, and living—that is, the economic and social life of a community of people—are predominantly subject to the same influences. It may be small, as in the case of a village, or large, as in the case of a city together with its entire environing metropolitan area.

904. Basic Principles of Rating. The rating assigned to the first feature of the Location category, Relative Economic Stability, is an estimate of the probable continuing marketability of the subject property, attributable to its site, *as affected by* the financial capacities and financial attitudes of owners, occupants, and prospective purchasers, and as related to similar estimates of all residential properties in the Economic Background Area, irrespective of competitive characteristics. The rating of all features of the Location category, except the feature Relative Economic Stability, is determined by comparing the subject location with all other competitive locations in the Economic Background Area, through the mediums of Established Ratings of Locations. Competitive locations are construed as locations which are appropriate for residential structures having price ranges similar to that which is determined as typical in the immediate neighborhood of the subject location. The price range of an appropriate residential property at the subject location, and at its competitive locations, is indicated by the price range of typical properties in their respective immediate neighborhoods. In general, comparisons should be restricted to a price range which does not differ more than the limits of the prices of properties which the typical prospective buyer with specific needs would consider for purchase. Similarity of price range does not provide a basis for such comparisons if certain racial aspects render the locations actually noncompetitive. Residential structures which occupy the site of the subject location and its competitive locations are of no concern in rating Location, except as they participate in the neighborhood influences affecting such locations. The price of a residential property at the subject location should not be used to determine the price range of competitive residential properties, unless it is representative of the typical price range of the immediate neighborhood. Under similar environing influences a vacant site would have the same rating as an improved site.

905. The competitive basis of rating is the only method to be used in rating all features, other than Relative Economic Stability. If the number of competing neighborhoods in an Economic Background Area are insufficient to provide adequate comparisons, an additional neighborhood will be assumed by providing arbitrary requirements for a *5* column rating of each feature, made up from the desires and requirements of the market. The actual conditions at the subject location are then rated by comparison with these arbitrary requirements. The arbitrary requirements established may be regarded as the conditions surrounding a "best" location, even though such a location does not actually exist. If this is done, the rating of conditions at the subject location by comparison with such a "best" location becomes in itself a competitive area basis of rating. In general, such arbitrary requirements representing adequacy and sufficiency should not be used unless the Economic Background Area affords less than three or four competitive neighborhoods.

906. The primary purpose of the Rating of Location is to determine the degree of mortgage risk involved because of the location of a property at a specific site. The rating is based on a prediction of the risks likely to be experienced at such location during a period of approximately the next twenty to twenty-five years. This point of view makes necessary the study and consideration of not only what is present at the time of inspection, but also a determination of the future trend in the neighborhood and Economic Background Area for at least the coming twenty to twenty-five years. In this connection, data pertaining to the ownership of property, data pertaining to population, community and neighborhood characteristics, and data relating to city growth conditions and the market for real estate will prove of inestimable value.

907. The scope of operations of the Federal Housing Administration necessitates the application of Rating of Location techniques under widely diverse conditions. A given set of physical environing conditions which serve to obtain a certain Rating of Location in one case might obtain a different Rating of Location in another case. In the first case the trend might be favorable; in the second case it might be less favorable or even unfavorable. Because mortgage risk lies in the future, the rating of mortgage risk should always be a measurement reflecting probable future trends.

908. As a general rule, the attitude of the market reflects the degree of acceptability of prevailing conditions, providing the market is reasonably cognizant of its needs. However, acceptability and tolerance are not synonymous. In an Economic Background Area it is necessary to distinguish between conditions which are acceptable in one case and tolerated in another. Mere tolerance

may warrant a low rating of any feature, even to the point of rejection, unless it is evident that better conditions will not be provided. There are many areas which have great charm, where planning has been well executed, and the surroundings present, to a marked degree, a harmonious picture of beauty and comfortable living. If properties in such areas possess ready marketability, that is, if there is a sufficiently large number of financially capable, prospective buyers for the properties, and if this market is expected to continue and the financial capacity of buyers is expected to remain the same or increase, then a high Rating of Location is warranted. Mere beauty and charm, however, are not sufficient to make a satisfactory area, but if these attributes are combined with the other factors which, together, sustain a high degree of marketability, a high Rating of Location is warranted.

909. Analysis of Neighborhoods. Certain generally accepted principles should control judgment when analyses of neighborhoods or locations are made. Among the principles are the following:

a. Homogeneous development of properties in a neighborhood tends to reduce mortgage risk. Areas which contain structures of about the same age are usually better mortgage lending areas than those in which a variety of age groups is present.

b. Areas in which development has been accomplished in accordance with accepted principles of good housing are apt to prove much more stable than those areas where little thought or attention has been paid to the requirements for light and air, lot coverage, and controlled similarity of types of structures.

c. The Valuator is confronted with different problems in rating new and old locations. If development has been completed and there are few vacant lots, a satisfactory measurement of mortgage risk is usually less difficult to determine than if the location being rated is in a sparsely developed area. The latter usually requires a more thorough study of the future before a significant rating can be made. There is in progress a definite decentralization of housing which will probably continue the building up of suburban neighborhoods. If the location under consideration does not lie in a path of city growth, and there is apt to be a lapse of a number of years before the neighborhood is well built up, a much lower rating will be indicated than in the case of a location which lies in a path of city growth with every prospect that the neighborhood will be built up in a comparatively short time. The present city pattern is the product of the action, in the past, of the competition of uses for sites and the historical succession of those uses. City growth is directional. The directions which it takes are the consequence of favorable market attitudes toward selected areas. These in turn result from the relative advantages of different locations with respect to civic, social, cultural, and natural facilities. The actual physical expansion of cities at border locations is frequently characterized by speculative activity. Interior locations, and border locations in less favored directions have a tendency to exhibit a gradual decline in quality. Neighborhoods not in the paths of city growth usually lack marketability and tend to deteriorate. There appears to be an inevitable process of infiltration by lower class occupancy into such districts. There is either a more intensive use of land for residential purposes, or a change of use to commercial and industrial purposes. Neighborhoods in favorable geographic positions in relation to city growth frequently enjoy a fairly rapid rate of absorption of newly constructed dwellings. Such neighborhoods may be remarkably stable if the absorption of new land into use is controlled and orderly. The income and social characteristics of future occupants will usually be of such a character that a suitable environment for mortgage lending activities is in evidence. On the other hand, neighborhoods in the paths of city growth may be unstable if the absorption of new land is characterized by imprudent land speculation, overextension in real estate purchases, and overdevelopment.

d. Cities grow along communication and travel routes, and the growth of cities is influenced by topographical conditions, zoning restrictions, legislative policies, and population increases. Newer residential districts are products of city expansion, and both new and old residential districts undergo a change in quality which is directly related to the changing types of people who come successively into occupancy. The trend of neighborhood stability usually lies in the same direction as the trend of social quality of the neighborhood. As families rise above the economic and social status of their neighbors, they desire to move to better districts. The city pattern then becomes the result of the action of the competition of uses for sites and the historical succession of those uses. Valuators must be aware of the phenomena of city growth and the conditions and characteristics of neighborhood trends in order that the probable future degree of mortgage risk surrounding a location may be accurately reflected.

e. The mere presence of established, financially capable owners in neighborhoods embracing both old and new structures does not assure a high degree of continuing marketability, even though the same type of persons apparently provide a strong market for properties in such areas. Such neighborhoods will suffer greatly within the next twenty years if they are not considered reasonably desirable by the younger families upon whom future marketability depends. A location with harmonious surroundings will not decline at the same rate as will a location in a neighborhood containing old structures mixed with new. Older properties in a neighborhood have a tendency to accelerate the rate of transition to lower class occupancy. Good planning and uninterrupted development tend to create continuing desirability of neighborhoods. The past has demonstrated that neighborhoods or subdivisions which were laid out many years ago in accordance with well executed planning to develop beauty and charm have continued in high favor, while other neighborhoods just as well located have suffered by reason of the absence of good planning.

f. Neighborhoods tend to decline in investment quality. Sometimes an exception is an undeveloped or partially developed new neighborhood. If such areas are favorably situated, attractive to new purchasers constituting the market, adequately protected from adverse influences, and definitely planned in accordance with accepted good housing practice, they will frequently improve for a period.

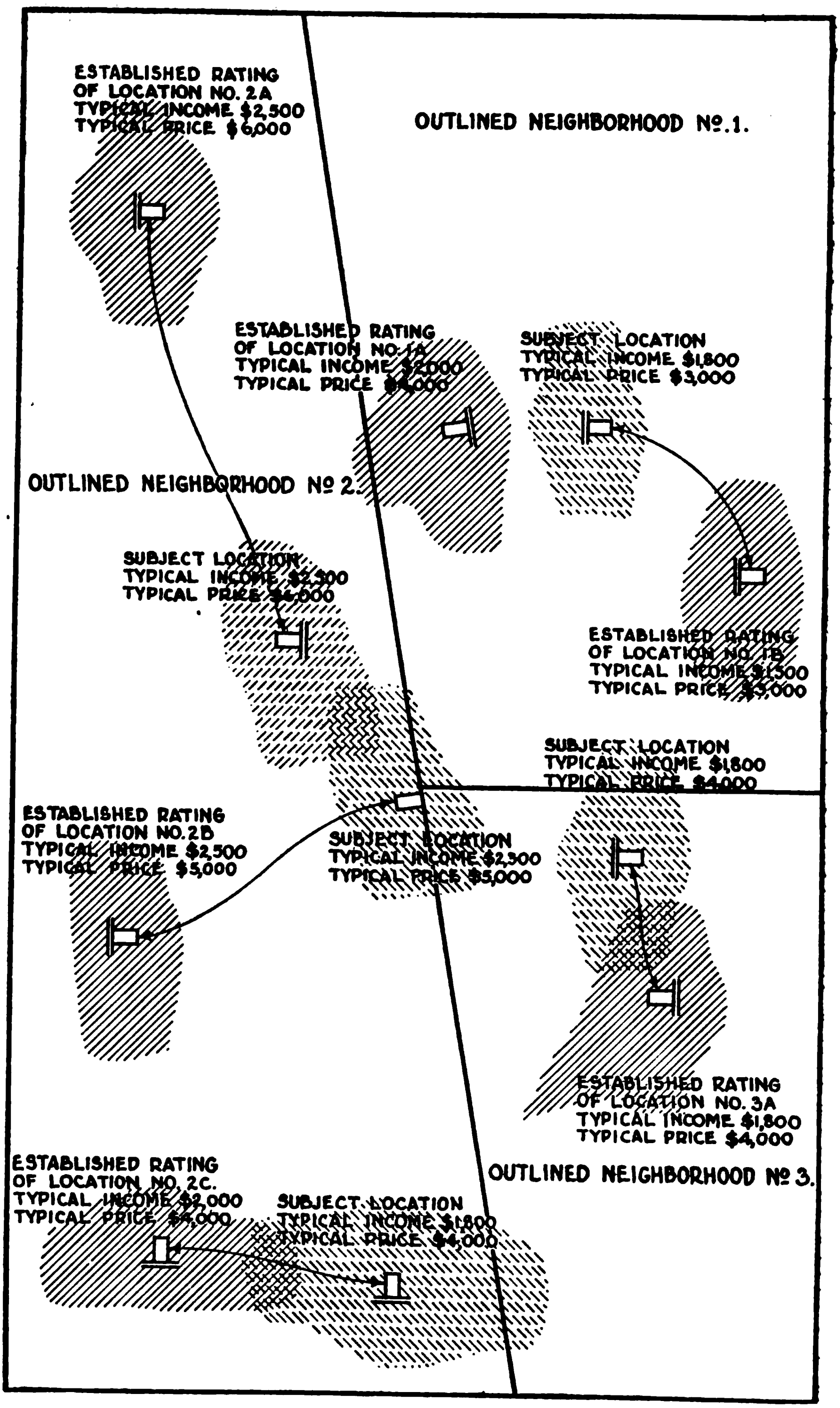
g. The stage of development of a neighborhood is an important factor. It cannot be presumed, however, that a neighborhood 15%, 50%, or 75% developed represents any specific degree of mortgage risk when generalization is attempted. The stability of such an area may be limited at the start. Later it may progress to a point where definite evidence is available to indicate the probable future character of the neighborhood. In other words, the character of the neighborhood will then have been established. At this stage, a higher Rating of Location may be justified as a result of certainty which was lacking in the less advanced stage of development.

ESTABLISHED RATINGS OF LOCATIONS

910. Valuation Sections are required to make Established Ratings of Locations. They contribute to speed in the processing of cases and ultimately lead to economy and consistency. The availability of Established Ratings of Locations also improves the effectiveness of preliminary examination. Established Ratings of Locations should be made for locations which are the most typical, or characteristic, of sites in the neighborhood, and for locations which are of the types most frequently encountered in the business of the Administration. Where several price ranges of properties occur in the same neighborhood, several Established Ratings of Locations should be made and the most appropriate one for comparison should be selected when processing a case. Established Ratings of Locations are made available to Valuators so that when a case involving a property situated within the boundaries of an Outlined Neighborhood is being processed, the Valuator will have an Established Rating of Location available for guidance. The Valuator proceeds to the established location, familiarizes himself with it, and then proceeds to the location under analysis. By ascertaining the conditions present at the subject location and comparing them, feature by feature, with those which determined the Established Rating of Location, he will be able to rate the subject location accurately and without delay. It is quite improbable that any one location in a neighborhood will rate higher than all other locations within the same Outlined Neighborhood for all features in the grid. If the subject location differs in quality from the rating ascribed to any feature of the Established Rating of Location, the Valuator should reflect such difference in the rating of the subject location. The Chief Valuator designates or numbers each Established Rating of Location with appropriate numbers or symbols in accordance with the instructions in Section 18, Compilation and Recordation of Data.

911. To make Established Ratings of Locations, it is necessary that the Economic Background Rating of the area be completed in accordance with the procedure described in this section. This provides the maximum weight for the first feature, Relative Economic Stability. Having determined the Economic Background Rating for the area, the first step in making Established Ratings of Locations is to determine ineligible or caution areas. The central downtown area can usually be outlined and considered as ineligible. However, such downtown reject areas must be outlined with the greatest care in order to avoid unfair decisions in connection with applications for mortgage insurance covering properties which lie within such borders. Central reject areas include slum and blighted areas, as well as the central business and commercial sections of the city. The second step is the outlining of neighborhoods for the purpose of indexing and classifying the Established Ratings of Locations. Adjoining areas having properties of similar age and quality are included in one Outlined Neighborhood. In some instances, this treatment permits the inclusion of a considerable expanse of territory in an Outlined Neighborhood. It is not necessary that all locations within the neighborhood boundary exhibit similar degrees of mortgage risk. Wide variations in total ratings will appear when individual cases are handled. When Established Ratings of Locations in an Outlined Neighborhood have been completed, the Valuator accomplishes the rating of all other locations in the Outlined Neighborhood by comparison with the most comparable Established Rating of Location.

912. An Outlined Neighborhood is not intended to embrace all of the influences which are considered in rating a location. Some conditions in an Outlined Neighborhood may have little or no influence upon the subject location, while other conditions with respect to significant influences may lie well outside the Outlined Neighborhood. For example, the immediate neighborhood of a location, as referred to in rating Relative Economic Stability, is generally an area of less proportions than the Outlined Neighborhood. However, some influences which affect such immediate neighborhoods may emanate from a much larger area than the Outlined Neighborhood. Obviously, many locations will lie along the boundaries of Outlined Neighborhoods. The influences affecting these and other locations are not altered by the presence of arbitrary boundaries of Outlined Neighborhoods. The purpose of outlining neighborhoods is to provide adequate and appropriate means of indexing and classifying Valuation and Location Rating Data, Real Estate Market Data, and Established Ratings of Locations. The next step is to rate the first feature on the Established Rating of Location form, Relative Economic Stability. This is done in accordance with the basic principles of rating set forth in paragraphs 904 to 909, and the specific rating principles in paragraphs 913 to 931. The favorable and unfavorable factors, and the reason for ascribing the rating indicated must be fully set forth on the Established Rating of Location form. The next step is to rate the remaining features in accordance with the basic principles of rating set forth in paragraphs 904 to 909, and the specific principles as shown in paragraphs 932 to 986. The favorable and unfavorable factors and the reasons for the rating


ESTABLISHED RATING
OF LOCATION NO. 2A
TYPICAL INCOME $2,500
TYPICAL PRICE $6,000
OUTLINED NEIGHBORHOOD No. 1.
ESTABLISHED RATING
OF LOCATION NO. 1A
TYPICAL INCOME $2000
TYPICAL PRICE $4,000
SUBJECT LOCATION
TYPICAL INCOME $1,800
TYPICAL PRICE $3,000
OUTLINED NEIGHBORHOOD No 2.
SUBJECT LOCATION
TYPICAL INCOME $2,300
TYPICAL PRICE $6,000
ESTABLISHED RATING
OF LOCATION NO. 1B
TYPICAL INCOME $1,500
TYPICAL PRICE $3,000
SUBJECT LOCATION
TYPICAL INCOME $1,800
TYPICAL PRICE $4,000
ESTABLISHED RATING
OF LOCATION NO. 2B
TYPICAL INCOME $2,500
TYPICAL PRICE $5,000
SUBJECT LOCATION
TYPICAL INCOME $2,300
TYPICAL PRICE $5,000
ESTABLISHED RATING
OF LOCATION NO. 3A
TYPICAL INCOME $1,800
TYPICAL PRICE $4,000
OUTLINED NEIGHBORHOOD No 3.
ESTABLISHED RATING
OF LOCATION NO. 2C.
TYPICAL INCOME $2,000
TYPICAL PRICE $4,000
SUBJECT LOCATION
TYPICAL INCOME $1,800
TYPICAL PRICE $4,000

assigned must be fully indicated on the Established Rating of Location form for each of these features. The Established Rating of Location form is completed by furnishing appropriate answers to all questions contained thereon with respect to neighborhood location, size, and influences. Upon completion of Established Ratings of Location for an area, the ratings ascribed each feature in connection with all Established Ratings of Location in the same price range should be reviewed, compared and adjusted as necessary. This comparison is made in the ratings of all location features except Relative Economic Stability. This review and adjustment process will afford a proper qualitative analysis of the respective degree of risk indicated by individual feature ratings.

RELATIVE ECONOMIC STABILITY

913. In rating this feature the Valuator expresses the extent to which owners and occupants of properties in the immediate neighborhood of a location may be expected to participate in and enjoy those employment and income advantages attributable to the entire Economic Background Area. Within such an area, neighborhoods will reflect these benefits in varying degrees. The feature is an expression of the security of the position of the families in the immediate neighborhood in which the location is situated, in relation to the security of the families in the immediate neighborhoods of all other locations in the Economic Background Area.

914. Two sets of elements are reflected in rating this feature. They are:

a. The general economic background, including opportunities for employment and trends of industrial, commercial, and other activities which affect the risk in all dwelling mortgages located in the Economic Background Area.

b. The relationship between the general economic background and the immediate neighborhood under consideration. This relationship involves the extent to which owners and occupants of properties in the immediate neighborhood of the subject location may be expected to share in and enjoy the advantages attributable to residence in the Economic Background Area.

915. These two sets of elements cannot be treated jointly. The first is the concern of the Chief Valuator. It is necessary for him to establish for each Economic Background Area the maximum possible rating which may be ascribed to the feature, Relative Economic Stability, in accordance with the instructions in paragraphs 917 to 921. This rating may not exceed 40 points in any case and is scaled downward for different areas in accordance with the Chief Valuator's Economic Background Rating. When the Chief Valuator makes an Economic Background Rating, his conclusion includes the weights applicable to each of the five rating columns. For example, if he finds it necessary to rate an Economic Background Area with a maximum possible weight of 30 points, then he has established the following table of weights for the first feature:

In the *1* Column-- 6 points
In the *2* Column-- 12 points
In the *3* Column-- 18 points
In the *4* Column-- 24 points
In the *5* Column-- 30 points

If he finds it necessary to establish the maximum possible weight at 15 points, then the following table of weights is applied to the first feature:

In the *1* Column-- 3 points
In the *2* Column-- 6 points
In the *3* Column-- 9 points
In the *4* Column-- 12 points
In the *5* Column-- 15 points

The following table may be used for ready reference. It indicates the individual columnar weights for ratings from 10 to 40.

Column					Column				
1	*2*	*3*	*4*	*5*	*1*	*2*	*3*	*4*	*5*
2	4	6	8	10	5	10	16	21	26
2	4	7	9	11	5	11	16	22	27
2	5	7	10	12	6	11	17	22	28
3	5	8	10	13	6	12	17	23	29
3	6	8	11	14	6	12	18	24	30
3	6	9	12	15	6	12	19	25	31
3	6	10	13	16	6	13	19	26	32
3	7	10	14	17	7	13	20	26	33
4	7	11	14	18	7	14	20	27	34
4	8	11	15	19	7	14	21	28	35
4	8	12	16	20	7	14	22	29	36
4	8	13	17	21	7	15	22	30	37
4	9	13	18	22	8	15	23	30	38
5	9	14	18	23	8	16	23	31	39
5	10	15	19	24	8	16	24	32	40
5	10	15	20	25					

916. The other set of elements, the general relationship between the economic background and the location under consideration, is the concern of the Valuator who renders the Report of Valuator on the case. It is necessary for him to form a judgment with respect to the degree to which the particular location and its immediate neighborhood receive the benefits of the economic background. This judgment is formed in accordance with the instructions below, in paragraphs 922 to 931, and is recorded by an X mark in one of the spaces opposite the first feature on the rating grid.

917. Economic Background Rating. A single Economic Background Rating is established for each Economic Background Area. The Chief Valuator shall delineate areas for the purpose of establishing Economic Background Ratings, and he is required to make certain that all Valuators know the established limits of the areas in which they work. In some cases, twin cities will be treated jointly and but one rating ascribed. In virtually all cases, suburban communities will be included in the same Economic Background Area and accorded the same rating as the city to which they are suburban. On the other hand, many satellite cities may be ascribed ratings independent of the one given to the major city near which they are located.

918. It is advisable to express the Economic Background Rating in terms of the weight ascribed for the *5* column. The highest rating ascribed to any area in the United States is 40 points. In no instance, however, is an Economic Background Rating of less than 10 points in the *5* column permitted. To establish these ratings, the Economic Background Rating Form, FHA Form No. 2096, is provided for the use of Chief Valuators. Its use will insure, to a major degree, uniform treatment of all areas. This form is not inserted in the case binders. It is used solely as an aid to the Chief Valuator in determining the Economic Background Rating for use in connection with all cases in the area to which the rating applies. Chief Valuators are not permitted to allow their conclusions to become known to borrowers, mortgagees, the public, or others than the Director and members of the Underwriting Staff.

919. In making an Economic Background Rating, the Chief Valuator forms an opinion of the probable future stability and sufficiency of the industrial, commercial, and other economic activities in the Economic Background Area. In arriving at his opinion, he considers the factors involved in terms of sources and amounts of family incomes which support investment in residential real estate. These elements are viewed in terms of their sufficiency, diversity, and probable future stability.

920. The effect of the economic background upon the risk involved in mortgages has been recognized by mortgage lenders. Some lenders have excluded entire cities from their lists of acceptable areas. Others have limited their activities to cities beyond definite population sizes and have favored selected locations within such accepted cities. It is not the policy of the Federal Housing Administration to exclude entire cities and towns from the benefits of mutual mortgage insurance. However, it may be that within certain communities where present day and expected future stability is exceedingly low, only certain favored locations which surpass the general average of the town or community may prove acceptable for insurance. The rating ascribed shall apply to all locations situated in the area rated. From time to time Chief Valuators will find it necessary to revise their Economic Background Ratings to keep abreast of changing conditions. Such revision does not, of course, affect cases already processed.

921. The Economic Background Rating gives consideration only to the underlying factors that affect the population of the entire area. It does not show how the various income groups are distributed throughout the area or what neighborhoods are good or bad from the standpoint of mortgage risk. It cannot be taken as a substitute for the analysis of specific locations. It must be recognized that even in areas having the most stable economic backgrounds, there are sections which do not derive any great benefit from their location in such areas. Specific instructions covering the process of establishing Economic Background Ratings are given in Section 18, Compilation and Recordation of Data.

922. **Rating of the Feature.** The Valuator must ascertain the extent or limits of the area included in the Economic Background Rating in order to rate this feature properly. These limits are established by the Chief Valuator according to the principles described above. The following instructions for the rating of the feature, Relative Economic Stability, apply to practically all cases processed by the Underwriting Staff. Occasionally, however, it may be necessary to consider unusual cases such as those involving resort properties. In such cases, the rating of this feature should reflect the group attitude of owners of such properties, with respect to continuing ownership and retirement of mortgage indebtedness.

923. The basis of rating the feature, Relative Economic Stability, is a comparison of the group income characteristics of the present and prospective occupants of properties in the immediate neighborhood of the location under investigation with the group income characteristics of present and prospective occupants of properties near all other locations within the Economic Background Area.

In this respect it differs from the method of rating the remaining seven features of the grid. This is necessary because the rating of this feature reflects the degree to which the occupants of properties in the vicinity of the location participate in the general advantages attributed to the Economic Background Area. The competitive area basis of rating would fail to produce a satisfactory analysis of income characteristics. For this reason, when rating Relative Economic Stability, comparison is made with all other neighborhoods, both competitive and noncompetitive.

924. *Stability of Family Incomes.* The group income characteristics of the occupants of properties in the immediate neighborhood of the location under consideration are analyzed from the points of view of their sufficiency and stability with respect to both sources and amounts of income received. It is necessary to devise a method whereby those income characteristics can be analyzed. An examination of the income characteristics of employed persons, with particular reference to the probable continuance of employment and incomes, suggests a method which can be readily adopted for the use of Valuators.

925. At the bottom of the employment scale, a large percentage of the employed population of a city is found working in the capacity of laborers. A member of this group has little or no individual skill, because any one person can usually perform the work as well as any other. Physical endurance is the primary requisite of this employed group. The next group encountered above the laborers in the employment field includes the semi-skilled mechanics and lower-grade clerks. The members of this group exhibit some individuality, because they have demonstrated through knowledge or ability a degree of superiority over laborers. Further up the employment scale are encountered mechanics and office workers. The capacity of members of this group is apparent, because they have shown the ability to rise to a point above the large groups below them. Next in the scale are found the foremen, chief clerks, and others of like standing in the employment world. These people usually have well established incomes. Above this group are the junior executives. It is considered that this group presents, for the purpose of determining mortgage risk, the best income characteristics in the entire employment field. The usefulness, versatility, and ability of this group have been firmly established. Should they lose their present employment, it is usually possible for them to find ready employment in a similar line of activity. At least this group possesses the characteristics which would provide them with the ability to find ready employment if there are sufficient sources from which employment may be secured. Should it become necessary for members of

this group to seek employment in lower strata of the employment scale, they can readily replace those below them by reason of their demonstrated superior ability and usefulness. At the top of the employment scale is found the senior executive group. Experience has demonstrated that although their leadership is most firmly established, the stability of incomes is not as great as that evidenced in the junior executive class. Opportunities for employment in similar capacities are usually limited. While employment is always available in the various strata of the employment scale below them, the incomes derived from such employment will usually prove inadequate to maintain their present standard of living and the retirement of mortgage indebtedness on expensive properties. It should be understood that while the senior executive group will, in most instances, rate below the junior executive group, only in exceptional cases will the former rate below the *3* column.

926. It is necessary for the Valuator to determine the character of work performed by occupants of properties in the immediate neighborhood of the location under investigation. With the employment charactertistics of occupants determined, the income levels are indicated. Where the income level of a neighborhood includes rental returns from duplex houses and other residential units within the same area, neighborhood influences will be accelerated in proportion to the degree in which the income level results from such rentals.

927. *Sufficiency of Family Incomes.* Such considerations as the standard of living established by the various income groups and the financial outlay necessary to maintain that standard, signs of extravagance in living, and indications that neighborhood occupants as a group have bought too expensive properties, will have a direct effect on the rating to be ascribed. Where it is observed that any group of occupants tends to live in an extravagant manner or where there is undue optimism in the purchase of dwellings, the column rating ascribed will be below that which the employment group might indicate. In the event the condition is so serious that probability of successful retirement of mortgage indebtedness is absent, the rating will be in the Reject column.

928. It is recognized that the immediate neighborhoods of many locations will show a considerable spread in the income levels of occupants. It is usually possible to determine the typical income level of occupants, and it should be used as the basis of rating. The rating ascribed may be affected only to a slight degree by the income characteristics of those occupants not typical of the neighborhood occupancy.

929. *Social Characteristics of Neighborhood Occupants.* While the rating of this feature is based upon the group income characteristics of the occupant group at the immediate neighborhood of a location, other considerations, such as the varying social characteristics of neighborhood occupants, including the group attitude toward obligations and living standards, are warranted and will be reflected to some degree in the rating. By social characteristics are meant the moral qualities, the habits, the abilities and the social, educational and cultural backgrounds of the people residing in the immediate neighborhood.

930. *Stage and Trend of Neighborhood Development.* In newer neighborhoods, consideration should be given to (*a*) the physical need or shortage of homes of the type and in the price class contemplated, (*b*) whether the need originates with a financially capable group of purchasers, and (*c*) whether the sales prices and values approximate cost of completed properties. In older, built up neighborhoods the principal consideration will be given to the presence of a ready, financially capable market for the homes which exist in the neighborhood, at their current value levels.

931. *Probability of Forced Sales and Foreclosures.* It is logical to anticipate a change in the class of occupancy in the neighborhood if the financial condition of the residents is such that forced sales and foreclosures may become numerous. Properties must remain desirable to their present owners if a satisfactory lending experience is to be expected. A change in class of occupancy is frequently accompanied by a decline in the values and seriously affects the continued desirability of the properties to their original owners. Mortgage risk is greater in such neighborhoods. As an index of Relative Economic Stability an unfavorable foreclosure experience in a neighborhood is of limited significance if it was caused by conditions which no longer exist, or if the experience was typical of the entire Economic Background Area. The probability of future foreclosures and forced sales, however, may be influenced by factors which are latent in the present situation. For example, there is greater risk of foreclosure in residential areas where mortgages represent a high ratio of loans to values, than in an area where the average mortgage indebtedness is a low percentage of values. The added burden of interest and amortization payments on the larger loans may be such that during trying times foreclosure becomes almost inevitable. For this reason when properties in a neighborhood are heavily mortgaged, an element of instability may be introduced. The Valuator should give consideration to the relative amount of mortgage indebtedness in the neighborhood as compared to other neighborhoods, which may be measured, for the purpose of rating, in terms of average ratio of loans to current values. The probable future rate of foreclosure, insofar as it is likely to be caused by unwise control of expenditure, is of utmost importance.

PROTECTION FROM ADVERSE INFLUENCES

932. This feature has a total weight of 20 points, which indicates it is one of the most important features in the Rating of Location. Protection from Adverse Influences is concerned with more than zoning and deed restrictions. These are of great importance, but they do not represent all of the protection which is or may be afforded a location. Where little or no protection is provided from adverse influences, the Valuator must not hesitate to make a reject rating of this feature.

933. *Zoning.* Protection in the form of zoning restrictions is becoming more general. One of the best artificial means of providing protection from adverse influences is through the medium of appropriate and well drawn zoning ordinances. If the provisions of an ordinance have been well worded and drawn from a thorough knowledge of existing and probable future conditions in the city, and if the ordinance receives the backing of public approval, an excellent basis for protection from adverse influences exists. If an ordinance has been drawn with little or no real understanding of its purpose, or without a desire to promote an orderly city growth, or if it lacks public approval, the chances are that it will offer little protection from adverse influences. Even when an ordinance is ably executed, investigation must be made to determine whether infractions of the zoning law are permitted. If the law may be changed readily, or if the provisions themselves are not strictly enforced, such conditions cannot be expected to afford much protection from adverse influences. Greater importance is attached to zoning protection in and near large metropolitan centers, than in places having smaller populations and less rapid rates of growth. Absence of zoning may be a proper basis for rejection in the former case, but would not necessarily cause rejection in the latter case.

934. *Restrictive Covenants.* Deed restrictions are apt to prove more effective than a zoning ordinance in providing protection from adverse influences. Where the same deed restrictions apply over a broad area and where the restrictions relate to types of structures, use to which improvements may be put, and occupancy, better protection is afforded. Where adjacent lots or blocks possess

altogether different restrictions, especially for type and use of structures and occupancy, the effect of such restrictions is minimized. A location lying in the path of business expansion is often unprotected from the business encroachment even though deed restrictions for residential use may be present. It must be realized that deed restrictions, to be effective, must be enforced. In this respect they are like zoning ordinances. If there is a probability of voiding the deed restrictions through inadequate enforcement of their provisions, the restrictions themselves offer little or no protection from adverse influences. In other words, if a property is so situated that its logical use is other than for residential purposes, it will very likely be put to its highest and best use in the course of time, even though it is restricted to residential use.

935. *Natural Physical Protection.* The geographical position of a location may afford reliable protection from adverse influences. If a location lies in the middle of an area well developed with a uniform type of residential properties, and if the location is away from main arteries which would logically be used for business purposes, probability of a change in type, use, or occupancy of properties at this location is remote. The degree of immunity offered to a location because of its geographical position within the city is to be considered. Natural or artificially established barriers will prove effective in protecting a neighborhood and the locations within it from adverse influences. Usually the protection from adverse influences afforded by these means includes prevention of the infiltration of business and industrial uses, lower class occupancy, and inharmonious racial groups. A location close to a public park or area of similar nature is usually well protected from infiltration of business and lower social occupancy coming from that direction. Hills and ravines and other peculiarities of topography often make encroachment of inharmonious uses so difficult that protection is afforded. A high speed traffic artery or a wide street parkway may prevent the expansion of inharmonious uses to a location on the opposite side of the street. However, if a high speed traffic artery passes directly through a desirable neighborhood area with similar development on each side of the artery, the noise and attendant danger constitute an adverse influence, rather than a protection. The same holds true for the presence of railroads, elevated or surface lines, and other means of transportation.

936. *Surrounding Homogeneous Neighborhood.* When a neighborhood has been solidly developed in accordance with accepted good housing practices, such a development alone usually constitutes good protection from adverse influences. But many solidly developed neighborhood areas present conditions which are far different from that which is regarded as good housing practice. Little protection is offered to such a neighborhood because of the probability that new and more attractive competing neighborhoods may be developed. The solidly built up neighborhood where good housing has not been provided is readily subject to change in occupancy. Narrow streets, excessive lot coverage, inadequate light and air, and poor circulation within the neighborhood area, as well as the intermixture of types, price levels, and a general absence of architectural attractiveness in dwellings, represent adverse influences in themselves.

937. *Quality of Neighboring Development.* The quality of dwelling construction is significant, inasmuch as unsubstantial, flimsy construction is subject to rapid deterioration which hastens the lowering of class of occupancy. The same result may be expected for locations whose properties present freakish architectural designs. The rating will be adversely affected if the neighboring development consists of old, obsolete dwellings. The presence of overimprovement or underimprovement in the neighborhood constitutes a condition which may adversely affect location ratings. Areas surrounding a location are investigated to determine whether incompatible racial and social groups are present, for the purpose of making a prediction regarding the probability of the location being invaded by such groups. If a neighborhood is to retain stability, it is necessary that properties shall continue to be occupied by the same social and racial classes. A change in social or racial occupancy generally contributes to instability and a decline in values.

938. *Ribbon Developments.* The same principles apply when rating locations on ribbon developments along highways. Such locations tend to attract uses which are often considered, from a residential standpoint, as nuisances. Therefore, the prospect of lessened desirability of such locations for residential use directly affects mortgage risk. However, where the likelihood of such nuisances is remote or where prospective purchasers for residential use are tolerant of present or prospective nuisances, reject ratings of this feature are not warranted.

939. *Nuisances.* Nuisances already present in a neighborhood affect mortgage risk in two ways. The first is the direct effect on the appeal of the neighborhood and this is taken into account when rating the feature, Appeal. The second is the indirect effect on mortgage risk in that the nuisances may accelerate change to a lower grade of occupancy. The latter condition is considered when rating Protection from Adverse Influences. The effect of a nuisance varies according to the type of neighborhood occupants and their degree of tolerance of the condition.

940. If a nuisance has already had its effect, that is, if the class of occupancy has already changed and no further change appears probable because of the nuisance, the rating of Protection from Adverse Influences is not affected. On the other hand, if the nuisance is likely to make the occupants dissatisfied with the location, the rating of this feature will reflect the condition. In either case, the rating of the feature, Appeal, will be affected if marketability to present class of occupants is impaired.

FREEDOM FROM SPECIAL HAZARDS

941. Special hazards refer directly to conditions which have an influence on the personal safety and health of the occupants in a given neighborhood, as compared with similar conditions surrounding all competitive locations.

942. *Topography.* Special hazards are frequently found to result from the peculiar topography of a location or its neighborhood. Streets with a heavy grade, ravines, abrupt changes in contour of land, soil erosion, and hillside locations may reflect special hazards of varying degrees. The topography of some cities is such that low land will be developed for residential purposes largely because such ground is located close to centers of employment or the downtown area of the city. These areas may be subjected to intense summer heat, poor circulation of air, periodic fogs, and, in some instances, floods.

943. *Subsidence.* The danger of subsidence is a special hazard which will seldom be encountered except in mining areas. In such areas a consideration of the extent of mining operations, the condition and character of the subsurface formations, the depth of mining operations, and the location of existing shafts and tunnels is necessary to determine whether the danger is imminent, slightly probable, or negligible. In those areas where the danger of subsidence is not determinable in the course of a routine examination, reject ratings will be warranted unless complete and satisfactory evidence can be furnished the Chief Valuator that the damage from such danger would be negligible.

944. *Earthquake, Tornado or Hurricane Hazard.* There are many types of windstorms, each of which represents some degree of hazard under certain conditions. In a neighborhood of poorly constructed homes more damage may result from flying debris than from the force of the wind alone. When this condition is apparent it should be properly reflected in the rating. In general, the above principle will apply to the hazards associated with the probabilities of earthquakes.

945. *Flood Hazard.* In many cities certain low areas are subject to periodic floods. Frequently the result of flood waters in a city is nothing more than a temporary inconvenience, but sometimes floods are attended by serious property damage and great danger to personal safety. It is the relative freedom from such hazards which is to be rated in this feature.

946. *Traffic Hazard.* Coincidental with the accelerating rate of traffic accidents is the increasing favoritism for homesites in the more protected areas. This trend results from an effort to escape the hazards of high speed traffic thoroughfares or the hazards of principal streets where traffic is not necessarily fast, but heavy and dangerous. Rating of this feature cannot approach reasonable accuracy unless full cognizance is given to this type of hazard.

947. *Fire and Explosion Hazards.* Frequency of occurrences is not necessary to establish hazards. They are real as long as the elements of danger exist, even though the related occurrences never transpire. This viewpoint is essential to understand fully the hazards of fire and explosion. The presence of commercial or industrial activity dealing with the storage or manufacture of volatile or explosive mixtures, and conditions which indicate even a remote probability of conflagration are examples of this type of hazard.

948. *Hazards to Health.* Some influences considered in rating the feature, Protection from Adverse Influences, and some conditions considered in rating the feature, Appeal, are likewise considered in rating Freedom from Special Hazards if they affect the personal safety and health of neighborhood occupants. Some of these influences and conditions are smoke, fog, chemical fumes, exhaust gases, stagnant ponds or marshes, poor surface drainage, and excessive heat or dampness.

ADEQUACY OF CIVIC, SOCIAL, AND COMMERCIAL CENTERS

949. For a neighborhood to remain stable and retain desirability for the same class of occupancy, it is necessary for it to be adequately served by grade and high schools, neighborhood shopping centers, churches, theatres, parks, playgrounds, community halls, libraries, and colleges. In some instances many of these are available to the residents at points within the neighborhood, while in other instances some, or even all, of them may be situated beyond the boundaries of the neighborhood.

950. Only in a few instances will all the kinds of facilities entering into the consideration of this feature be present. A favorable rating is made when it is considered that those present provide adequate means for convenient and pleasant living with suitable provision for cultural development. The older residential areas within a city will usually have available more of these facilities than the newer neighborhoods. The centers making for convenience in living and cultural benefit usually follow rather than precede the building up of any residential area. However, those new neighborhoods which are better served by conveniences will usually develop and maintain a character more favorable to stability than those in which they are lacking. Areas occupied by low-income groups will ordinarily require easier access to civic, social, and commercial centers than the areas occupied by residents of higher income levels. The rating should express the sufficiency, quality, and availability of these facilities as related to the requirements of the social class of occupancy, and the effect resulting from comparison of similar facilities at competitive locations.

951. *Quality and Accessibility of Schools.* When considering the question of schools, distances to the schools should be related to the public or private means of transportation available from the location to the schools. The social class of the parents of children at the school will in many instances have a direct bearing. Thus, physical surroundings of a neighborhood area may be favorable and conducive to enjoyable, pleasant living in its location. However, if the children of people living in such an area are compelled to attend school where the majority or a considerable number of the pupils represent a far lower level of society or an incompatible racial element, the neighborhood under consideration will prove far less stable and desirable than if this condition did not exist. Frequently, upon payment of a fee, children in such an area could attend another school with pupils of their same social class. However, desirability of the neighborhood, when compared with competitive locations, might be adversely affected by the additional expense. In many instances where a school has earned a prestige through the quality of instruction and adequacy of facilities, it will be found that such attributes will be an element in maintaining the desirability of the entire area comprising the school district. In cases where schools are not immediately present, consideration is given to convenience and cost of required transportation.

952. *Quality and Accessibility of Shopping Centers and Amusements.* The central downtown, commercial, financial and theatrical district serves, in some measure, all inhabitants of an Economic Background Area. Therefore, the only consideration given in this feature to the downtown district is its relative distance and availability to competitive locations. Neighborhood shopping centers are an essential part of community life, in all except the smaller towns. The benefits they afford to the occupants of a given

location are measured by their presence, quality, adequacy, availability, and the relationship with similar benefits afforded competitive locations. While the presence of neighborhood stores may be essential to the convenience of occupants of a low-income area, the mere existence of such elements near a location occupied by people of high incomes would be a destroying influence, rather than a favorable asset. However, it is desirable for the higher income level area to have these shopping centers and other facilities easily available, although it is undesirable for the dwelling locations to be situated adjacent to such centers.

953. *Quality and Accessibility of Churches, Clubs, and Recreation Centers.* Similar considerations are to be given to the presence, quality, and distance to churches, clubs, and recreation centers. For certain types of neighborhoods, means of recreation are essential, whereas in others they represent merely a passive contribution to general welfare. For locations in cities which are devoted in part or as a whole to the tourist or resort business, almost the entire basis for stability is represented by the means provided for recreation and amusement. Ready access to neighborhood churches, theaters. public and private golf courses, and park and playground areas is always desirable.

ADEQUACY OF TRANSPORTATION

954. Ready access to places of employment, main shopping districts, and other neighborhoods within the city is a requisite of neighborhood stability. Transportation itself is not rated, but rather the adequacy of transportation for the type of residents occupying the location. The rating is made by comparing the adequacy of transportation afforded competing locations occupied by inhabitants of similar income levels. The highest rating is given to those locations where services and schedules are the best and where costs are the lowest. The following deals principally with cities which, because of their size, require the facilities provided by public transportation systems. The underlying principles remain the same for smaller communities which do not have these systems. In the smaller communities considerations must revolve around the character of the streets and sidewalks, and the distance from the location to the civic, social, and commercial centers.

955. *Diversity of Available Services.* In many cases a single transportation line may furnish entirely adequate facilities for the area it serves. However, better service is often afforded, especially with respect to the frequency of service, when two or more means of transportation are available. Therefore, the diversification of available services is usually a significant factor in determining

the relative adequacy of competitive locations with respect to transportation facilities.

956. *Quality and Frequency of Services.* The quality of transportation in general, and especially the quality of its management, equipment, and service, will be reflected in the ratings of this feature. Frequency of service is another important factor in determining Adequacy of Transportation. Long delays occasioned by waiting for a car or bus, and overcrowded conditions resulting from infrequent service will adversely affect the rating if such inconveniences are absent at competitive locations. The permanence of the common carrier providing the transportation is considered, and where there is a probability of discontinuance of service, as the result of unprofitable operation, a low rating is warranted. Contemplated transportation facilities never justify as much weight as facilities which are actually available.

957. *Cost of Service.* The fares charged by common carriers are of no concern if the rates, whether high or low, are the same for all sections of the area served. Relative cost at competitive locations is the only proper basis of determining the competitive position of a location as reflected by the transportation cost-factor relationship. Cost of transportation can be reasonably determined only by considering the transportation requirements of all members of the family, and of such servants as may be employed by them. Families of the low-income group require public transportation facilities except in small communities where such facilities are neither provided nor essential. These families also require cheaper transportation than do the families of higher income groups. Reliance upon private automobiles makes it possible for families, except in the low-income group, to occupy suburban areas which are not served by public transportation facilities, without appreciable effect upon their transportation requirements. In such cases, if competitive locations are served by public transportation facilities, the transportation cost differential will adversely affect the rating of locations dependent upon private automobile transportation alone.

958. *Distance from Location to Service.* The mere presence of public transportation facilities within the neighborhood of a location does not indicate adequate facilities. The distance between the location and the boarding point of the public transportation line may cause great inconvenience, especially in bad weather, or it may introduce certain hazards resulting from intervening traffic crossings. It may also appreciably increase the time required to reach the destination of travel from the subject location.

959. *Time Required to Destinations.* The time consumed in travel on public transportation lines is of much greater

importance than the distance covered. Therefore, the relative adequacy of transportation afforded competitive locations will be influenced by distance only when adjustment, if applicable, is made to reflect the time element. In small communities where public transportation facilities are not available, distance becomes the important factor. In measuring time, consideration must be given to delays resulting from necessary transfers.

960. *Condition of Streets and Roads.* Where transportation is wholly or partially dependent upon the use of private automobiles or buses, the relative adequacy of such means will be influenced by the character and conditions of streets and roads. Consideration must also be given to any unfavorable topographical and climatic conditions which would require, for example, the crossing of steep hills, especially during seasons of bad weather.

SUFFICIENCY OF UTILITIES AND CONVENIENCES

961. *Presence of Required Utilities.* Marketability of residential properties and, likewise, mortgage risk are affected by the presence or absence of such services as police and fire protection, telephone service, gas, electricity, water supply, storm sewerage, sanitary sewerage, garbage disposal, street lighting, street paving, sidewalks, and curbs. The rating should reflect, with respect to these utilities, the comparative advantages or disadvantages of the location under consideration with all competitive locations within the Economic Background Area. Also, it should reflect the degree to which the present utilities and conveniences fill the needs and desires of both the present occupants and the prospective purchasers in the neighborhood of the subject location. Utility requirements will vary with differences in the social and financial class of people occupying the area. In most instances, community water which is pure and under sufficient pressure is considered a definite requirement. In other communities, individual water supplies will prove adequate for some of the locations. Thus it is necessary to interpret the present and expected future desires of the market when rating this feature. It may generally be assumed that the prospective market will be composed of the same class. However, if a neighborhood is changing in occupancy, the needs and desires of the lower class which will eventually prove to be the occupants of the neighborhood shall be taken into consideration. Consideration should be given to the probability of additional utilities and conveniences being installed. The rating under such circumstances cannot be as high as it would be if the additional utilities and conveniences were already present at the location. Until the service is in actual existence and available, there is always some doubt regarding its ultimate installation.

962. *Quality of Utilities.* Utilities may be present in an entirely satisfactory measure and still fail to meet requirements if the quality of such utilities is substandard. Examples of utilities and conveniences which offer restricted benefits due to poor quality are: (*a*) streets in bad repair, (*b*) fire protection dependent upon inadequate equipment, (*c*) gas service of insufficient pressure, and (*d*) electrical service which is frequently interrupted.

963. *Cost of Services.* Cost is another element which must be considered, together with presence and quality of utilities and services. Cost is only considered when it produces advantages or disadvantages of the location being rated as determined by comparison with other competitive locations.

LEVEL OF TAXES AND SPECIAL ASSESSMENTS

964. The rating of this feature reflects the effect which taxes and special assessments may have on the desirability of the location for home ownership. Therefore, it is necessary to determine the total amount required for taxes and special assessments. This amount is compared with the amount required for taxes and special assessments in connection with properties of similar value in competing areas.

965. *Relationship of Tax Burden with Competitive Locations.* The only concern in rating this feature is to determine the relative advantages or disadvantages of the tax level at the subject location in comparison with other competitive locations within the area. It is well known that the basis for assessment, and often the tax rate itself varies for different areas within a city. Where specific locations are receiving preferential treatment in this regard, and where it is estimated that such condition will continue, a high rating of this feature is in order, regardless of the reasons for the condition.

966. Inasmuch as the extent of the general tax burden in the city as a whole is not considered in the rating of this feature, it should be observed that it is proper to give certain locations a high rating even though the city has a relatively high tax level. Thus, in an Economic Background Area, it is possible to have locations which warrant a *5* column rating even though the tax rate may be 3%, providing this is the lowest rate in the Economic Background Area.

967. *Nature, Cost, and Duration of Special Assessments.* If special assessments exist, or if they are in immediate prospect, the Valuator should consider the length of time such assessments

may continue, as well as the total payment required. Even though special assessment payments may be required for only a few years, they should be given consideration in the rating. A few years of high special assessments may seriously affect marketability and desirability for home ownership. Special care must be taken in cases where special assessments are in the nature of ad valorem taxes. In such cases, each individual property is security for an entire bond issue and cannot be freed from the special assessment lien until the bond issue has been entirely retired. Low ratings of this feature must be given in all such cases, and if the special assessment burdens are excessive, reject ratings may be warranted.

APPEAL

968. The factors affecting this feature are natural physical charm and beauty of surroundings, geographical position of location, appearance of street layout, harmonious character of buildings, social attractiveness of environment, and freedom from nuisances. In rating Appeal, consideration is not given to factors included in other features in the Rating of Location, except as specifically discussed under the features, Protection from Adverse Influences and Freedom from Special Hazards. Appeal is purely relative and is to be measured by the attitude of the income group or the social class which constitutes the market for properties near the location under consideration. Thus, it will be possible for a neighborhood in a low price range to possess as high an appeal for its prospective market as a neighborhood in a high price range. Appeal is measured by a comparison between competing areas of the same price range where the market is made up of the same income groups.

969. *Natural Physical Charm and Beauty of Location.* In general, mortgage risk is minimized if locations and their surroundings are physically attractive. For example, the market for high priced properties may prefer certain distinctive characteristics such as rolling topography, pleasing landscaping, wooded lots, and presence of brooks. However, the mere presence of these characteristics is not ratable, but the comparison between characteristics found in competing locations is the basis for rating. It may be that lower priced locations do not have such attributes. On the other hand, such locations may possess physical charm principally because of well kept homes, grounds and streets. Therefore, it is equally possible to obtain high ratings for this feature in lower priced locations.

970. *Geographical Position of Location.* The geographical position of the location may have a distinct bearing upon the

rating of this feature. Broad vistas, pleasing views, and climatic advantages resulting from geographical position are factors which will tend to attract people to a location. Appeal will be adversely affected, however, if the approach is through an unsightly area.

971. *Layout and Plan of Neighborhood.* Attractive street layouts which are suitable to the character of improvements and which preserve the natural charm of the land are elements of appeal. Areas so laid out have a tendency to remain desirable to present owners and to command the continued interest of prospective purchasers.

972. *Architectural Attractiveness of Buildings.* The appeal of a location is strengthened if the buildings in the immediate neighborhood are attractive as a group and harmonize with each other and with their physical surroundings. Neighborhoods may be encountered in which the predominant architectural design is inappropriate to the community. A location under this influence lacks a degree of the appeal attributable to other locations in more harmonious environments. A pleasing variety that results in harmoniously blended properties is greatly to be desired and should result in a high rating of this feature. Variety does not mean an incongruous mixture resulting in unpleasing contrasts. It has been demonstrated that pleasing variety for neighborhoods and entire developments can be successfully accomplished even in areas designed for modest homes.

973. *Social Attractiveness.* Satisfaction, contentment, and comfort result from association with persons of similar social attributes. Families enjoy social relationships with other families whose education, abilities, mode of living, and racial characteristics are similar to their own. Appeal which is attributable to significant social influences is frequently indicated by the relationship of competitive locations to the paths of city growth. Locations which lie in a path of city growth generally indicate the presence of certain strong elements of appeal which in themselves have influenced the direction of residential development. Appeal is, however, purely relative and is to be measured by the attitude of the income group or the social class which constitutes the market for properties near the location under consideration.

974. *Nuisances.* Billboards, service stations, offensive noises and odors, unsightly properties, and stables may be examples of nuisances which are objectionable to neighborhood occupants and which adversely affect appeal and should be recognized in the rating of this feature.

SPECIAL CONSIDERATIONS IN RATING UNDEVELOPED SUBDIVISIONS AND OTHER SPARSELY BUILT AREAS

975. The instructions and principles for developed neighborhoods set forth in the foregoing paragraphs apply equally to undeveloped or other sparsely built areas. When judging the latter, it is essential to look into the future and forecast the environment that will likely be created because of the existence of certain conditions in combination with certain assumptions. Special consideration is given various features when rating such locations. These special considerations are outlined in succeeding paragraphs.

976. Successful new areas are recognized as the best mortgage lending areas. To be successful, a new or partially developed area must reach a stage of being substantially built up within a period of a very few years. Due to the fact that most outlying residential areas will be developed as a result of the decentralization movement rather than as a result of population increases, the economic background of the community assumes great importance, since those communities which will experience a prosperous future will decentralize and build new residential areas much faster than those for which a less advantageous future is forecast.

977. Since assumptions in combination with certain known conditions constitute the basis for rating, new and partially developed locations require low ratings; that is, satisfactory areas receive a passing but not a high rating. As the character of these areas is established, subsequent ratings will reflect the new existing conditions. The character of the area becomes evident when a considerable percentage of lots have been improved, or when a satisfactory concentration of dwellings is present. The wave system of development—or concentration of improvement and building activity in one portion of the subdivision until it is established, before starting activity in an adjoining section—is an orderly procedure which may greatly reduce mortgage risk. Such a program assures structures of the same age, and if development is halted for any reason, the close grouping of homes will not decrease neighborhood and location stability.

978. In the early stages of development, most locations in undeveloped subdivisions will not warrant ratings sufficiently high to qualify for mortgage insurance unless the ratings are predicated upon compliance with certain conditions designed to assure satisfactory standards of the subdivision. Ratings will usually be predicated upon such conditions as installation of streets and utilities, restrictive covenants applying to all lots in the subdivision, liquidation of delinquencies in taxes or mortgage debt, and, in some cases, the construction and sale of a specific number of additional homes. The

latter predication is made only if additional sales of new homes are necessary to establish the character of a neighborhood. If such predications are made, they are set forth as conditions on the Report of Chief Underwriter, FHA Form No. 2017, and subsequently on the commitment.

979. *Relative Economic Stability.* In rating this feature, the Valuator considers the combined income characteristics of both occupants and persons constituting the market for the price class of improvements contemplated. Since an assumption is the basis for rating, high ratings are seldom justified.

980 (1). *Protection from Adverse Influences.* The Valuator should realize that the need for protection from adverse influences is greater in an undeveloped or partially developed area than in any other type of neighborhood. Generally, a high rating should be given only where adequate and properly enforced zoning regulations exist or where effective restrictive covenants are recorded against the entire tract, since these provide the surest protection against undesirable encroachment and inharmonious use. To be most effective, deed restrictions should be imposed upon all land in the immediate environment of the subject location.

980 (2). Carefully compiled and fully enforced zoning regulations are effective because they not only exercise control over the subject property, but also over the surrounding area. However, they are seldom complete enough within themselves to assure a homogeneous and harmonious neighborhood.

980 (3). Recorded restrictive covenants should strengthen and supplement zoning ordinances and to be really effective should include the provisions listed below. The restrictions should be recorded with the plat, or imposed as a blanket encumbrance against all lots in the subdivision, and should run for a period of at least twenty-five to thirty years. Recommended restrictions should include provision for the following:

a. Allocation of definite areas for specific uses such as single or two-family houses, apartments, and business structures
b. The placement of buildings so they will have adequate light and air with assurance of a space of at least ten feet between buildings
c. Prohibition of the resubdivision of lots
d. Prohibition of the erection of more than one dwelling per lot
e. Control of the design of all buildings, by requiring their approval by a qualified committee, and by appropriate cost limitations or minimum square foot ground floor areas

f. Prohibition of nuisances or undesirable buildings such as stables, pig pens, temporary dwellings, and high fences

g. Prohibition of the occupancy of properties except by the race for which they are intended

h. Appropriate provisions for enforcement

980 (4). The fact that zoning regulations and restrictive covenants exist does not necessarily mean that a high rating is warranted. The type of use permitted by such regulations should be carefully analyzed. Frequently areas are zoned and restricted in a manner that would encourage land use which would greatly decrease its desirability for residential purposes. The protection provided should be appropriate to the best use of the land.

980 (5). Some areas in which there are no zoning regulations or restrictions may be considered properly protected because of the favorable topography or geographical position of the land. The natural protection afforded in such instances might be sufficient to warrant a good rating.

980 (6). Additional protection and stability are afforded by city or county plans and subdivision regulations that are officially recognized and enforced. Such plans will protect residential streets against becoming noisy, high speed traffic arteries; will establish barriers between residential properties and industrial or railroad properties; and will assure that the growth of the city will be orderly and harmonious. To be favorably considered for mortgage insurance, any undeveloped subdivision falling within the jurisdiction of a city, county, or regional plan shall conform to such plan and regulations. These regulations are sometimes evaded through the sale of property by metes and bounds. When a subdivision is sold in this way the plot plan can be changed at the wish of the developer. For this reason, it is highly preferable that a subdivision be sold from a recorded plat.

980 (7). A partially developed area that remains long in that condition represents, in itself, an adverse influence which will make the area undesirable for mortgage lending. Complete reliance should not be placed on deed restrictions and zoning in such areas. Other factors which will assure early development of the area must be considered to weigh fully the protection afforded against stagnation, slow or unhealthy growth. Among the factors which tend to offer such protection are the following:

a. Situation of development in the path of city growth

b. Contemplated use of land for best purposes, considering such conditions as topography, character of land, and situation of area *c.* The need and demand for properties of the price class contemplated

d. Combined cost of lot and improvements approximating selling prices and values of completed properties

e. Development planned in accordance with accepted standards of good housing

f. A financially capable developer who enjoys the confidence of the market

981. *Freedom from Special Hazards.* Considerations under this feature include the degree to which dangers to personal safety are nullified.

982 (1). *Adequacy of Civic, Social, and Commercial Centers.* These elements of comfortable living usually follow rather than precede development. Those centers serving the city or section in which the development is situated should be readily available to its occupants. Schools should be appropriate to the needs of the new community and they should not be attended in large numbers by inharmonious racial groups. Employment centers, preferably diversified in nature, should be at a convenient distance.

982 (2). The development which bases its sales program almost solely upon lower cost land in order to compensate for its inaccessibility to community and cultural centers, will seldom prove successful, especially if the sales appeal is to the low-income group.

983 (1). *Adequacy of Transportation.* It is necessary to determine the degree in which transportation facilities will meet the requirements and desires of the prospective purchasers of homes in the new area and compare the standing of the area to competing areas. In a development for the low-income group, an increase of a few cents in the cost of transportation may seriously affect the marketability of otherwise desirable properties. Reliance upon private automobiles alone cannot be considered adequate transportation for any except the higher income groups, and even in these groups suitable public transportation facilities greatly increase the desirability of the area.

983 (2). At times, transportation facilities to outlying new areas will be planned, though not installed. In such instances a low rating is required until the transportation is physically present. A rejection is indicated unless adequate facilities are definitely assured even though planned and anticipated.

984 (1). *Sufficiency of Utilities and Conveniences.* In all cases there must be appropriate and necessary utilities and street improvements installed, or definite assurance given that such facilities will be furnished. Due to climate and local custom and

conditions, street improvements and utilities that might be considered satisfactory in one section of the country may be undesirable in another. No hard and fast rules can be drawn covering the type of improvements. However, the streets should be graded and properly surfaced.

984 (2). If the water is furnished by a private organization rather than from public mains, the financial standing of the water company should be carefully investigated. It has been a practice in some localities for developers to increase the water rates after all the lots have been sold, thereby forcing the lot owners to purchase the system at an exorbitant price. In many cases it is advisable to deed the lot owners an interest in the private water system with appropriate provisions for operation and maintenance. There must always be definite assurance of an adequate supply of pure water at reasonable cost.

984 (3). Water supply from wells is seldom satisfactory. The danger of pollution is always great. Little or no fire protection is provided, and the cost of the construction of the well and of installing the necessary pumping system is usually as great or greater than the per lot cost of water mains. With very few exceptions, and only when the lots are generous in size, and when the supply and purity of the water have been certified as satisfactory by the local or state health authorities, should water supply from individual wells be considered satisfactory, and only under exceptional circumstances should a high rating be given. In judging the adequacy of a water system, the size of the mains, assured supply, and pressure must be considered.

984 (4). There must be means of disposing of domestic sewage in a sanitary and unobjectionable manner which meets the approval of the local and state health authorities. If public sewer mains are not installed or readily available, approved individual septic tanks may be used. If the soil is heavy and the drainage is poor, septic tanks or cesspools may become a real hazard. If the cost of extending the city sewers is no greater per lot than the cost of a properly designed septic tank and tile disposal field, the extension of the sewer line is greatly to be preferred.

984 (5). An excellent gauge of the appropriateness and the quality of utilities and street improvements is the standards established for dedication and acceptance by the municipality. If the utilities and street improvements are dedicated to, and accepted by, the city, township or county, the responsibility for maintenance is transferred from the property owners and there is assurance that the construction is appropriate to the climate and needs.

985 (1). *Level of Taxes and Special Assessments.* The tax and assessment burden to which properties in an area are liable exerts a tremendous influence on the future of any residential area. In the case of an undeveloped area it will be necessary for the Valuator to determine what the approximate burden will be. He should ascertain whether the improvements are to be put in by the developer and included in the lot price, or whether their cost will be paid by yearly assessments. In either case, he should reduce this expense to a front-foot cost basis for purposes of comparison. In most communities complete street improvements and utilities range in cost from $7 to $15 per front foot. When the improvement costs are greatly in excess of these figures, heavy delinquencies in purchase contracts or in assessments may usually be expected. The cost of these improvements will not always decrease with the cost of the contemplated dwelling, since with small lots and increased density of population better traffic facilities are needed and larger sewer and water mains must be installed. Consequently, cases will frequently be found where the front-foot improvement costs for high priced homes is considerably less than the cost of such improvements for a low income group with small lots.

985 (2). In the case of a partially developed area, the Valuator should investigate the number of delinquencies in purchase contracts and in assessments. When a disproportionate number of owners are found to be in arrears, it should be considered a danger sign and he should govern the rating accordingly.

985 (3). Some State tax moratorium plans provide an excellent medium for recasting accumulative burdens from overdue tax and assessment payments. The security offered by such plans as well as the lowering of the taxes payable should be considered when encountered.

985 (4). If too expensive improvements are installed in an area or an uneconomical layout has been designed, the tax and assessment burden will prove heavy. The Valuator will compute the entire tax and assessment payment required for the typical property in any new area and will make his rating by comparing this payment with that required for typical properties in competing areas.

986 (1). *Appeal.* In rating the appeal of an undeveloped or other sparsely built area, the effect which the contemplated program of development will have on the attractiveness of the area will be considered together with existing conditions.

986 (2). In addition to the regular considerations under Appeal, special attention should be given to the following factors:

a. Have care and intelligence been used in planning the street and lot layout?

b. Has consideration been given to the topography and to natural features?

c. Have efforts been made to save the trees and to beautify the landscape?

d. Does sponsorship contribute to appeal?

SUMMARY OF SIGNIFICANT CONSIDERATIONS

987. The following classification summarizes the principal considerations involved in the rating of each feature of the Location category:

- Relative Economic Stability
  - Stability of Family Incomes
  - Sufficiency of Family Incomes
  - Social Characteristics of Neighborhood Occupants
  - Stage and Trend of Neighborhood Development
  - Probability of Forced Sales and Foreclosures
- Protection from Adverse Influences
  - Zoning
  - Restrictive Covenants
  - Natural Physical Protection
  - Surrounding Homogeneous Neighborhood
  - Quality of Neighboring Development
  - Ribbon Developments
  - Nuisances
- Freedom from Special Hazards
  - Topography
  - Subsidence
  - Earthquake, Tornado or Hurricane Hazard
  - Flood Hazard
  - Traffic Hazard
  - Fire and Explosion Hazards
  - Hazards to Health
- Adequacy of Civic, Social, and Commercial Centers
  - Quality and Accessibility of Schools
  - Quality and Accessibility of Shopping Centers and Amusements
  - Quality and Accessibility of Churches, Clubs, and Recreation Centers
- Adequacy of Transportation
  - Diversity of Available Services
  - Quality and Frequency of Services
  - Cost of Service
  - Distance from Location to Service
  - Time Required to Destinations
  - Condition of Streets and Roads

Sufficiency of Utilities and Conveniences
- Presence of Required Utilities
- Quality of Utilities
- Cost of Services

Level of Taxes and Special Assessments
- Relationship of Tax Burden with Competitive Locations
- Nature, Cost, and Duration of Special Assessments

Appeal
- Natural Physical Charm and Beauty of Location
- Geographical Position of Location
- Layout and Plan of Neighborhood
- Architectural Attractiveness of Buildings
- Social Attractiveness
- Nuisances

PART II

SECTION 10

RATING OF BORROWER

CONTENTS

PART II

SECTION 10

RATING OF BORROWER

GENERAL RATING INSTRUCTIONS

Rating of Borrower

	FEATURE	REJECT	1	2	3	4	5	RATING
Attitudes	Social and Economic Characteristics		3	6	9	12	15	
	Motivation in Relation to Transaction		5	10	15	20	25	
Ability to Pay	Employability and Earning Stability		4	8	12	16	20	
	Relation of Obligations to Transaction		3	6	9	12	15	
	Relation of Income to Transaction		5	10	15	20	25	
	TOTAL RATING OF BORROWER							

1001. The following instructions apply to all cases in which the borrower is an individual except those individuals and partnerships engaged in the production of new dwellings for sale, the sale of existing dwellings, or otherwise conducting the business of real estate. The rating grid for the Rating of Borrower appears on the Report of Mortgage Risk Examiner (Individual Borrower), FHA Form No. 2016, and contains five features. It is illustrated above.

1002. Rating of Borrower shall be accomplished by rating separately each of five features. The five features have been weighted on a scale of 100 points in order to retain the relative importance of each when all are combined to obtain the Total Rating of Borrower. Each feature is marked on a scale from *1* to *5*, *5* being the highest rating. After analysis of the factors comprising a feature, an X mark is placed in the column which is determined to reflect the degree of risk involved. If the X mark is placed in any column other than the Reject column the figure appearing in the marked square is carried over to the extreme right hand column of the grid. If the X mark is placed in the Reject column, the word "Reject" is carried over to the extreme right hand column of the grid. One such rating in any feature will necessitate a recommendation for rejection of the application for insurance. When the word "Reject" appears in the Rating column, it must also be written in that column on the Total Rating line. If no such rating appears after any of the features, the final rating of the category is obtained by adding the figures in the Rating column. The system is so designed that this figure will be an indication of the rating on a numerical basis.

1003. Mortgage risk is vitally affected by the borrower. In recognition of this fact, the National Housing Act requires that a mortgage, to be eligible for insurance, must "contain complete amortization provisions . . . requiring periodic payments by the mortgagor not in excess of his reasonable ability to pay as determined by the Administrator." Therefore, analysis of all credit factors is a necessary part of the risk rating system. This is interpreted to mean that the practice of attempting to make acceptable an otherwise ineligible note or bond by requiring co-signers and co-makers, not closely related to the borrower, is to be discouraged. Furthermore, the quality and value of real estate security cannot compensate to any great degree for the lack of a satisfactory borrower.

1004. Complete information on the borrower must be assembled. In making the Rating of Borrower, the Mortgage Risk Examiner may have the following data available:

a. The Mortgagors' Statement accompanying the Mortgagee's Application for Insurance
b. Experience of mortgage lending institutions that have held, or are holding, mortgages on properties owned by the borrower, including the property described in the application
c. Remarks in the Report of Valuator
d. Results of inquiry directed to references
e. Factual Data Reports on the borrower from credit reporting agencies
f. Commercial Report from a commercial agency on employers and corporations, partnerships, or individual enterprises from which the borrower derives a substantial portion of his income
g. Other pertinent information

1005. If it is deemed advisable to direct inquiry to any reference, definite information should be requested with the understanding that the information will be held strictly confidential. Definite questions should be asked in an attempt to clear up apparent discrepancies that may have appeared in information already obtained. This may be accomplished by letter or otherwise. Form letters are provided for use in making typical inquiries and shall be used where applicable. Verbal information shall be reduced to written form and recorded with other accumulated factual data.

1006. The procedure used to secure Factual Data Reports from credit reporting agencies is described in Section 2, Underwriting Procedures. The Chief Mortgage Risk Examiner has authority, in all cases in which he considers it necessary or advisable, to obtain Factual Data Reports from any credit reporting agency approved by the Underwriting Division, Washington, D. C., and assigned to service the Insuring Office. A standard form of report is used. Commercial credit reports from an approved agency are also available to all Insuring Offices.

1007. The information in the Mortgagors' Statement should be compared with information from all other sources. Particular attention should be given to checking the reported income, related responsibilities, and the outstanding obligations of the borrower. Should any serious discrepancy appear in the information derived from the various sources, it must be explained or reconciled before the Rating of Borrower is completed.

1008. The rating of the borrower is neither a mechanical compilation of facts and figures, a perfunctory analysis, nor an expression of a casual conclusion or judgment. It involves careful study. A very definite responsibility rests on the Mortgage Risk Examiner not to draw hasty or poorly supported conclusions. The information which he uses must come from reliable sources and should be complete. He must always be careful to see that his decisions are well founded and do justice to borrowers as well as to the Federal Housing Administration. Cases in which the borrowers' characteristics, circumstances, and prospects are such that insurance of their mortgages should be declined shall be handled with certainty and decisiveness.

1009. The five features and their weights are as follows:

a. Social and Economic Characteristics	15
b. Motivation in Relation to Transaction	25
c. Employability and Earning Stability	20
d. Relation of Obligations to Transaction	15
e. Relation of Income to Transaction	25

1010. The five features are classified into two groups according to the point of view used in rating them. The two groups are "Attitudes" and "Ability to Pay." The first two features, Social and Economic Characteristics and Motivation in Relation to Transaction, are considered from the point of view of Attitudes. The word "Attitudes" is placed in the extreme left margin space on the grid to remind the Mortgage Risk Examiner to consider these features in terms of Attitudes. The other three features, Employability and Earning Stability, Relation of Obligations to Transaction, and Relation of Income to Transaction, are considered from the point of view of Ability to Pay. The words "Ability to Pay" are placed in the extreme left margin space on the grid to remind the Mortgage Risk Examiner to consider these features in terms of Ability to Pay. The first feature, Social and Economic Characteristics, reflects the inherent attitudes of the borrower. The second feature, Motivation in Relation to Transaction, reflects the relationship of the borrower's attitudes to the mortgage transaction. The third feature, Employability and Earning Stability, reflects the degree to which the borrower is able to establish and maintain income. The fourth feature, Relation of Obligations to Transaction, reflects the characteristics of the borrower's obligations in relation to the contemplated mortgage obligation. The fifth feature, Relation of Income to Transaction, reflects the anticipated relationship between the borrower's financial prospects and the mortgage transaction.

SOCIAL AND ECONOMIC CHARACTERISTICS

1011. The rating of this feature is based upon an analysis of the borrower in his social and economic relationships, independent of the mortgage transaction, and is determined by analyzing factors such as character, family life and relationships, associates, maturity, attitude toward obligations, and ability to manage affairs.

1012. *Character.* Character is defined as the sum of the traits and habits that constitute a person's mental and moral being. Although the elements of character in their fullest significance are too deeply rooted to distinguish with complete accuracy, it is reasonable and practicable to assume that in most cases a borrower's character is evidenced in the reputation he has established. A borrower's reputation over a considerable period of time is usually indicative of his thoughts, actions, and degree of moral stability. His habits and conduct are generally a good indication of his moral standards and ethical principles. Reliance cannot be placed upon character until complete and definite information on reputation has been secured.

1013. *Family Life and Relationships.* The borrower's immediate family life and relationships usually denote the degree of his general stability. Harmonious home life is a significant factor in the desire for maintaining a home. The family that pursues the accepted moral and economically sound courses in its everyday life presents the best mortgage risk. Disregard of moral responsibilities and failure to guard against excessive expenditures endanger family unity. The presence of discord discourages the assumption of continuing responsibilities. Unsatisfactory domestic relationships should be readily discernible because they are usually facts of general knowledge.

1014. *Associates.* The characteristics of a borrower are also indicated by the type of persons with whom he associates. Individuals who have interests, habits, and ethical codes in common usually associate with each other. This makes it possible to draw certain conclusions by obtaining information regarding the people with whom the borrower constantly associates. It is probable, in most cases, that more significant information is obtained by considering the character and type of people with whom the borrower associates socially, rather than those with whom he is associated in business activities. However, the latter group must not be ignored. The important consideration is the type of people who are voluntarily selected as associates, rather than those with whom the borrower is thrown into association by circumstances other than choice. The highest rating could hardly be ascribed in cases where the borrower's chosen associates are other than substantial, law abiding, sober-acting, sane-thinking people of acceptable ethical standards.

1015. *Maturity.* Consideration should be given to the borrower's maturity, for the reason that maturity contributes to stability. It is not implied that a young borrower necessarily lacks stability of character or purpose, but age should lend maturity of judgment to a borrower. Distinction should be made between borrowers with established characteristics and borrowers whose characteristics remain to be established.

1016. *Attitude toward Obligations.* This important factor reflects the borrower's performance with respect to the payment of his financial obligations. A review of the borrower's past record in the discharge of such obligations will be a clue to his future attitude in the assumption and payment of obligations. The borrower's paying record may indicate that he attaches varying degrees of importance to different types of obligations. Such an attitude does not depict a full sense of responsibility. The borrower with the best attitude not only attaches importance to the payment of debts incurred for merchandise or services for which there is recurring necessity, but also to the liquidation of debts incurred for merchandise or services for which there is only an intermittent need or desire. With regard to mortgage loans, it is usually found that borrowers with domestic responsibilities are more dependable than those without such responsibilities. The borrower's attitude toward his obligations is duly influenced by the degree of cooperation that he receives from the members of his immediate family.

1017. The condition of the borrower's obligations is an indication of his attitude toward them. Past litigations should disclose his control over, and the degree of his adherence to his contractual obligations. A lack of management in his affairs may have resulted in suits, judgments, or even bankruptcy. Such a situation may divulge an improper attitude of the borrower, or may reveal mitigating circumstances by reason of forces beyond his control. The attitude of the borrower should be not only one of willingness but also of eagerness to comply with any agreement or contract to which he is a party in order to warrant the highest rating of this feature. While other social and economic characteristics of the borrower may contribute to a high rating of this feature, the rating will be lower in proportion to the degree of irregularity with which he meets his obligations. The borrower's attitude toward his obligations may be sufficiently careless or irresponsible to warrant a reject rating of this feature.

1018. *Ability to Manage Affairs.* This factor requires an analysis of the borrower's characteristics with respect to his attitude in the control of his affairs, particularly those with an economic significance. The borrower with a sense of balance will guard against assuming responsibilities that do not enhance his own or his family's opportunities with a full measure of compensation. He will also maintain a position that will permit some adjustment or adaptation to unforseen exigencies. He will save, plan, budget his income, and govern his conduct in other activities in a manner that will allow him to adjust, adapt, or arrange his affairs.

MOTIVATION IN RELATION TO TRANSACTION

1019. The rating of this feature is based upon the analysis of the motives which prompt the borrower to enter into the mortgage transaction and is determined by analyzing factors such as cash investment, motives for borrowing, and importance of the property to the borrower.

1020. *Cash Investment.* Cash investment is the amount represented by the difference between the purchase price of the property and all encumbrances secured by such property. Cash investment is a directly contributing element to motivation. Experience has shown that a man will make strenuous effort to preserve the asset in proportion to the amount of cash invested in the property. The greater the cash investment, the greater is the incentive that motivates the borrower to faithful performance in the transaction. The cash investment should be sufficient to indicate that the borrower will have a continuing motive to keep the mortgage in good standing until maturity. Therefore, it shall be determined that the borrower is in a position, in addition to undertaking the mortgage obligation, to establish a bona fide cash investment in order to create and encourage an attitude toward the mortgage obligation which will justify the presumption that he will make every effort to discharge the debt.

1021. The minimum requirements for cash investment or its equivalent are contained in Section 5, Minimum Eligibility Requirements. Although the cash investment eligibility requirement applies only to transactions in connection with recent purchases, it is a fact that the greater the cash investment, the greater is the motivating influence throughout the life of the loan.

1022. The cash investment requirement is not a minimum eligibility requirement when the borrower is (a) placing a mortgage on property owned continuously for a period of time sufficiently long to establish the fact that the proposed mortgage is not a part of the purchase consideration, (b) refunding a mortgage on such property, or (c) placing or refunding a mortgage on property acquired by outright gift, inheritance, or bequest.

1023. Cash investment may be represented by equivalents in the form of commodities, investments, chattels, labor, or services. The equivalent value of commodities, investments and chattels should be determined by the cost or market value of the equity therein, whichever is the lesser amount. The equivalent value of labor or services should be determined at prevailing rates. Cases involving the equivalent of cash investment require the most careful investigation to ascertain the validity of such representation.

1024. In cases of repossession of title, the equity that may have been established prior to foreclosure shall be deemed as lost and shall not be accepted in lieu of the required cash investment or portion thereof, but shall be subjected to the cash investment requirement as previously outlined with respect to initial purchases.

1025. In rating this feature, it is necessary to take into consideration the presence and amount of cash investment. This feature, as influenced by this factor, should reflect a more favorable rating as the invested equity is in greater amount. Where the borrower is unable or unwilling to make a cash investment sufficient for economic soundness the case shall be rejected under this feature. In every case, the required cash investment must equal or exceed the minimum requirement prescribed in Section 5, Minimum Eligibility Requirements.

1026. *Motives for Borrowing.* Where the proceeds of the mortgage will be soundly used, it may be presumed that the borrower will maintain a better attitude toward the obligation than he would if the proceeds are used unsoundly. Generally, the refinancing of existing liens, the purchase of a home, or the financing of desirable property improvements may be regarded as sound motives. The refunding of obligations, prudently incurred, is also a sound motive. On the other hand, use of the proceeds for speculation, pleasure trips, or other purposes which gratify transitory desires, may generally be regarded as unsound motives.

1027. The basis of the analysis is not the precise use of the loan proceeds but, rather, the justification for the proposed use. Thus, indebtedness incurred for business, travel, or education may or may not evidence prudent judgment. The underlying circumstances should be regarded in the light of their effect on motivation in the mortgage transaction. Generally, mortgage loans made because of illness, debts, or unemployment are economically unsound. There may be conditions, however, that obviate this general rule. For instance, an illness in the family may entail an appreciable outlay of funds beyond the borrower's immediate ability to meet, but not beyond his ability to meet over an extended period of time. Again, while the use of mortgage proceeds for the purchase of a home is generally sound, the allocation of funds to such purpose is unsound if the home is excessively priced, cheaply constructed, poorly located, or too costly in relation to income.

1028. The application frequently reveals the intended use of the proceeds of the loan. Where this information is not revealed, a reasonable attempt should be made to ascertain the intended use of the money.

1029. *Importance of Property to Borrower.* This factor indicates the degree of the sacrifice the borrower will make in order to retain the property. The borrower's motivation in this respect should be analyzed from the aspects of owner occupancy, of an investment, and of speculation. Motives of a borrower who occupies the property are more significant than the motives of an investor, and still more so than the motives of a speculator.

1030. The importance of the property to the owner occupant is significant in many phases. Foremost in this respect is the fact that most borrowers will subject themselves to more sacrifices in the maintenance of a home than in any other obligation. A home is an investment that involves more than dollars and cents. It has sentimental attachments that cannot be entirely measured with money. Such attachments are too numerous to mention completely but, for illustration, the property may be the family homestead. It may be the property representing the borrower's first investment. The architecture and design may have a particular appeal. The advantages offered in the location of the property may include historical significance, early associations, proximity of relatives or friends, desirable social environment, or accessibility to daily necessities and conveniences.

1031. The borrower derives a measure of prestige from home ownership that often enhances his position or that of his family in the business and social worlds.

1032. The borrower who acquires property for occupancy in a location inhabited by a class or race of people that may impair his interest in the property—and thereby affect his motivation—should be ascribed a lower rating in this feature to reflect the diminishing importance of the property to the borrower. Diminishing importance from this source may reduce motivation to a degree justifying rejection of the borrower in this feature. A borrower who has continued to live under similar conditions may not be subject to as great a penalty in the rating of this feature, because some motivation may be evidenced.

1033. The advantages or disadvantages presented by a comparison between the expenses incident to home ownership and the cost of rent for similar accommodations are another element in the consideration of this factor. A borrower may be inclined to strain his ability to meet the expenses attendant with home ownership to a greater degree than he would in paying rent for comparable quarters. However, there is an expense limit for him beyond which the importance of the property will diminish.

1034. The same concepts as outlined in the preceding paragraph are the governing considerations of the importance of the property to the borrower in the comparison of price and value. A property purchased at a "bargain" price creates free equity for the purchaser. It is natural that equity acquired without cash outlay lends an additional interest to the borrower in the property. The trend of increased value will likewise reflect greater importance to the borrower.

1035. A distinction should be made between full time and part time occupancy in analyzing the degree of importance the property holds for the borrower. It is reasonable to presuppose that the borrower will attach more importance and undergo greater sacrifice for a home used as a permanent residence than he will for a temporary shelter used only during certain periods of the year. The permanent home is essentially a necessity, while the seasonal or part time residence would be relinquished if both dwellings became too great a financial burden to the borrower.

1036. A borrower who owns a property as an investment to be tenanted by someone other than himself will attach importance to it only so long as it affords or promises to afford him a net return. The borrower's position should be carefully analyzed in order to determine from his annual income whether he can afford to own the property and whether the contemplated mortgage obligation will absorb his income to an extent that will adversely affect his motivation.

1037. There will be occasions when the borrower applies for a mortgage loan on a property primarily intended for sale. The borrower may even reside in the property but such occupancy does not have the same elements of motivation attendant with permanent occupancy. His motive will be greatly influenced by marketing possibilities and trend of value.

EMPLOYABILITY AND EARNING STABILITY

1038. The rating of this feature is based upon an analysis of the borrower's ability to establish and maintain stability of income. Emphasis is placed on the future continuity of income and not on the amount of his income. It is rated by analyzing factors such as versatility, personality, employment, occupational impairment, reemployment possibilities, reserves and contributions, age, and health.

1039. *Versatility.* This factor requires an analysis of the attributes that qualify the borrower for employment. Versatility is a desirable quality. A degree of versatility in a borrower may be developed by education and training. It may enhance and enlarge his opportunities, because it enables him to compete on more favorable terms, not only in his own line of work but in other fields of endeavor. A certain measure of versatility may be necessary in borrowers whose line of employment evidences the hazards of occupational impairment or indicates a decline through declining economic necessity. A borrower may have little or no education and still qualify for employment, but education or training usually lends greater assurance of employment, and a higher education or training develops greater adaptability of his talents to the possibilities for advancement.

1040. Knowledge derived from either education or training, or both, when practicably applied, is an essential contribution to earning stability. The borrower must be able to adapt himself to the opportunities for which his education and training have fitted him in order to apply his knowledge to its best use. This does not mean that the borrower must necessarily have an advanced education to qualify as proficient in his chosen line of endeavor, or in any other work in which he evidences inherent aptitude.

1041. *Personality.* A borrower's ability to become and remain employed is in a measure dependent upon his personality. Personality is reflected in the borrower's poise, speech, tact, appearance, courtesy, sincerity, and alertness. These are the qualities that make for agreeable association between employer and employee, and enhance the borrower's potentialities for continued employment and promotion.

1042. *Employment.* An analysis of this factor is imperative in order to estimate, with the greatest possible accuracy, the borrower's earning stability. A borrower's earning ability depends upon the exercise of his mental faculties, the use of his hands, the employment of his funds, or a combination of these mediums. It is necessary to study the borrower's past employment record because it will indicate his probable future performance. This record will disclose, through experience and evidences of advancement or retrogression, the extent of the ambitions, application, and steadiness which, when translated into earnings, reveal the degree of regularity of income and earning stability. It will divulge his natural ability and the likelihood of his progress and advancement with his present employer. The future possibilities of the borrower with his employer involve two considerations. The first deals with the inherent potentialities of the borrower for advancement, and the second relates to the stability of the employer. Even though a borrower possesses a full measure of natural ability, his employer's progress may not be sufficiently satisfactory to indicate a continued need for the borrower's services, or to offer opportunities for advancement to the borrower.

1043. *Occupational Impairment.* There are types of employment which present hazards to the borrower's earning stability. Such types include (*a*) artistic careers subject to rapid decline in popular favor, (*b*) occupations in which skill or facility becomes gradually impaired, (*c*) lines of endeavor in which gradual occupational impairment results from the occupation itself, and (*d*) occupations in which greater than the normal probabilities of accidental disability are apparent. In analyzing this factor, major consideration must be given to the *probable* rather than the possible development of the impairment to employment continuity.

1044. *Reemployment possibilities.* The demand for the borrower's services and his ability to compete with others employed in similar lines of endeavor, or other lines in which he shows sufficient aptitude to receive adequate compensation, are direct measurements of mortgage risk. Two borrowers of similar ages and incomes may be totally unlike in temperament and pursuits, thereby constituting entirely different mortgage risks. The one may seek and know how to grasp opportunities and advantages, while the other is content with his situation. Furthermore, the one may be following a vocation for which a reasonable future need can be anticipated. The other may be trained in highly specialized duties in a limited field where it would be difficult for him to obtain employment if, for any reason, his present position should terminate.

1045. This factor also has particular significance in cases where the borrower is engaged in employment of a temporary nature. Temporary employment may be that in which the employer's purpose or his use of the borrower's services are limited as to duration of time. In such cases, however, due recognition shall be given to the borrower's versatility and consequent ability to turn his efforts to similar or other lines of employment which have aspects of permanence.

1046. *Reserves and Contributions.* Income can also be derived from the employment of reserve funds which the borrower has accumulated. In analyzing this factor, principal consideration should be directed to the reserves which produce income, because it is the production of income that contributes to the borrower's eligibility with respect to his ability to pay. The sources and soundness of such reserves are subject to the same careful analysis as income derived from other sources. Net income derived from other assets against which there are fixed charges shall be considered unstable in comparison with income derived from comparable assets which are in the form of fixed investments, such as unpledged bonds or mortgages. The analysis of assets assumes major importance in cases where assets must furnish income, in whole or in part, for the liquidation of obligations. In such cases these assets shall be analyzed as to their degree of stability, amount, and liquidity. The presence of reserves does not necessarily result in a high rating of this feature, nor does their absence necessarily cause a low rating.

1047. A borrower's earning stability may be supplemented by contributions. They are subject to the same analyses as other types of income, and their soundness must be considered in connection with earning stability. Unless contributions evidence reasonable continuity, they cannot be regarded as any part of the borrower's earnings.

1048. *Age.* Age is significant in rating this feature only to the degree that it has affected or will probably affect the borrower's employability and consequent earning stability. While the young borrower may not have established evidence of complete training and experience during his initial period of employment, youth may be regarded as an asset rather than a liability. A borrower in advanced years, however, may have passed the height of his proficiency to the extent that the demand for his services has diminished. Such cases would not necessarily constitute a reject rating, but they should not receive the highest rating unless the borrower, through the employability of funds, has sufficient earning stability.

1049. *Health.* The health of the borrower is significant only in so far as it will affect the borrower's future employment. A temporary illness or minor disability may not threaten his employment sufficiently to reflect in the rating. However, a borrower whose employability has been interrupted by a grave illness might justify a reject rating of this feature unless satisfactory evidence of his return to good health is submitted.

RELATION OF OBLIGATIONS TO TRANSACTION

1050. The rating of this feature is based upon an analysis of the characteristics of the borrower's obligations and their relation to the contemplated mortgage transaction, and is determined by analyzing factors such as nature of obligations and effect of obligations on financial capacity. The rating of this feature will be low where other ascertained obligations will precede the proposed mortgage payments in the family budget. On the other hand, if the proposed mortgage payments will be accompanied in the budget only by the bare necessities of food and clothing, the rating will be high. Where the mortgage payments do not exceed rent payments which the mortgagor would be forced to pay for ordinary shelter, the rating shall reflect the relatively favorable position of the mortgage payments.

1051. *Nature of Obligations.* This factor requires an analysis of the nature of the borrower's obligations, to determine their relative significance without undue emphasis on financial amounts. For purposes of analysis, a borrower's obligations may be classified as those pertaining to his family and those not directly connected with family matters. These obligations comprise those already incurred and those that may recur or be continued into the future. In order to determine their relative significance, the nature of the obligations shall be analyzed in detail.

1052. The principal obligations of any borrower are those attendant with family responsibilities, and these obligations shall be analyzed in the light of the necessities and other benefits which the borrower and his family require to maintain their standard of living. Obligations for necessities should be considered in the light of the costs involved in maintaining a required standard of living. For example, an automobile may be considered a necessity for one man, and more or less a luxury for another. Likewise, an obligation involved in the purchase and maintenance of an automobile may or may not be considered an obligation arising from purchase and ownership of a necessity. For example, if the automobile is classified as a luxury, it may be reasonable to assume that the automobile will be sacrificed when conditions demand. This assumption should be considered in relation to the social and economic characteristics of the borrower. Cognizance shall be taken of the judgment the borrower exercises in determining the economic benefits derived from his expenditures. It is quite natural that the typical borrower will incur obligations through home ownership because of increased desires attributable to his pride of ownership. However, such obligations should always bear a relative measure of compensation and encourage the maintenance of an adjustable balance in his economic situation. Because of unpredictable circumstances, the future obligations incident to the borrower's family are not at any time readily determinable. However, conditions surrounding the borrower, by virtue of his environment and ambitions, permit reasonable inference as to their probable course in the future. This likewise holds true with respect to obligations that do not pertain directly to the family. The very nature of these obligations should permit an analysis of the possibilities of fluctuations. Certain obligations may be easily determined to be of a temporary nature, or to hold probabilities of continuance or recurrence in a greater or lesser degree. A borrower who evidences sufficient initiative to adapt his budget of expenditures to meet his necessities is deserving of a high rating in this feature.

1053. The Administrative Rules require that the borrower must establish that after the mortgage offered for insurance has been recorded, the mortgaged property will be free and clear of all liens other than such mortgage, and that there will not be outstanding any other unpaid obligation contracted in connection with the mortgage transaction or the purchase of the mortgaged property, except obligations which are secured by property or collateral owned by the borrower independently of the mortgaged property. Violations of this rule require reject ratings of this feature.

1054. When the purchase price of the property involved in the mortgage transaction exceeds the value, the cash investment required will exceed the real equity. The excessive purchase price in such an instance will usually require a larger cash investment than anticipated by the borrower and particular attention should be directed to any probable secondary indebtedness contracted, or likely to be contracted, in connection with the acquisition of the property covered by the contemplated mortgage. If the larger cash investment requires the assumption of an additional obligation incurred by a loan based on collateral owned by the borrower independently of the mortgaged property, such a loan shall require an analysis embodying not only the nature and effect of the obligation, but also the quality of the pledged collateral. If the Mortgagors' Statement indicates that the transaction cannot be closed without violation of the Administrative Rule, the subject application shall be rejected under this feature.

1055. Continuing obligations of a contingent nature should be analyzed as to the probabilities of their remaining remote or becoming actual liabilities. While it is the responsibility of the Mortgage Risk Examiner to avoid the acceptance of borrowers whose contingent liability will probably cause default, it is not to be presumed that all contingent liabilities necessarily will become direct liabilities.

1056. It may be presumed that the borrower will adjust his accustomed standards of living to a reasonable extent, and thereby correspondingly reduce his expenses. However, such adjustments will have their limitations because of the average man's inclination to raise, rather than lower his scale of living. The analysis should reveal the degree of sacrifice and subordination that the borrower, if necessary, will make to maintain the contemplated mortgage obligation in good standing.

1057. *Effect of Obligations on Capacity.* This factor requires an analysis of the effect of the borrower's obligations—analyzed as to their nature and amounts—on his earning capacity and stability and, therefore, on the transaction. Obligations incurred for the purpose of acquiring income-producing or income-increasing assets indicate a more favorable condition than obligations incurred solely for transitory purposes. The character and certainty of the income produced or increased affect the rating. Furthermore, provisions made for the retirement of such obligations is one indication of the effect of the obligation on capacity. An incidental consideration is involved in the question of whether the borrower received full value in the form of a sound asset for which he created the obligation.

RELATION OF INCOME TO TRANSACTION

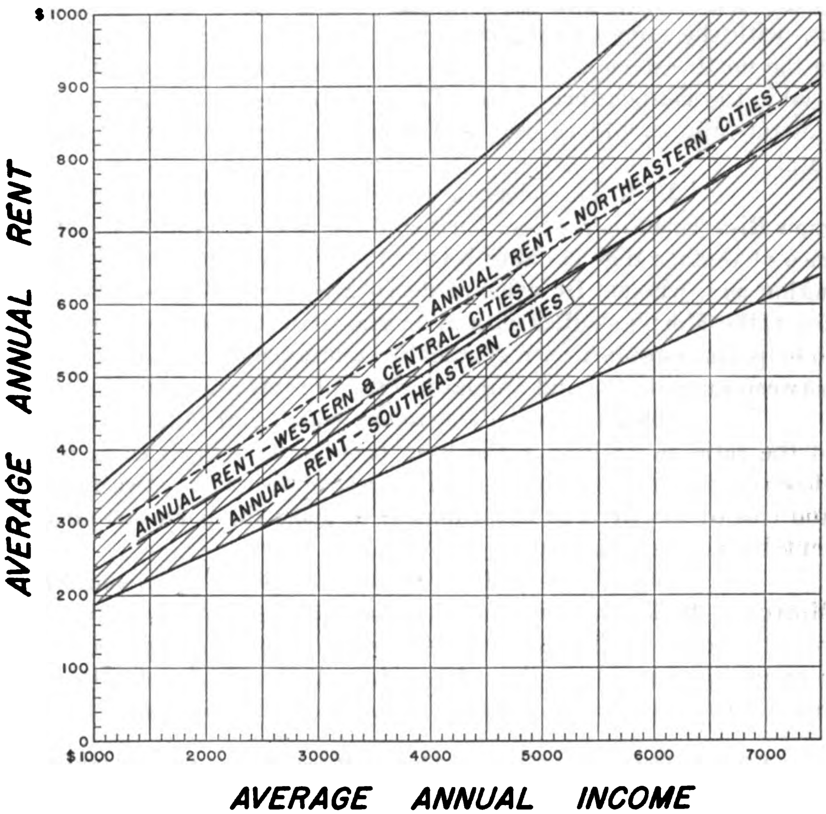
1058. The rating of this feature is based upon an analysis of the ability of the borrower's income to pay the contemplated mortgage obligation. Analysis shall include consideration of such factors as ratio of property value to annual income, and ratio of total monthly payment to income. These ratios shall be considered in the light of the conclusions already formed when rating the features, Employability and Earning Stability and Relation of Obligations to Transaction.

1059. *Ratio of Property Value to Annual Income.* The maximum value of residential property which the borrower can reasonably afford to own or purchase with his annual income shall be determined. If the value of the owned or purchased property is not properly related to the borrower's income, a substantial risk is involved in the making of a mortgage loan to him. In such a case, a reject rating of this feature will be warranted. Because the most favorable ratio of property value to annual income in one case may be substantially different from the most favorable ratio in another case, its influence on the rating of this feature cannot be ascertained mechanically. Such rules as the one that a man should not undertake to purchase a property when the value exceeds two or two and one-half times his yearly income, cannot be applied blindly. An excessive ratio usually forces upon the borrower a standard of living out of proportion to his annual income. Further consideration must be given to the expense of owning and maintaining a larger and more expensive property than his earning capacity would ordinarily justify.

1060. *Ratio of Total Monthly Payment to Income.* This ratio reveals the degree to which the monthly mortgage payment absorbs monthly income, and therefore reveals the proportion of that income available for other living expenses and obligations. In turn, consideration is given to other living expenses and obligations, such as number of children and other dependents, the borrower's scale of living, cost of home maintenance, and payments required by other obligations. In general, the more burdensome ratios result in lower ratings.

1061. As in the factor, Ratio of Property Value to Annual Income, no definite zone limits can be prescribed within which the ratio of total monthly payment to income must fall. The influence it will have on determining the rating of this feature cannot be ascertained mechanically. Examples cited in the following paragraphs must not be interpreted as prescribing positive rules for the making of ratings, for they are intended to serve merely as guides in rating this feature. It is obvious that a favorable ratio between monthly mortgage obligation and income for one borrower may be an unfavorable ratio for another. Although the two borrowers may have the same amount of monthly incomes and monthly mortgage obligations, a lower feature rating may result in one case than in the other because of a wide difference in the nature of their family responsibilities and other obligations.

1062. Generally speaking, as family incomes are found to be in lower brackets, progressively higher percentages of the family income will be devoted to paying for the cost of shelter, but the actual amounts in dollars and cents would be correspondingly lower. This is a fact which must be carefully considered in each individual case in order to determine accurately how much the borrower can afford to pay monthly on the mortgage obligation in his circumstances and with his financial resources. If, in the judgment of the Mortgage Risk Examiner, the monthly payment will not allow a sufficient remainder of income for other necessities and responsibilities, it will be obvious that the borrower is attempting to maintain or purchase a property that is too expensive for him and not within his ability to pay. In such a case, a reject rating of this feature is warranted.



1063. The accompanying chart, which shows the average annual rent paid at a given annual income, has been computed from data obtained throughout the United States by the Division of Economics and Statistics of the Federal Housing Administration. The shaded space between the upper and lower lines drawn across the face of the chart shows the range of annual average rent paid at a given income by the individuals included in the investigations. Across the shaded space a line desiganted "Northeastern Cities", another line designated "Western and Central Cities", and still another line designated "Southeastern Cities" show the mean, or average, annual rent paid at a given income by families in the several areas. Thus a wage earner with an income of $2,500 a year pays, typically, an annual rent in the range between $295 and $545. The average rent paid by families with the same earning capacity was estimated to be about $425 in the northeastern cities, $380 in the western and central cities, and $360 in the southeastern cities. These averages are the most frequent amounts and should be used as the principal guide in applying the data.

1064. This chart is to be used as a guide by the Mortgage Risk Examiner whose further duty is to determine the difference of rental range existing between local areas and the region and nation as a whole. In order to derive the greatest benefit from the chart, the Mortgage Risk Examiner should use it as a starting point to help him establish with reasonable assurance the prevailing ratios between annual rent and annual income in local communities.

1065. Cases will be found which fall outside the range of the ratio prevailing in the local community. Such cases require close scrutiny in order to ascertain whether the ratio between income and cost of shelter is so hazardous as to make the borrower an unacceptable risk for insurance.

1066. This feature reflects the final judgment of the Mortgage Risk Examiner in determining the ability of the borrower's income to discharge the mortgage obligation, and shall reflect a rating comparable to the relationships that exist between the borrower's available income and the mortgage transaction.

CO-MAKERS, CO-SIGNERS, ENDORSERS, AND GUARANTORS

1067. In some cases the title of the real property involved will be vested in several individuals. In such instances it is necessary for all the parties owning an interest in the real property to execute the note, bond, or other evidence of debt. In cases of this nature, all such parties shall be considered separately, but rated as one borrower.

1068. Except in remote instances of unusual merit as determined by the Mortgage Risk Examiner, acceptance of co-makers, co-signers, endorsers, and guarantors other than those closely related to the borrower shall be discouraged. The eligibility of a mortgage loan may rest to a degree upon the motives, financial responsibilities, and interests of co-makers, co-signers, endorsers, or guarantors who do not have a title interest in the real estate involved in the application for mortgage insurance in the following cases:

a. Where property is in the name of either the husband or wife, but not both, and both sign the credit instrument, their joint income and credit character shall be considered in the rating of the borrower. This would not be true, however, if the husband or wife were legally separated.

b. Where a son or daughter of legal age signs the credit instrument with the parent or parents, weight may be given to the amount of income such a son or daughter can and will contribute. At the discretion of the Mortgage Risk Examiner, this will also be permitted in cases involving close relatives where it is assured that their own interest in the obligation is sincere and dependable.

1069. Under no circumstances should co-makers, co-signers, endorsers, and guarantors be required to have a vested interest in the ownership of the mortgaged property when such requirements would compromise the probable dower right of a husband or wife, or jeopardize probable inheritances.

PART II

SECTION 11

RATING OF COMMERCIAL BORROWER

CONTENTS

Effective February, 1938
Federal Housing Administration

PART II

SECTION 11

RATING OF COMMERCIAL BORROWER

GENERAL RATING INSTRUCTIONS

Rating of Commercial Borrower

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TOTAL RATING OF COMMERCIAL BORROWER							

1101. The principles and procedure outlined herein are applicable to cases involving corporations regardless of type of business, and individuals or partnerships engaging in the production of new dwellings for sale, or in the sale of existing dwellings, or otherwise conducting the business of real estate. In this classification are operative builders, real estate developers and operators, mortgage lending institutions, and owners of real estate in quantity, as distinguished from individuals who hold properties for their own occupancy, or long term investment. References made to the commercial borrower will likewise apply to all corporate and individual operative builder borrowers. The rating grid for the Rating of Commercial Borrower appears on the Report of Mortgage Risk Examiner (Commercial Borrower), FHA Form No. 2016a, and contains four features. It is illustrated above.

1102. Rating of Commercial Borrower shall be accomplished by rating separately each of four features. The four features have been weighted on a scale of 100 points in order to retain the relative importance of each when all are combined to obtain the Total Rating of Commercial Borrower. Each feature is marked on a scale from *1* to *5*, *5* being the highest rating. After analysis of the factors comprising a feature, an X mark is placed in the column which is determined to reflect the degree of risk involved. If the X mark is placed in any column other than Reject the figure appearing in the marked square is carried over to the extreme right hand column of the grid. If the X mark is placed in the Reject column, the word "Reject" is carried over to the extreme right hand column of the grid. One such rating in any feature will necessitate a recommendation for rejection of the application for insurance. When the word "Reject" appears in the Rating column, it must also be written in that column on the Total Rating line. If no such rating appears after any of the features, the final rating of the category is obtained by adding the figures in the Rating column. The system is so designed that this figure will be an indication of the rating on a numerical basis.

1103. Complete information on the commercial borrower must be assembled. In making the Rating of Commercial Borrower, the Mortgage Risk Examiner may have the following data available:

a. The borrower's latest balance sheet and operating statement attached to the Mortgagee's Application for Insurance
b. Experience of mortgage lending institutions that have held, or are holding mortgages on properties owned by the borrower, including the property described in the application
c. Remarks in the Report of Valuator
d. Results of inquiry directed to references
e. Mercantile commercial report on the business
f. Factual Data Reports on principals
g. Other pertinent data

1104. The Mortgage Risk Examiner may request the applicant or the approved mortgagee to furnish documents, statements, reports, articles of incorporation, by-laws, or other detailed information that will enable him to complete the rating. He should secure additional pertinent information from all available sources. The information secured may include an explanation or elaboration of items appearing in the financial statement, operating statement, statement of business experience, record and history of the corporation, list of officers and directors, and, particularly if the borrower is an operative builder, information relative to the technical knowledge and actual experience, executive ability, and general training of the individual or individuals comprising the management. Verbal information shall be reduced to written form and recorded with other accumulated factual data.

1105. The procedure used to secure credit reports from approved agencies is described in Section 2, Underwriting Procedures. The Chief Mortgage Risk Examiner has authority, in all cases in which he considers it necessary or advisable, to obtain commercial reports on the commercial borrower and parent or subsidiary corporations, and Factual Data Reports on the principals from credit reporting agencies approved by the Underwriting Division, Washington, D. C., and assigned to service the territory.

1106. The Rating of Commercial Borrower requires careful study of the responsibility and judgment of the principal owners and the experience, integrity, ability, and management of the business displayed by the officers. It must be recognized that the security and success of a concern is comparable to these same elements in the individuals controlling its ownership and operations.

1107. In rating a commercial borrower, corporations and individuals whose signatures appear as co-signers, endorsers, or guarantors of the note, bond, or other evidence of debt are considered separately for the purpose of determining sufficiency of financial ability. However, all parties to the obligation are rated as one borrower.

1108. To be considered and rated with the commercial borrower, it is not required that each individual whose signature appears as co-signer, endorser, or guarantor of the note, bond, or other evidence of debt, have a legal interest in the real property to be mortgaged. However, the Administrative Rules require that the signatures of all parties who hold the legal title shall appear as makers of such note, bond, or other evidence of debt.

1109. The features and their weights are as follows:

a. Organization and Competence of Management	15
b. Motivation in Relation to Transaction	20
c. Financial Condition	30
d. Prospective Earning Capacity and Stability	35

1110. The first feature, Organization and Competence of Management, requires a study of the anticipated probability of efficient management, based on evidences in the past record. The second feature, Motivation in Relation to Transaction, reflects the borrower's attitude toward the mortgage transaction. The third feature, Financial Condition, reflects an analysis of assets, liabilities, income and expenses. The fourth feature, Prospective Earning Capacity and Stability, requires a study of the borrower's financial prospects.

ORGANIZATION AND COMPETENCE OF MANAGEMENT

1111. The rating of this feature is based upon an analysis of the past performance of the commercial borrower in order to predict the probabilities in its future performance and is determined by analyzing factors such as organization and history, characteristics of principals, reputation, and attitude toward obligations.

1112. *Organization and History.* A review of the articles of incorporation and by-laws will disclose the purpose of operation, terms, and conditions under which the management has been conducting the affairs of the borrower. An analysis of the authorized, subscribed, and paid in capital will further reveal the financial advantages or handicaps under which the management has been operating. A knowledge of the period of time in active business may not be of essential importance in connection with ascertaining the degree of competence indicated by the present management. It is more important to know the period of time that the borrower has been operating under the present management. The longer the period of time, the greater will be the possibilities for accuracy in determining the degree of competence and success of the present management. In the case of a commercial borrower which has succeeded a private enterprise of the principals under the present management, investigation should cover the operations since the installation of the present management.

1113. *Characteristics of Principals.* This factor is of vital importance in the rating of this feature because the success or failure of a concern depends, in a large measure, on the individuals who control and manage its affairs. An analysis should be made of the social and economic characteristics of the majority owners, directors, and officers. A further consideration of analysis is the experience of the officers who participate in the active management of the business, since the degree to which operations have been successful in the past years will definitely reflect the influence of the individuals who have been managing its program.

1114. The majority owners in control of the funds are empowered with the regulation of activities through the management. They will, either directly or through representatives, dictate the policies and determine the allocation of profits. Their judgment will influence the course of the business enterprise. Therefore, an analysis of their business sagacity in the exercise of such power is of utmost importance. Major stockholders with long range judgment may sacrifice immediate personal gains in the interest of their corporate pursuits. If actively engaged in the business they should be thoroughly competent to manage it. If not actively engaged in the business, the degree of judgment exhibited in selecting a management for the business will be revealed by analysis. Imprudent principals have been known to transgress on the possibilities of good management by exhausting the assets of the business to a point where it does not possess adequate funds for normal transactions. Such practice may, in a very short time, result in insolvency. Many concerns fail to succeed because they are left to run themselves and, through lack of proper attention by the active principals, sound policies are ineffectively executed.

1115. Business concerns, in many instances, are dominated by one individual. This condition is very prevalent in the case of operative builders. In such instances the invested capital is derived principally from the individual's personal funds. The business policy is a reflection of his judgment and experience. The achievements of the concern are largely dependent upon his personal direction. In organizations of this type the significance of the principal's age cannot be ignored because of the uncertainty of succession. The life of the firm may depend extensively on the ability of the principal to give personal attention and financial support to the business.

1116. In an analysis of the operative builder borrower, consideration of his past record usually reveals the degree of ability, foresight, integrity, and progress that can be anticipated in future operations. As is the case in other fields of endeavor and enterprise, an operative builder's knowledge of his business, properly applied, will take him a long way in the right direction and should be a contributing influence for favorable consideration.

1117. *Reputation.* The security and success of a business are a reflection of the same elements in the individuals behind its ownership and management. Its reputation will be patterned largely after the personal reputations of its principals. Therefore, conclusions on the commercial reputation cannot be reached without a knowledge of the individual reputations maintained by its principals, particularly those in the management of its activities.

1118. *Attitude Toward Obligations.* An excellent indication for determining the commercial borrower's probable attitude toward the payment of the contemplated mortgage debt is its manner of executing contractual obligations with creditors. While this cannot be accepted as complete evidence in the determination of mortgage risk, it is a direct clue to the borrower's probable paying performance. Therefore, careful consideration should be given to the business record in discharging obligations. Does the company meet its accounts and notes payable according to terms, or is there evidence that its management assumes a careless attitude toward debts? Is the management argumentative and arbitrary in demanding discounts to which it is not justly entitled? Is it necessary for creditors to enter suit against the concern and reduce their accounts to judgments in order to secure payments of acknowledged indebtedness? Is dealing with the company a constant source of irritation and litigation? Has the concern ever voluntarily declared itself insolvent or been forced involuntarily through the bankruptcy courts by its creditors prior or subsequent to the assumption of its affairs by the present management? On the other hand, is it a desirable concern with which to do business?

1119. In cases where it is required that principals of the concern join with the commercial borrower as co-signer, endorser, or guarantor on the note, bond, or other evidence of debt of the mortgage obligation, a thorough analysis of the attitude such principals maintain toward their personal obligations shall be made.

1120. Competent management does not require that payments of obligations be made before the net due dates unless compensating discounts make such payments profitable. Therefore, the prompt payment of debts on the net due dates generally contributes to a favorable rating of this feature. Irrespective, however, of the borrower's desirability manifested in other factors of this feature, the rating of the feature will be lower in proportion to the delay with which the management meets obligations. The management's attitude may be sufficiently indifferent to justify a reject rating of this feature.

MOTIVATION IN RELATION TO TRANSACTION

1121. The rating of this feature is based upon an analysis of the motives which actuate the commercial borrower to enter into the mortgage transaction. This feature is rated by analyzing such factors as cash investment, motives for borrowing, and importance of the property to the borrower.

1122. *Cash Investment.* For the same reasons stated in Section 10, Rating of Borrower, the cash investment of the commercial borrower in the subject property is a contributing element to motivation. Cash investment applies with the same force to the commercial borrower as to the individual borrower. The minimum requirements for cash investment or its equivalent are contained in Section 5 of this Manual, Minimum Eligibility Requirements.

1123. *Motives for Borrowing.* The purposes for which the proceeds of the mortgage loan are to be used will also be a contributing element in determining the soundness of the borrower's motives. Generally, the refinancing of unpaid balances on existing liens, home development for the benefit of employees, property improvements, and initial financing to facilitate purchase or sale of homes may be regarded as sound motives. On the other hand, use of the proceeds for speculation, acquisition of permanent additional working capital, or discharge of unrelated business obligations may be regarded generally as unsound motives.

1124. Analysis of the proposed use of the proceeds of the transaction is made in the light of its effect on motivation. Frequently the motive of commercial borrowers, other than operative builders, is the development of homes for the benefit of employees. Behind this purpose are usually benefits which the employer will share, in part, with the employee. In general, the motives behind such transactions may be considered sound.

1125. The operative builder's principal purpose in securing a mortgage loan is, quite naturally, to facilitate the financing and sale of his merchandise. Therefore, his motivation to keep the loan in good standing is primarily the expectation of a profit and of the recovery of his cash investment in the mortgaged property.

1126. *Importance of Property to Borrower.* This factor indicates to what extent the commercial borrower will endure sacrifices in retaining the property. The borrower's motivation in this respect should be analyzed from the point of view of investment and speculation. In either case cognizance should be taken of the possibilities of profitable return. It is necessary to ascertain the importance that the commercial borrower attaches to the property offered as security. Has it been received reluctantly for the payment of a debt, or has it been acquired for a logical purpose? Does it promise profit in money or other benefits?

1127. Dwellings held or acquired for speculation have little importance to the commercial borrower other than the marketing possibilities for profit. Frequently, motivation to repay the mortgage debt diminishes when possibilities for profit disappear. This may not be true where the borrower is confining such sales to selected employees.

FINANCIAL CONDITION

1128. The rating of this feature is based upon an analysis of the source, character, amount, and distribution of funds and is determined by analyzing such factors as adequacy of operating funds, balance sheet, operating statement, and ability to discharge obligations.

1129. *Adequacy of Operating Funds.* A business must have capital in order to operate. At its inception the acquisition of capital is accomplished through the medium of capital stock subscriptions. The investment of the owners should be secured and protected by adequate assets. In the normal course of active enterprise liabilities are incurred. Therefore, the availability of adequate operating or working funds is necessary to meet these liabilities.

A sound enterprise should be able to provide operating funds from earnings derived from its ordinary operations. An absence of profit shall require a close analysis of the commercial borrower's justification in securing operating funds from other sources and of the effect that such procedure will have on its future financial position. A temporary cessation of profits may be explainable, and may justify the procurement of operating funds from some other source. A continued absence of profit will ultimately result in insolvency.

1130. Sources, other than profits, from which funds can be obtained include proprietary interests, chattel notes and mortgages, unsecured loans, hypothecation or sale of assets, expansion of capital investment, and contributions. Because a company may convert such assets into cash, an analysis of the value and liquidity of such assets is made in order to determine the adequacy of operating funds. Further, the effect of such conversion on the capital structure is included in the analysis.

1131. The operative builder's major problem is to dispose of his properties readily in order to obtain funds for his continued activities. It is an all important matter to him to effect a quick turnover of completed dwellings because his operating funds may be restricted until he can make satisfactory disposition of them. Unless he has substantial capital he will not be able to hold the properties in his portfolio of investments. His business will be retarded or may be even suspended until he can recover his investment in unsold properties.

1132. *Balance Sheet.* The balance sheet is an analysis of facts regarding the net worth and financial position of a business. Detailed instructions in the analysis of a balance sheet are not attempted in this text. It is the responsibility of the Mortgage Risk Examiner to be able to analyze a balance sheet intelligently.

1133. Desirable ratios between various types of assets and liabilities have a widely diversified significance in different kinds of enterprise. Some ratios are pertinent and some may be disregarded, depending upon the nature of the line of business. Among the ratios most commonly used are the following:

a. Quick assets to current liabilities
b. Current assets to current liabilities
c. Sales to receivables
d. Sales to inventory
e. Sales to net worth
f. Sales to fixed assets
g. Net worth to fixed assets
h. Net worth to current liabilities
i. Net worth to total liabilities

1134. Business difficulties really fall into three main classes, (*a*) insufficient net profit, (*b*) improper division of net profit between stockholders and the company, and (*c*) improper use of profit retained by the company. The first condition is the most serious and is self explanatory. In this connection, it is important to ascertain the cause for insufficient profit as well as the fact that insufficiency exists. The third condition, which is the next most serious, may lead to a situation wherein there are insufficient current assets to meet obligations, irrespective of excellent profit. The second condition is not as prevalent as the other two but occurs with enough frequency to require attention. A comparison of balance sheet summaries over a period of time will assist in discovering such weaknesses.

1135. In the assets listed on the balance sheet, items such as patents and good will may have an indeterminable value for credit purposes. Assets or liabilities, which are too inclusive or obscure, should require qualitative explanations from the borrower.

1136. Ordinarily, the operative builder's assets reveal only limited liquidity in cash or readily convertible holdings, because the major portion of his worth is invested in the building program. The operative builder borrower cannot be expected to show sufficient financial strength to carry an unsold or unrented house indefinitely after completion, but he should be expected to demonstrate ability to carry a completed project for a reasonable period of time. The possibility of rental should be considered.

1137. A comparison of statements over a reasonable previous period of time will indicate the trend of the borrower's financial position. This review should be accepted as some indication of future performance.

1138. Evidences on the balance sheet will contribute heavily to the rating of this feature. A high rating cannot be ascribed to the commercial borrower unless all pertinent ratios between certain assets and liabilities are favorable, and unless the net worth is intact and shows promise of improvement. A lower rating will be given in proportion to those business hazards which are apparent in the balance sheet. A reject rating is warranted when the borrower's financial responsibility to undertake the contemplated mortgage loan is unsatisfactory.

1139. *Operating Statement.* This statement, commonly known as the Profit and Loss Statement, is an itemized summary of the items of income and expense during a specific period of time. It reveals the accumulation of profits or losses from business activities. In brief, it shows whether the business has been making or losing money. Analysis of a series of operating statements will indicate the past trend of the business and, to a degree, will assist in forecasting the future trend.

1140. Some operative builders have a tendency to expand beyond their financial responsibility. Therefore, because of constant changes in the financial position of operative builders, the activities and profit and loss statements of such borrowers must be constantly watched. It is further necessary to be familiar with the nature of the disposition of the properties for which commitments have been issued.

1141. *Ability to Discharge Obligations.* Commercial enterprises, in general, require credit in order to continue in business, and, therefore, protect their credit reputations. For this reason, their credit is usually based on definite audited statements. It is feasible to accept the current credit record of a commercial borrower as a clue to its financial capacity. In predicting the borrower's future ability to discharge obligations, analysis should be made of the judgment employed to secure benefits from expenditures. The nature and amounts of business obligations are analyzed as to their affect on earning capacity. Certain types of indebtedness may be only temporary, while others may show probabilities of continuance or recurrence. Income producing or income increasing obligations demonstrate a more favorable situation than those incurred for strictly transitory purposes. Arrangements made to discharge such obligations is one indication of the effect of the indebtedness on capacity. An analysis of the elements in this factor will reveal the borrower's probable performance in the contemplated mortgage transaction.

1142. Contingent liabilities that may become burdensome debts in the future should not be overlooked, but, at the same time, undue concern should not be entertained where the actual liability of such contingencies apparently will remain very limited or remote or will probably be liquidated.

1143. In cases where it is required that principals join with the commercial borrower as co-signers, endorsers, or guarantors on the note, bond, or other evidence of the mortgage obligation, a thorough analysis of the personal financial responsibility of such parties shall be made.

PROSPECTIVE EARNING CAPACITY AND STABILITY

1144. The rating of this feature is based upon an analysis of the borrower's future ability to obtain and maintain income, and to pay the contemplated mortgage obligation. It is rated by analyzing such factors as evidences of net profit, operating possibilities, and ability to discharge the contemplated mortgage obligation.

1145. *Evidences of Net Profit.* It may be assumed that as long as a business enterprise can realize net profit it will continue to stay in business and continue to pay its obligations. The usual exceptions include corporations chartered for religious, charitable, and similar purposes. In the absence of net profit or surplus reserves, the only alternative sources for the acquisition of operating funds are collateral or unsecured loans, and new capital. Sustained absence of net profit will result ultimately in insolvency.

1146. Demand for the merchandise and services produced by the company is necessary for the proper utilization of capital. Profit is impossible without sales, and sales depend on demand. Sales cannot rely entirely on need, because need may not be translated into actual purchases. Mere sales do not indicate profit unless the cost of production and cost of sales are below prices received.

1147. The analysis of this factor depends on the probability and character of future net profit. The presence of net profit at the time of analysis is to be noted, but more important is the continuance of profit during the term of the proposed mortgage loan. A business, in order to continue successfully, must meet competition not only in its particular line of business, but also in other lines offering substitute products or services.

1148. The foregoing paragraphs apply equally to the operative builder, whether corporate or individual. He is literally a manufacturer and merchandiser of dwellings. Not unlike other enterprises his merchandise and services are for sale, and not for personal consumption. Likewise, he generally provides himself with merchandise before he has a purchaser.

1149. *Operating Possibilities.* The continued success of a business will depend on the availability of facilities which will permit the functioning of an operating program that can profitably meet demand. The realization of future profit must be based on (*a*) the existence of a buying market, and (*b*) the ability to produce and sell at prevailing competitive prices. While certain products can, in a measure, introduce or attract demand, it lies largely outside of the control of any one business enterprise. It is more necessary for a business to be able to regulate its chosen activities to demand, than to attempt to regulate demand to its chosen activities. In order to anticipate and enjoy a stable market it is desirable for a business to be in a position to (*a*) regulate distribution to keep pace with demand, and (*b*) change production with changing demand. Stability of demand is essential to stability of profit. Stability of operating profit is essential to stability of earned income.

1150. When considering an operative builder in the capacity of a borrower it will be necessary to analyze the character of his operations. His characteristics and financial statements will not disclose all the facts necessary to determine his desirability as a borrower. A further determination must be made of the economic soundness of his projects. The Architectural and Valuation Sections shall be consulted to ascertain whether the operative builder borrower is constructing appropriate dwellings in suitable locations. An operative builder who gives buyers what they want, where they want it, deserves a favorable rating of this feature.

1151. *Ability to Discharge the Contemplated Mortgage Obligation.* The purpose of analyzing the commercial borrower is to determine the degree of credit risk involved in the issuance of mortgage insurance. The previous feature, Financial Condition, involved a study of the past and present financial position in order to forecast the future financial situation. In this feature the previous factors present an analysis of the underlying forces which will govern the possibilities of continuing business activity. The decision with respect to eligibility as based on this factor shall be predicated on evidences in the factors of these last two features in the Rating of Commercial Borrower grid, and will contribute to a high rating in this feature where such factors reflect a highly desirable commercial borrower. This factor will effect a lower feature rating in proportion to the borrower's deviation from such standards. A reject rating in this feature will be justified when the borrower's prospective earning capacity and stability are too uncertain to establish, with reasonable assurance, its ability to discharge the contemplated mortgage obligation.

PART II

SECTION 12

RATING OF EARNING EXPECTANCY

CONTENTS

Effective February, 1938
Federal Housing Administration

PART II

SECTION 12

RATING OF EARNING EXPECTANCY

GENERAL RATING INSTRUCTIONS

Rating of Earning Expectancy

FEATURE	REJECT	1	2	3	4	5	RATING
Rentability of Units		3	6	9	12	15	
Occupancy Percentage in Competitive Buildings		1	2	3	4	5	
Likelihood of Serious Competitive Construction		2	4	6	8	10	
Reliability of Rental Market Data		2	4	6	8	10	
Reliability of Expense Prediction		2	4	6	8	10	
Rating of Property		3	6	9	12	15	
Rating of Location		3	6	9	12	15	
Expense Ratio		4	8	12	16	20	
TOTAL RATING OF EARNING EXPECTANCY							

1201. The category, Rating of Earning Expectancy, is utilized only in connection with mortgages secured by rental income dwelling properties. Before the Rating of Earning Expectancy can be established the Rating of Property and the Rating of Location must have been completed. When the total Rating of Earning Expectancy has been established the result is used in the Rating of Mortgage Pattern.

1202. The total Rating of Earning Expectancy is a rating of the certainty, probable fluctuation, and probable rate of decline of the net earning expectancy of the property. It is a measurement of mortgage risk in terms of the qualitative characteristics of the earning expectancy. The Rating of Earning Expectancy cannot be completed until an estimate of the earning expectancy has been made in accordance with the instructions given in Section 15, Valuation of Rental Income Dwellings. It should also be noted that the last step in valuation, namely, capitalization, should not be completed until after the Rating of Earning Expectancy has been established inasmuch as the rating itself should be used as one of the determinants of the proper capitalization rates used to convert the earning expectancy into a final value estimate.

1203. The Rating of Earning Expectancy shall be accomplished by rating separately each of eight features, in accordance with the principles outlined in this Section and Section 6, Methods of Mortgage Risk Rating. The eight features have been weighted on a scale of 100 points in order to retain the relative importance of each when all are combined to obtain the total Rating of Earning Expectancy. Each feature is marked on a scale of from *1* to *5*, *5* being the highest rating. After analysis of the factors comprising a feature, an X mark is placed in the column which is determined to reflect the degree of risk involved. If the X mark is placed in any column other than the Reject column, the figure appearing in the marked square is carried over to the extreme right hand column of the grid. If the X mark is placed in the Reject column, the word "Reject" is written in the extreme right hand column of the grid. One such rating of any feature will necessitate a recommendation for the rejection of the application for insurance. If the word "Reject" appears in the Rating column, it must also be written in that column on the Total Rating line. If no such rating appears after any of the features, the final rating of the category is obtained by adding the figures in the rating column. The system is so designed that this figure will be an expression of the rating on a numerical basis.

1204. The eight features which are rated to determine the total Rating of Earning Expectancy are listed below with the weights which have been ascribed to them:

a. Rentability of Units	15
b. Occupancy Percentage in Competitive Buildings	5
c. Likelihood of Serious Competitive Construction	10
d. Reliability of Rental Market Data	10
e. Reliability of Expense Prediction	10
f. Rating of Property	15
g. Rating of Location	15
h. Expense Ratio	20

1205. In establishing the several ratings it is highly important to bear in mind the relationship between mortgage risk and the characteristics of the earning expectancy. Earning expectancy is construed to represent a flow of net income extending from the present indefinitely into the future. One danger in making an estimate of net earnings is to assume average conditions and ignore variations and fluctuations from the average through coming years. The description of an estimate of net earnings as a single amount of annual income is of little significance in the measurement of mortgage risk until it is described in qualitative terms which indicate its characteristics. There must be a determination of the probable stability of the earning expectancy. This can be accomplished only after consideration is given to the probable certainty as to amount, periodic fluctuation, rate of decline, and duration of the net earnings. The Rating of Earning Expectancy is an attempt to examine and measure these qualitative characteristics.

1206. It should be pointed out that certain of the features are rated on the basis of set rules rather than by judgment alone. Deviation from these set rules may be made only in instances where the text indicates that the rules are judgment guides. In other cases compliance with the rules is mandatory.

RENTABILITY OF UNITS

1207. This feature, Rentability of Units, is rated by judgment comparison. If the units in the building are in a strong competitive position in the rental market, a *5* column rating is ascribed. If the units are in a relatively weak competitive position, a *1* column or Reject rating is ascribed. In every case the comparisons must take competitive rental rates into account and balance them against the rental rates used in the valuation of the property. The Valuator must form his judgment by analyzing the rapidity with which available rental space is absorbed in other properties or by known demands for accommodations in the rental market. His considerations must take into account the supply of space of various types in the community and he should compare the supply with the requirements of typical families for space.

1208. Major emphasis is placed on the probable future trend of rentability of the units. Even in cases where high occupancies, at current rental rates, can be readily obtained in the current market, intermediate or low ratings may be justified if evidence indicates a strong probability that the market will become oversupplied and cause a future recession in rental rates during early future years.

1209. To establish a rating of Rentability of Units, consideration is given to those factors used in rating the features in the Rating of Location and the Rating of Property which appeal to tenants rather than owner occupants. The attractiveness of the space, the appeal of the location, and the equipment and services offered will have a strong bearing on rentability. Room sizes, numbers of rooms in the apartments, transportation facilities, and the character of local centers near which the property is located are considered in relation to the preferences of prospective tenants in the rental market.

OCCUPANCY PERCENTAGE IN COMPETITIVE BUILDINGS

1210. It is presumed that this feature, Occupancy Percentage in Competitive Buildings, is most successfully rated when statistics showing average vacancy percentages in competitive buildings are available. It deals with future probable competitive relationships only by inference inasmuch as it is rated in terms of current occupancy percentages. The following table may be used as a guide to correct rating. Valuators need not be bound by it because general vacancy statistics do not always cover the precise group of properties which are strictly and significantly competitive.

Current Occupancies in Competitive Space:	*Place X in column*
96% to 100%	5
91% to 95%	4
86% to 90%	3
79% to 85%	2
70% to 78%	1
Less than 70%	Reject

LIKELIHOOD OF SERIOUS COMPETITIVE CONSTRUCTION

1211. This feature, Likelihood of Serious Competitive Construction, views future competition in terms of probable new construction of similar accommodations in the immediate neighborhood or in strongly competitive neighborhoods. The presence of vacant land which can, under existing zoning ordinances and other restrictions, be used as sites for the construction of competitive buildings, must be balanced against the actual probability of such use. The following table is used to rate this feature:

Likelihood of Large Amounts of Competitive Construction:	*Place X in column*
Remote	5
Little	4
Moderate	3
Strong	2
Great	1

1212. In general, the future period of time which should be viewed is the next three or four years from the date of analysis. The imminence, in point of time, of competitive construction should color the rating ascribed.

RELIABILITY OF RENTAL MARKET DATA

1213. The rating of this feature, Reliability of Rental Market Data, is not based upon the failure of the Valuator to assemble data of a reliable character. It is presumed that rental market data compilation has been complete. This feature takes into account the uncertainties which remain after the compilation of data. The character of the required data is indicated in Section 15, Valuation of Rental Income Dwellings and Section 18, Compilation and Recordation of Data. To establish this rating an analysis is made as to the reliability of all information having a bearing on the amount of rent the units will command, the rapidity with which they can be rented and re-rented, and the extent to which they can compete successfully in future rental markets. It is the quality or degree of reliability of the data which is rated, not the apparent significance of the data. The rating is decreased when data are meager, unreliable, or of uncertain quality. Such a condition usually exists when there are few comparable properties in the neighborhood or where the subject property has the characteristics of a pioneering venture. Special attention should be directed to those items of data concerning factors which may cause wide fluctuations in the future gross earning capacity of the property. The following table is used to establish the rating of this feature:

Quality of Market Data:	*Place X in column*
Excellent	5
Good	4
Fair	3
Questionable	2
Poor	1

RELIABILITY OF EXPENSE PREDICTION

1214. The rating of this feature, Reliability of Expense Prediction, is not based upon the failure of the Valuator to assemble data of a reliable character. It is presumed that the operating expense data compilation has been complete. This feature takes into account the uncertainties of the expense prediction which remain after the compilation of data. The character of the required data is indicated in Section 15, Valuation of Rental Income Dwellings and Section 18, Compilation and Recordation of Data. To establish this rating an analysis is made as to the reliability of all information having a bearing on the amounts which will be required to operate, maintain, and manage the property. It is the quality or degree of certainty of the expense forecast which is rated, not the apparent significance of the data. The rating is decreased when data are meager, unreliable, or of uncertain quality. It is decreased when only limited confidence can be placed in the correctness of the final estimate of total operating expenses. Such a condition usually exists when there are a limited number of comparable properties or where the plan of operation is untried and operating data are difficult to obtain.

1215. Special attention is directed to all those items of data concerning factors which may cause wide fluctuations in future operating expenses. Among these the principal one is almost always the uncertainties in the tax situation. The present tax burden may be heavy or light. As long as it is reasonably certain not to change materially, the feature rating is not decreased on this account. Ratings vary downward according to the necessity for additional taxes and the likelihood that they will be levied. Some of the contingencies which require lower ratings are:

a. The prospect that the property will become a part of a special tax district or be subjected to other special assessments

b. The financial condition of a county or municipal jurisdiction which lacks population and the resources necessary to maintain local services now attempted

c. The likelihood of an adverse change of taxing policy

d. The uncertainties with respect to the burdens for relief in taxation budgets

1216. The following table is used to establish the rating of this feature:

Reliability of Expense Prediction:	*Place X in column*
Excellent	5
Good	4
Fair	3
Questionable	2
Poor	1

RATING OF PROPERTY

1217. The Rating of Property is determined in accordance with the principles set forth in Section 8. This feature is then rated by using the following table:

If category rating is—	*Place X in column*
80 to 100	5
70 to 79	4
60 to 69	3
55 to 59	2
50 to 54	1
Under 50	Reject

RATING OF LOCATION

1218. The Rating of Location is determined in accordance with the principles set forth in Section 9. This feature is then rated by using the following table:

If category rating is—	Place X in column
80 to 100	5
70 to 79	4
60 to 69	3
55 to 59	2
50 to 54	1
Under 50	Reject

EXPENSE RATIO

1219. This feature, Expense Ratio, is the most heavily weighted feature in the Rating of Earning Expectancy. The expense ratio is calculated by dividing the total estimated expense of operating, taxes, insurance, and management by the estimated yearly effective gross revenue for the last year specifically estimated. The expenses do not include items for depreciation or vacancy allowances but do include all items for which actual outlays will have to be made. The effective gross revenue includes only expected collections. Therefore, it is the difference between gross revenue at 100% occupancy and the sum of the allowances for vacancies and collection losses and all other contingencies which affect the amount of revenue collection. The significance of this ratio as an index of risk is apparent. A net income of $2,000 per year, which is the result of an effective gross revenue of $5,000 and expenses of $3,000, is more hazardous than a net income of the same amount which derives from a gross revenue of $3,500 and expenses of $1,500. In the first case, the expense ratio is 60%; in the second case it is 42%. A 20% recession of rents reduces the $2,000 net income $1,000 in the first case, but only $700 in the second case. That is, the higher the expense ratio, the greater the risk. In determining expense ratios all fractions are dropped. This feature is rated strictly by the following table:

If Expense Ratio is—	Place X in column
Under 35%	5
35% to 44%	4
45% to 52%	3
53% to 59%	2
60% to 64%	1
65% and over	Reject

PART III

SECTION 13

METHODS OF DWELLING VALUATION

CONTENTS

Effective February 1938
Federal Housing Administration

PART III

SECTION 13

METHODS OF DWELLING VALUATION

PURPOSE OF VALUATION

1301. Because the National Housing Act does not permit the insuring of any mortgage which involves a principal obligation in excess of a stipulated percentage of the value of the mortgaged property, it is necessary for the Federal Housing Administration to secure appraisals from its own Valuators. Furthermore, the values of properties must be ascertained because the ratio of the loan to the value is one of the considerations in the risk rating process.

1302. Valuations utilized by the Federal Housing Administration must serve the specific legal purposes of the National Housing Act. There must be a uniform interpretation of what the Act means by "appraised value" and uniformity with respect to methods used to estimate value. While it is possible that appraisals will sometimes vary as a matter of judgment, no variations should be permitted to result from differences in the concept of the purpose of valuation, the definition of value, or differences in methods of estimation.

1303. The valuation of dwelling properties for the purpose of determining the amount of security solves only a part of the mortgage lending problem. While valuation is a most important element in the analysis of mortgage loans, it does not constitute the sole basis upon which mortgages are selected. The security for a mortgage loan is only partially disclosed by valuation, and valuation is used to analyze the security principally by comparing the amount of a proposed mortgage with the estimate of value of the property.

1304. In connection with the activities of the Federal Housing Administration, valuation must produce an estimate which directly assists in the decision with respect to the eligibility of a loan for mortgage insurance. Valuation is never an end in itself. There are two ways in which property value constitutes security for a loan. The first, and by far the more important one, is the incentive to make interest and principal payments on the loan because of the importance of the property to the owner. The second is the value of the property recoverable under conditions of foreclosure. Emphasis is placed on the order and relative importance of the two kinds of security. Security has more to do with the avoidance of foreclosure than with the possibility of a recapture of capital by sale after foreclosure. In general, dwelling properties are primarily pledges. The first class of security has significance to the lender chiefly because the borrower has a stake in a valuable and desirable property and would not care to lose an equity which is of considerable value to him and of less value to the lender.

1305. The Federal Housing Administration requires the Valuator to place a value on *all* the property delineated and described by him as eligible security in accordance with instructions in Section 5, Minimum Eligibility Requirements. This does not preclude the setting of separate valuations on fractions or portions of the properties submitted, but does require that the Federal Housing Administration Valuation fixed by the Chief Underwriter shall embrace the entire eligible security of whatever character it may be. The requirement that all the property be appraised does not imply that mortgage insurance limits will be enhanced in direct proportion to value added by pledging additional property as security, but is prescribed solely in the interests of good practice and uniformity of procedure.

THE CHARACTER OF VALUE

1306. The word "value" refers to the ability of useful things to produce benefits for human beings in answer to their needs or desires. The meeting of such needs or the satisfying of such desires requires the occurrence of events in the future, never in the past. Value does not exist unless future benefits are in prospect. Its measure is the present worth of expected benefits which may be realized only upon the occurrence of future events.

1307. In the valuation of real estate, properties are appraised. "Property" refers to certain rights which a person enjoys by virtue of his ownership of wealth. In this sense, property is the privilege of using physical real estate facilities, not the facilities themselves.

1308. Definition of Value. The Federal Housing Administration recognizes that there are many purposes for which valuations are made and that there are, of necessity, many possible definitions of "value". Definition depends upon the purpose for which the estimate is to be used. At the same time, the Federal Housing Administration has only one objective in view in connection with valuation. It therefore utilizes only one concept of value. The word "value", as used by the Administration, refers to the price which a purchaser is warranted in paying for a property for continued use or as a long-term investment. This concept is defined as the price which well-informed typical buyers, acting intelligently, voluntarily, and without necessity, would pay for the property. It always presumes a price which is justified by the future long-term benefits which will accrue through ownership to a typical owner.

1309. The above definition of value describes the exchange value concept and places emphasis on the idea that value is a price which typical buyers are warranted in paying. This is presumed to be equivalent to the price a typical owner is justified in paying, whether he is actually a new purchaser or the present owner.

1310. A primary distinction is made between value, as defined above, and market price. Both are value concepts and take cognizance of a market, either present or implied. There are cases where the two may be identical in amount, but quantitative differences are frequently encountered. Another way of describing this is to distinguish between *what a property is worth* and *what the current market thinks it is worth*. The accompanying diagram illustrates the necessity for careful distinctions between concepts of value. Such concepts vary with the motives and purposes of buyers and sellers. The diagram on the following pages indicates why "value" may have several meanings. The concept of value used for mortgage lending purposes is that indicated by the bold type words opposite "Buyers." The chart explains that there can be several prices justified by different motives. It shows that market prices are not necessarily acceptable as valuations.

1311. While it is recognized that the required "justified selling price" or "justified purchase price" or simply "value" can be interpreted variously depending upon the differences in purpose of appraisal, the Federal Housing Administration recognizes a somewhat general market containing a reasonable number of "typical" buyers. The value to be estimated, therefore, is the probable price which typical buyers are warranted in paying. This valuation is sometimes hypothetical in character, especially under market conditions where abnormalities in price levels indicate the presence of serious quantitative differentials between the two value concepts. With the definition of value prescribed for use by the Federal Housing Administration, marked differences between "available market prices" and "values" will be evident under both boom and depression conditions of market. No other definition is acceptable for mortgage loan purposes inasmuch as one of the objectives of valuation in connection with mortgage lending is to take into account dangerous aberrations of market price levels. The observance of this precept tends to fix or set market prices *nearer* to value.

BUYERS

Buyers who are well informed and act intelligently and without necessity.	They will pay current market prices if not more than the present worth of future long-term benefits that will accrue to typical users.	Prices paid are influenced by an adequate understanding of existing and prospective market conditions.	The buyers' actions tend to hold market prices at levels not in excess of the present worth of future long-term benefits that will accrue to typical users.
Buyers who act without necessity but are not well informed or act unintelligently.	They will pay current market prices even though they may exceed the present worth of future long-term benefits that will accrue to typical users.	Prices paid are influenced by an inadequate knowledge of existing and prospective market conditions.	The buyers' actions tend to cause market price levels to rise above the present worth of future long-term benefits that will accrue to typical users.
Buyers who are motivated by necessity or who act to secure special benefits which will accrue to them as specific users.	They will, or must, pay current or higher than current market prices, even though they exceed the present worth of future long-term benefits that will accrue to typical users.	Prices paid are influenced by existing market conditions, by degree of necessity and by available alternatives.	The buyers' actions tend to create and support a market at inflated price levels.

SELLERS	*Sellers who are well informed and act intelligently and without necessity.*	*They will sell for available market prices if not less than the present worth of future long-term benefits that will accrue to typical users.*	*Prices received are influenced by an adequate understanding of existing and prospective market conditions.*	*The sellers' actions tend to hold market prices at levels not less than the present worth of future long-term benefits that will accrue to typical users.*
	Sellers who act without necessity but are not well informed or act unintelligently.	They will sell for available market prices even though they may be less than the present worth of future long-term benefits that will accrue to typical users.	Prices received are influenced by an inadequate knowledge of existing and prospective market conditions.	The sellers' actions tend to cause market price levels to decline below the present worth of future long-term benefits that will accrue to typical users.
	Sellers who are motivated by necessity, or who act to secure special benefits which will accrue to them specifically.	They will, or must, sell for any available price, even if less than present worth of future long-term benefits that will accrue to typical users.	Prices received are influenced by existing market conditions, by degree of necessity, and by lack of alternatives.	The sellers' actions tend to depress and retard upward movements of market price levels.

1312. Valuation, in accordance with the prescribed definition of value, cannot be feasible without recognizing that each property offers a buyer a future income stream in the form of services or monetary net profits. The essence of valuation is in the attempt to forecast as accurately as possible the certainty, amount, character, and attractiveness of the future income stream and to translate it, by such means as are available, into an estimate of present capital value. The latter value has already been defined as justified or warranted purchase price. By reverse reasoning this definition of the concept of value controls the considerations with respect to the forecasts of the future income stream.

1313. One concept is found among many appraisers and lending agencies, namely, the idea of "loan value." The Federal Housing Administration recognizes no necessity for the use of such a term. If it refers to a correct valuation, then the word "value" should suffice. If it is intended to refer to a valuation somewhat higher or lower than value, it leads to unsound practice.

1314. "Normal value" is a term which is frequently used. It is very rarely, however, that it can be satisfactorily defined. Normal value has been used to mean a value which, in the past, was higher or lower than that which exists. Such a concept is apt to result in unsound valuations because generally it is accompanied by the inference that in a short time prices and values will return to the so-called "normal". Therefore, it is inferred that it is not proper to recognize existing conditions and facts which have created present values at points which the appraisers consider to be "abnormal." The instability of the general price structure in times past has caused great fluctuations in real estate price levels so that there is really no single level that can be pointed out as a normal level. It is improper to assume that a certain level of real estate prices that existed at one time is "normal", and that prices therefore will inevitably return to that level in the future. All values depend on future occurrences and the process of estimating values necessitates the making of assumptions with regard to the future. The past is often useful in forecasting the future, and the manner in which events have occurred in the past may be a reliable indication of what will probably happen in the future. However, an exact repetition of events can very seldom be contemplated. While the above probably throws suspicion on appraisal concepts of normal value, it does not necessarily imply that they are utterly worthless. Without some notion of the idea of a median trend or normal level of value, appraisers may find it difficult to distinguish between value and available market price. The distinction between the current price and the value must follow more from a forecasting process than from a reference to value levels in the past.

1315. Sources of Real Estate Value. The value of a real estate property results from the benefits which its utilization is expected to confer on the owner. There are various forms in which real estate may be useful. Residential real estate is useful because it provides shelter. This obvious fact, however, is significant only when the motives of the owner or typical prospective owners are used as the basis for a further examination of the character of the usefulness. To one owner a house appeals as a dwelling place for his own family. The appeal of another residence may be related almost solely to investment motives. In the first case, the expected services of the property are enjoyed directly as they accrue. In the second case, the expected services are enjoyed indirectly in the form of dollar income. In every case, however, the utility of the property is the source of any value it may have and valuation can be accomplished only by an examination of the usefulness of the property.

1316. The degree of usefulness varies with the characteristics and qualities of the properties, the requirements of the inhabitants of the community, and the scarcity of available properties. Value thus appears in relation to supply and demand and in terms of the relative advantages of available properties. Usefulness and scarcity create eagerness for possession and competition ensues in the real estate market.

1317. Usefulness is, of necessity, prospective and lies in the future. The buyers and sellers in the market examine, or are presumed to examine, the available properties in terms of future usefulness and translate their expectations into present prices which reflect their forecasts with respect to the extent, quality, and certainty of the future services and productivity. These considerations by prospective buyers, who compete with one another, create real estate price levels which become guides in valuation.

IMPLIED VALUATION PROCEDURE

1318. It is evident that sound valuation procedure must embrace and use both the definition of value and an examination of the source of value. These lead, by logical derivation, to the establishment of certain axioms of valuation and to the outlining of a basic procedure.

1319. Axioms of Valuation. There are certain basic valuation principles which are axiomatic, or self-evident. These include:

a. Valuation presupposes the existence of a buyer
b. Valuation presupposes the existence of a seller

c. Valuation presupposes a sale in which the buyer is well informed, and acts intelligently, voluntarily, and without necessity

d. Valuation presupposes a sale in which the seller is well informed, and acts intelligently, voluntarily, and without necessity

e. Valuation endeavors to estimate prices which represent the worth, at the time of appraisal, of the future benefits from long-term use which will arise from ownership, rather than merely prices which can be obtained in the market

f. Valuation recognizes the importance and usefulness of sales prices, provided it is determined whether or not such sales prices were fair and warranted; and provided the motives, intelligence, and wisdom of the parties to the sales, as well as other conditions surrounding them and influencing the determination of the sales prices, are ascertained and weighed

g. Valuation presupposes and recognizes that intelligent buyers and sellers consider the utility of real property

h. Valuation recognizes that the prices at which competing properties are available, either by purchase or by building, set or tend to set the approximate upper limit of possible value

i. Valuation presupposes and recognizes that well-informed buyers and sellers are commonly aware of the existence of competing properties and compare their respective asking prices, desirability, advantages, and disadvantages, and future prospects

j. Valuation recognizes that replacement cost at the time of appraisal sets one approximate upper limit of possible value

k. Valuation recognizes that value may be much less than either replacement cost or available market price.

l. Valuation presupposes and recognizes that well-informed buyers and sellers compare and contrast the advantages and disadvantages of renting with those involved in ownership

1320 (1). Delineation of Property to be Appraised. The Valuator is required to estimate the value of specific properties. In a legal sense the word "property" refers to *rights* which are possessed through acquisition of title, that is, of ownership. It is these rights in relation to specific properties which must be valued. They must be delineated before they can be valued. The nature of the title held by the party whose rights are being valued determines the delineation. Thus, if title is held in fee simple, free of all encumbrances, the rights are the most extensive possible. If such a title is encumbered, the rights are correspondingly restricted and may be less valuable, depending largely on the nature of the encumbrances. For example, encumbrances in the nature of easements, reservations, restrictions, and rights-of-way may cloud the title and lessen the value of the owner's estate. Valuation cannot be made without knowledge of encumbrances or without being based on some assumptions regarding them. Title may also confer only the rights established by a lease. The lessee's rights are only those described in the lease or conferred by law and are subject to those reserved by the lessor. The terms and conditions of the lease must be ascertained before the lessee's "property" can be delineated and valued. In any event, regardless of the nature of title, the rights of an owner, though *exclusive*, are never *absolute* for they are always subject to the rights of the sovereign authority, such as the right to tax, to regulate and control as by zoning ordinances or other legislative enactments, and the right of eminent domain. Delineation of property is affected by such matters.

1320 (2). Delineation of the property to be appraised also depends on the extent of the physical property described in the instrument which conveyed title. Valuators are supplied with legal descriptions of the properties which are offered as mortgage security. In each case they are required to delineate and describe the portion which comprises eligible security. Their valuations must embrace all the property thus delineated and described, even though land in addition to an area sufficient to suitably accommodate the building improvements is included. Furthermore, if an easement over adjoining property for ingress and egress or for light and air, or some other purpose, is included in the property described, or is found to be appurtenant to it, the right consisting of the easement must also be embraced in the valuation.

1320 (3). In some instances the property described may embrace rights other than rights in realty. Proper delineation will eliminate any such rights from the valuation. They might relate to such things as stoves and refrigerators (though these are sometimes classed as realty, in which event they would be included in the delineation), garden tools, household equipment, and other chattels or personal property. Some items of equipment, window shades and screens, for example, are appurtenant to the real estate and, therefore, properly included in the property delineated. Some rights are not appurtenant but are "gross", that is, they do not run with the land but are simply personal rights vested in the existing owner. They would not automatically pass to a purchaser as would appurtenant rights. Consequently, they would not be elements of the valuation. Usually rights-of-way, easements, and riparian rights are appurtenant.

1320 (4). Property rights include the right to use and occupy, the right to lease to others, and the right to sell. The exercise of these various rights results in the realization of benefits. The extent and nature of the rights determines the extent and nature of the benefits which, in turn, determine the value to be ascribed to the delineated property. However, the benefits cannot be valued except in consideration of the characteristics and motives of owners of various types. The right to occupy, or to lease, or to sell vests in any owner holding title in fee simple unencumbered. The owner might be an owner-occupant who values the property because of its desirability as a place of residence for his family. Or the owner might be one who values it because of the net rental he can realize from it. Again, the owner might be a mortgage company, an operative builder, or a speculator, and to any of these owners the property would be valuable mainly for the money obtainable in a sale. Obviously, though the rights possessed by any of these owners would be identical, the value ascribable to these rights could well be different to several of them. After delineating the property, or rights, to be appraised, Valuators are required to value them from the point of view of typical buyers to whom the property exerts strongest appeal, not from that of an owner who is an operative builder, a financial institution, a speculator, or any other type of temporay owner.

1321. **Substitution Theory.** The buyer, in any case, is not warranted in paying more than it would cost him to purchase other substitute properties affording equal advantages and subject to equal disadvantages. The buyer is not warranted in paying any more, and the seller is not warranted in accepting any less, than the price at which other properties having equal facilities, equal desirability, and equal utility, and subject to the same risk of loss or possibility of enhancement of desirability or value in the future, can be purchased from well-informed owners who act intelligently and are free to act of their own volition and desire. This principle applies to any means of securing a substitute property, whether by outright purchase, or by building a duplicate.

1322. This leads to the conclusion that sound valuation method must recognize the market prices at which comparable properties are available as the approximate upper limit of valuation. It also means that the cost of replacement of a property, by entering into a construction program, is also the approximate upper limit of possible valuation. Neither the estimation of available market price nor the estimation of the replacement cost of a property is, in itself, an appraisal process in accord with the definition of value. These estimates do, however, enter directly into the valuation procedure as limiting control factors. In general, these estimates are construed to be the absolute upper limits of valuation. In certain cases, however, there are logical reasons to consider them as approximate upper limits only. These reasons are brought out in the descriptions of the practical methods.

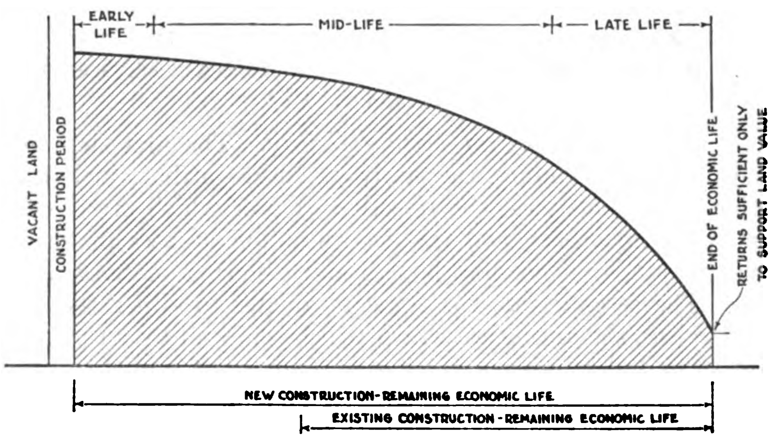
1323. Basic Procedure. The purpose of valuation, the definition of value, the axioms of valuation, and the practical limitations of appraisal data dictate the basic valuation procedure. Sound procedure systematically employs, insofar as it is practicably possible, the theoretically correct method of valuation. The basic procedure embraces the following:

a. A study of the future utility of the property and of the motives of possible prospective buyers
b. A forecast representing the most probable series of future services to be derived from ownership of the property
c. An analysis which converts the forecast services into a present price or valuation

1324. *Study of Future Utility.* The first step in the basic valuation procedure, the study of future utility, includes the selection of possible uses, the rejection of uses which are obviously lower uses than others, and the determination of uses in terms of alternative kinds of possible buyers and differing motives of such buyers. The second step, the forecast, relates to either the future direct services, the amenities, which will be enjoyed by an owner occupant, or to dollar incomes which are the source of value to an owner investor. In some instances, motives of possible typical buyers will require the forecast to relate to both amenity incomes and dollar incomes. In every case the forecast must embrace the entire future. It is incomplete if it includes only a forecast of the services or returns which are expected to accrue during the next year, a typical early year, or "on the average" in early years. The third step, the conversion of the forecast into a valuation, is accomplished variously, either by determining warranted prices by comparison of the expected services with those of other properties on which accepted valuations have been established, by capitalization of predicted monetary returns, or both processes in combination.

1325. *Returns from Property.* The future services of properties are best conceived if they are visualized as being in the form of a flow of returns. The returns will be periodic services including actual shelter, enjoyment, pride of ownership, or net income. They include amenities and monetary earnings. Both forms of returns should be considered as a flow of income, whether the income takes the form of direct satisfactions or dollars.

1326. In urban residential real estate the flow of returns is present only when the site is occupied by useful buildings or other improvements. Undeveloped vacant land is presumed to become productive shortly after the completion of construction. Typically, the flow of returns will rise rapidly to a maximum rate in the early life of the improvements and gradually decline during midlife and late life until the improvements have finally lost profitable usefulness and the flow of returns is only large enough to justify purchase of the property as vacant land. The accompanying diagram shows the trend of the flow of returns in the typical case. It assumes, but does not indicate, periodic fluctuations attributable to changes in gross revenues, taxes, operating expenses, undersupply or oversupply of competitive properties, or other causes.



1327. *Translation of Forecast to Estimate of Value.* The third step in the basic valuation procedure is the translation of the forecast of returns to an estimate of value. The predicted returns are amenities, monetary net incomes, or both in combination. In valuation, these returns are translated to an equivalent present worth in the form of a price. In theory, this is precisely what the market does. It compares probable future amenity and dollar returns and assigns values according to their quantity, quality, and duration. It is known that there is a relationship between the level of the net returns a property is capable of producing, and the value of the property. The ratio of the net returns to the value is described as the rate of return. When used to determine the value from predetermined estimates of net returns, it is described as the capitalization rate. The rate will be relatively low when the future returns are certain and of long duration. It will be relatively high when the returns are uncertain or subject to wide fluctuation.

1328. Capitalization rates used to translate forecast returns into estimates of value may be applied only to net returns. In certain cases of valuation, it is feasible to forecast gross returns and to assume that, on the average, the expenses of operating the different properties are constant for the same sizes and grades of properties. When gross returns are used, the Valuator translates his forecasts into an estimate of value by multiplying by a conversion factor. The effect is the same as if he had used net returns and divided by a capitalization rate. The use of conversion factors is, however, justified only by the validity of the assumption that the gross returns of several properties embrace expenses which are substantially constant from case to case.

1329. **Selection of Method.** The basic procedure is described in terms of properties owned in fee simple unencumbered. All cases require valuation of the unencumbered fee first. If the actual property is a leasehold estate, the value of the leasehold is determined afterward in accordance with instructions in paragraphs 1336 (1) to 1336 (12).

1330. There are two alternative methods of valuation prescribed. As described, they apply to properties owned or to be owned in fee simple unencumbered. They are:

a. The amenity comparison method of valuation, described in Section 14

b. The capitalization method of valuation, described in Section 15

1331. *The Amenity Comparison Method* is applied to amenity income dwellings. Amenity income dwellings are defined as properties which exert appeal to a measurable degree to typical prospective purchasers interested in the direct amenity services which the dwelling is capable of rendering an owner occupant. Such a purchaser will consider buying the property as a place of residence for himself and his family. In addition, his motivation may include the desire to secure monetary returns. Most cases of single family dwellings are appraised by this method. Small multi-family dwellings are correctly appraised by the method when the motives of the typical buyers include the intention to live in one of the family units.

1332. *The Capitalization Method* is applied to rental income dwellings. Rental income dwellings are defined as properties which exert appeal *solely*, or almost solely, to prospective purchasers interested typically and only in the net monetary returns which the properties are capable of producing. Such a purchaser will consider buying the property only because of the dollar returns he anticipates. Some cases of single family dwellings are correctly appraised only by this method. These are cases in which the typical available prospective buyers are confined to persons other than those who would wish to live in the premises. The method is applicable principally to multi-family dwelling properties.

SUPPLEMENTARY PROCEDURES

1333. Supplementary procedures and modifications of the appraisal process are used to solve the special problems presented by mechanical equipment and accessories, dwellings on higher-use sites, leasehold estates, taxes and special assessments, and the valuation of fragmental properties.

1334 (1). Mechanical Equipment and Accessories. Certain electrical and mechanical devices are installed in homes. In many instances the installations are such that some or all of this equipment loses its character as personal property and becomes an integral part of the real property. Equipment which is part of the real estate is part of the security for the mortgage on the property, and therefore affects the value estimate. If the equipment is wisely chosen and installed, it may enhance the value of the property to the full extent of its cost in the case of a new dwelling. If, however, the cost of the equipment is too great an outlay in relation to the cost of the structure, or if the typical buyer cannot afford the cost of operating the equipment, it will not enhance the value of the property to the full extent of its cost. First, the Valuator must be able to know just what equipment in the building is part of the real property and what is personal property, so that he may know exactly what he is to appraise. Second, he must determine to what extent the value of the property is enhanced by the equipment which is part of the realty. Insofar as any of the equipment is in the nature of chattels, he must omit it from the rental value estimates if feasible to do so. In any event, value of chattels is never to be included in the estimate of value.

1334 (2). If the case involves an old structure, and it is intended that new mechanical equipment and accessories will be installed in such a way as to become part of the realty, the Valuator's problem is the same as in the case of new structures. The Valuator must determine to what extent the installation will enhance the property value. Many of these mechanical devices are subject to rapid deterioration due to the wearing out of moving parts, and to speedy obsolescence due to continual change and improvement in design. For these reasons it may not be wise to install them where the costs of installation, maintenance, and operation will be too great in relation to the value of the property.

1334 (3). In cases involving rental income dwellings the value added by special mechanical equipment will be reflected in the amount of rent these properties can command. In estimating the value of such a property the Valuator must ascertain (*a*) of what the equipment consists, (*b*) what is its replacement cost, (*c*) what it will cost to operate and maintain, (*d*) how long a probable remaining economic life it will have, and (*e*) the number of times it will have to be replaced during the estimated remaining economic life of the building improvements. Then he must calculate what amount per annum will have to be taken from the gross income the property will produce in order (*a*) to operate and maintain this equipment, and (*b*) to recover the value he assigns to it. This amount he uses as a deduction in his income analysis in ascertaining the net income which may be expected from the property. In this way he can justify the value assigned to the property including its short-lived equipment.

1334 (4). The Valuator is given assistance, where new buildings are involved, by the Architectural Inspector, who is instructed to included in his report a separate item representing the replacement cost of any equipment which is part of the real property and which will suffer rapid deterioration or obsolescence.

1335 (1). Dwellings on Higher-Use Sites. There are cases in which the property to be appraised consists of a single family residence upon a lot suitable at the time for commercial or multi-family residential use. Some appraisers attempt to estimate value in such cases by adding a land value based on the higher use to the so-called "depreciated replacement cost" of the residence. Such a valuation is incorrect because it is based upon the erroneous premise that the value so attributed to the land is enhanced by the residence, by an amount equal to the so-called depreciated replacement cost of the structure. The fact that the residential use does not represent the highest and best use for the site is thus ignored. The premise is incorrect and any conclusion based upon it is likewise erroneous. It would also be erroneous to ascribe a value to the land for the existing residential use and then proceed as in ordinary cases.

1335 (2). The value of a residential property can be equivalent to the sum of the value of the site and the replacement cost of the structure upon it, only if the structure is new and represents the highest and best use for the land. Furthermore there must be a demand for such residential properties at prices equivalent to this sum. Obviously, the conditions described cannot apply in the case of old residences on apartment or business sites, and therefore a replacement cost estimate cannot be used for valuation purposes in such cases, for such an estimate will always exceed the value of such properties.

1335 (3). In dealing with properties which are not improved to their highest and best use, if the improvements are capable of producing a net return in excess of the sum imputable to the land and the costs of taxes, operation, and maintenance, then their economic life has not yet terminated and their value upon the site may be determined by the use of the capitalization method of valuation. The earnings of the improvements cannot be treated as though they were to continue indefinitely, when, as a matter of fact, they will continue for only a relatively short time. If the residence has reached the end of its economic life, then the value will not be in excess of the worth of the land plus the salvage value, if any, of the improvements.

1335 (4). If a site used for a residence is found to be zoned for business use, or if it fronts upon a street portions of which are being devoted to commercial purposes, the Valuator must not assign a value to the lot equal to the value of another nearby site which actually is being profitably used for commercial purposes. Before the residential site can have a value equivalent to that of the lot which is actually improved and being utilized profitably for business purposes, there must be an immediate need for the site for equally profitable business purposes. Generally speaking, in American cities, most lots which are being used for residential purposes, but which front upon commercially zoned streets, will probably not be utilized for business purposes until the lapse of long periods of time, during which their owners will receive little or no net return from them but will have to carry excessive burdens of taxation and sacrifice the interest earnings which they might enjoy if the sums which they paid for the properties were invested in some more productive form of property. The general tendency is to overestimate the value of such properties.

1336 (1). Leasehold Estates. Section 201 of the National Housing Act permits the insurance of mortgages eligible in other particulars which are first liens on real estate the titles to which are held by mortgagors either in fee simple unencumbered or:

a. Under a lease for not less than ninety-nine years, which is renewable

b. Under a lease having a period of not less than fifty years to run from the date the mortgage was executed

In certain localities in the United States considerable numbers of residential properties are leasehold estates. The valuation procedure in such cases involves additional steps.

1336 (2). When a long term lease upon real property is made, the effect is to create two distinct properties. The lessor still holds his title in fee simple, but since it is encumbered by the lease which he has given, his interest is designated the "leased fee." The lessee acquires the rights to the benefits which the property will produce during the term of the lease, provided he does not default in the performance of those acts required of him under the terms of the lease. His interest is designated the "leasehold estate." In exchange for the rights, he is obligated to pay a rental to the owner of the fee and to discharge the other obligations placed upon him by the lease. It is not deemed essential here to prescribe the more complex methods of leasehold estate appraisal. The procedure set forth herein produces results of the required degree of accuracy for the valuation of small residential leasehold estates and is presented with the aim of giving sufficient direction to Valuators, in order that they may properly perform their functions in cases where this type of ownership exists.

1336 (3). The Valuator determines the total value of the property as though owned in fee simple and unencumbered by a lease. He then determines the value of the leased fee. Finally, he deducts the value ascribed to the leased fee from the estimated value of the unencumbered property and accepts the difference as a reasonable approximation of the value of the leasehold estate. He then enters the results on the Report of Valuator in the following manner:

ESTIMATE OF VALUE OF LEASEHOLD ESTATE ——————— $4,800

ESTIMATE OF VALUE.—In my opinion the value of the property described above, assuming the contemplated improvements or new construction described in exhibits, if any, accompanying FHA Form No. 2004a, or assuming the repairs or alterations or additions, if any, listed under item (*15*) have been completed, is ....unencumbered by lease.......... $.....6,000.......

Distribution of value estimate:			
Land	$ 1,500	@ $ 30 per ☐ lot, ☒ fr. ft., ☐ sq. ft.	
Main Building	$ 4,000	Remaining lease term—30 yrs. renewable	
Garage	$ 400	Annual ground rent	$60
Other Improvements	$ 100	Capitalization rate	5%
		Valuation of leased fee	$1,200

These steps are described in greater detail in the following paragraphs.

1336 (4). The first step is to estimate the value of the property as though owned in fee simple unencumbered. This is done in the same manner as in any case where a leasehold estate is not involved, and all the instructions and suggestions contained in the Underwriting Manual are to be followed in this step.

1336 (5). The next step is to estimate the value of the leased fee, that is, of the lessor's estate. In order to do this, it is necessary to be familiar with the terms of the lease. This necessitates a reading of that document. A decision must be made as to whether or not the lease terms are fair and equitable. If they are not, it is possible that the lessee will default. Of course, if he has erected a building at a substantial cost to him, and the building is suited to the site, the default of the lessee may not result in any loss to the lessor. On the other hand, it may result in substantial monetary gain to him. Such would be the case if the lease provided that upon default of the lessee and consequent forfeiture of his rights, all improvements upon the land would revert to the lessor without cost to the latter. Such a condition is usual in cases of long-term leases. The elements of value in the lessor's rights, that is, the leased fee, are:

a. The present value of the net rentals which the lessee is to pay under the lease

b. The value of the "reversion", that is, the value of the right to regain possession of the property and the benefits it will produce after termination of the lease

1336 (6). The valuation procedure in the case of a lease for a definite period of years, and not renewable, differs in some respects from the procedure followed in the case of a lease renewable forever, but it will not be necessary in the operations of the Federal Housing Administration Valuators to make any distinction in the two cases. This is because under the provisions of the National Housing Act, a lease in an eligible case must run for at least fifty years. Furthermore, in view of the fact that the values of the sites in all cases will not be large, the possible error that may result from failure to follow a different procedure will be so minute that it will always be inconsequential.

1336 (7). *Valuation of the Leased Fee.* The ground rents reserved under a lease renewable forever may be treated as "perpetuities", that is, as payments which will continue periodically forever. The valuation of such rentals is by direct capitalization after a proper rate of capitalization has been chosen. The rate of capitalization varies in different cases depending upon, (*a*) the reasonableness of the amounts reserved as rent, (*b*) the certainty that the lessee will be able and willing to pay the rents when due, (*c*) the amount of the "stake" of the lessee in the property, (*d*) the future prospects of the property with regard to maintaining or enhancing its desirability, utility, and value, and (*e*) the rate of return obtainable from other types of investments. If favorable conditions exist, it will not be unusual for capitalization rates applicable to the valuation of leased fees to range upwards from about 4%. The process of capitalization of a net rental receivable in perpetuity is simple, merely involving division of the yearly rental by the capitalization rate. For example, if the ground rent is $90 per year net to the lessor, and it is assumed that the proper capitalization rate is 4%, the capitalized value of the ground rent payable in perpetuity is $90 divided by 4%, or $2,250. If, instead of 4%, it were determined that the capitalization rate should properly be 6%, the value would be $90 divided by 6%, or $1,500. Under these conditions, there will be no "reversion" to the lessor, that is, the property presumably will never revert to the lessor, inasmuch as the lessee has the right to renew his lease forever. Therefore, the total value of the leased fee in the example quoted would be $2,250 or $1,500, depending upon the rate of capitalization.

1336 (8). *Valuation of the Leasehold Estate.* Having taken the steps outlined above, the Valuator will have reached a conclusion with regard to:

a. The total value of the property in fee simple unencumbered by the lease.

b. The value of the leased fee (lessor's interest).

The valuation of the leasehold estate (the lessee's interest in the property) is then determined by deducting the valuation of the leased fee from the total valuation of the property in fee simple unencumbered by the lease. The result so obtained is a close approximation and is accepted by the Administration as the value of the leasehold estate.

Example No. 1. A ground lease upon a single family residence site having more than 50 years to run calls for a rental of $60 per year, representing 6% upon a ground value of $1,000 at the time the lease was made. The lessee erected a residence upon the site at a cost of $5,000 several years prior to the date of appraisal. The value of the leasehold estate is determined as follows:

(*a*) Estimated value of the property in fee simple unencumbered		$6,000
Distribution of total valuation:		
Land	$1,500	
Buildings	4,500	
Total	$6,000	
(*b*) Estimated value of the leased fee: The lease is well secured, land value has increased since the lease was made, the district is well protected with appropriate restrictions and zoning, and has developed into a uniformly desirable residential area. It is determined that a fair capitalization rate of lessor's ground rent is 5%; therefore, the valuation of the leased fee is $60 divided by 5%		$1,200
(*c*) Valuation of leasehold estate		$4,800

In the foregoing example, it will be noted that the value of the leasehold estate exceeds the value of the improvements. This is because the land has enhanced in value and the ground rent is therefore lower than it would probably be if a new lease were to be made at the time of appraisal.

Example No. 2. In this case, conditions are the same as in the foregoing example except that the district has depreciated in value, and it is found that the owner's expenditure of money for his home has proven unwise. The lessor's ground rent is still well secured, but because of unfavorable factors affecting the neighborhood, the proper capitalization rate is 6%.

(a) Estimated value of the property in fee simple unencumbered		$4,000
Distribution of total valuation:		
Land	$500	
Buildings	3,500	
Total	$4,000	
(b) Valuation of the leased fee, $60 divided by 6%		$1,000
(c) Valuation of the leasehold estate		$3,000

In the above example the value of the leased fee exceeds the value of the land. Likewise the leasehold estate is less valuable than the portion of the total valuation ascribed to the improvement. In such cases, the results are entered on the Report of Valuator in the following manner:

ESTIMATE OF VALUE OF LEASEHOLD ESTATE ---------------- $3,000

ESTIMATE OF VALUE.—In my opinion the value of the property described above, assuming the contemplated improvements or new construction described in exhibits, if any, accompanying FHA Form No. 2004a, or assuming the repairs or alterations or additions, if any, listed under item (15) have been completed, is ....unencumbered by lease.......... $...4,000.......

Distribution of value estimate: Land	$ 500	@ $ 500 per ■ lot, □ fr. ft., □ sq. ft.	
Main Building	$ 3,500	Remaining lease term	55 years
Garage	$	Reserved annual rent	$60
Other Improvements	$	Capitalization rate	6%
		Valuation of leased fee	$1,000

1336 (9). The laws of some states fix the methods whereby lessees of residential properties under long-term ground leases may "redeem" the ground rentals reserved under their leases by purchasing the fee simple title from the lessor, thereby destroying the lessor-lessee relationship. In such instances, the appraisal procedure must be consistent with the legal requirements. For example, assume that under a state law a lessee has the right to redeem the ground rent by paying the lessor a sum equal to the capitalized value of the ground rent on a 6% basis. Thus, in Example No. 1, if such state law existed, the value of the leased fee would be $60 divided by 6%, or $1,000 rather than $1,200, and the value of the lessee's estate would be $5,000 rather than $4,800. Legal enactments of the type mentioned have the effect of giving lessees options to buy at definite prices, and if an option to purchase exists in a lease, the value of the lessor's interest, or leased fee, cannot exceed the option price, although it may be less than that figure.

1336 (10). *Subleasehold Estates.* Sometimes lessees under long term leases create subleasehold estates by subleasing their rights to others. Such subleasing is not unusual in cases where one individual leases several parcels of ground and then subleases each parcel separately to different persons. The procedure to be followed in valuing subleasehold, or sub-subleasehold, estates is the same in principle as that outlined herein for the valuation of ordinary leaseholds. The Valuator simply capitalizes the total rental reserved in the sublease and deducts the resultant sum from the total valuation ascribed to the property as if unencumbered.

1336 (11). Valuators must realize that the ownership of a property which is a leasehold estate involves more risk than the ownership of either a leased fee or an unencumbered property. Furthermore, mortgage investment in leasehold estates is generally more hazardous than in unencumbered properties. Consequently, valuation procedure in such cases requires the exercise of discriminating judgment.

1336 (12). The maximum amount of an insurable loan on a leasehold is determined, in part, by multiplying (*a*) the valuation unencumbered by lease by (*b*) the maximum percentage applicable and subtracting (*c*) the value ascribed to the leased fee. Thus, in Example No. 1, assuming the 90% maximum would apply, the maximum insurable loan on the leasehold would be $4,200 ($6,000 × 90%=$5,400 minus $1,200=$4,200). In Example No. 2, it would be $2,600 ($4,000 × 90%=$3,600 minus $1,000=$2,600).

1337 (1). Taxes and Special Assessments. The level of general property taxes and the character and amounts of special assessments affect the values of properties. The greater the amounts of such burdens, the less valuable are the properties subjected to them, even though they may offer identical services to their owners.

1337 (2). General property taxes are levied yearly and must be paid yearly or more frequently. Within any given community the level of taxes is reflected in the market prices which properties command, and except in cases where the assessed valuations are not properly equalized, appraisal procedure is not affected, inasmuch as the market price data and rental data used by the Valuators already contain the necessary adjustments. Differences in tax levels, however, do affect the comparisons which appraisers make and should be taken into account.

1337 (3). The effects upon value of special assessment liens are different from those produced by general property tax liens. Whereas all properties in a community may be subject to general property taxation, levies in the nature of special assessments are made only upon the properties within the boundaries of the special assessment district. Such special assessments differ from general property taxes, not only in the respect just mentioned, but also in that they continue for a definite period of years only, whereas the general property taxes continue indefinitely. Therefore, if special assessment liens exist, due allowance for this condition must be made in the valuation process. Properties against which special assessment liens exist are less valuable than they would be if these liens did not exist. This is made apparent by considering the conditions reflected in the several cases outlined below.

Case No. 1. A property free of special assessment liens but subject to general property taxes: Value, $6,000.

Case No. 2. The same physical property, subject not only to general property taxes but also special assessment liens totaling $200 now due and payable. A purchaser of this property must pay the amount due and the value of the property is therefore less: Value, $5,800.

Case No. 3. The same physical property, subject not only to general property taxes but also to special assessment liens totaling $500, payable in ten yearly installments of principal plus interest at 6 per cent per annum on the deferred amounts. Because of the risk created by the possibility of default in paying the installments of interest and consequent foreclosure and loss of title, or because of the interest rate charged which may be excessive in the light of current financial conditions, this property may be less valuable by $500, or more, than a similar property free from assessment liens: Value, $5,500 or less.

Case No. 4. The same physical property subject not only to general property taxes, but also to a special assessment lien which is a lien upon all of the properties within the special assessment district and which continues a lien upon all of these properties until it is entirely extinguished. Special assessment bonds outstanding, $500,000. Assessed value of the special assessment district, $3,000,000. Assessed value of the property being appraised, $3,000 or 1/1000 of the district assessed value. The effect of the assessment lien on the value of the property is much more pronounced than in Case No. 3. The following paragraph discusses the reasons for this. Value, less than $5,500, probably considerably less.

Case No. 5. The same physical property and condition as in Case No. 4, except that the assessment district is broken down into zones, each of which bears a different percentage of the total levy against the entire district. Assume that the assessed value of the property is still $3,000 and of the entire district $3,000,000. However, the property is in an area which is designated Zone A of the assessment district, which zone is required to pay 20% of the total district lien ($500,000), or $100,000. It is seen now that the assessed value of the property is $\frac{1}{100}$ of that of the zone in which it is located, so that if all owners of properties in the zone and assessment district pay their yearly assessment levies, the property appraised will be charged $\frac{1}{100}$ of $100,000 or $1,000 plus yearly interest charges. The value therefore will be less than $5,000, and probably considerably less.

1337 (4). In Case No. 4, if all of the property owners in the special assessment district pay installments of principal and interest each time they become due, the owner of the specific property considered will have to pay $\frac{1}{1000}$ of $500,000, or $500, in yearly installments, plus interest. Therefore, the minimum reduction in value as compared with Case No. 1 would be $500. However, if any of the other property owners in the district become delinquent in their assessment payments, the delinquency may cause an increase in the amounts which will be levied against the properties in the district during the following year. This may result in an increase in the amount of delinquency and necessitate a still greater levy for the next year. In this way, the special assessment burden may mount up year by year, falling more and more heavily upon the shoulders of those owners able to pay or unwilling to abandon their properties. It is possible for such burdens to reach the point where owners in the district voluntarily surrender their properties. This possibility is mainly responsible for the statement above that the value probably would be considerably less than $5,500. If special assessment liens of the type mentioned in Cases No. 4 and No. 5 exist, it is essential that information be gathered with regard to (*a*) the amount of delinquency, if any, (*b*) the likelihood of foreclosure by the owners of the lien, and (*c*) the likelihood of a pyramiding of the assessment levies.

1337 (5). In cases where special assessment liens exist, the Valuator must appraise the properties as they stand, subject to the assessment liens. In no such case is it permissible for him to base his appraisal upon the hypothetical condition of the assessments being paid. In each such case the estimate will be decreased by at least the amount of the liens against the property, or that proportion of the lien upon the entire district which would represent the minimum that would probably be assessed in all the future yearly levies against the specific property under appraisal. In determining this minimum he would be influenced by:

a. The assessment levy made during the current year against the property appraised
b. Whether or not the levies had been increasing in the prior years during which the assessment lien had existed
c. The probable trend of the amounts of the levies in the future
d. The total amount of the lien outstanding against the district
e. The ratio of the assessed value of the property appraised to the assessed value of the assessment district, or of the zone in which the property lies

1337 (6). When properties lying within the boundaries of special assessment districts are sold, the buyer may either assume the burden of paying the assessments as they come due, or he may insist upon the immediate payment by the seller of existing special assessment liens. Obviously, the purchase price will be different in the two cases. For this reason, it is essential that when Valuators obtain sales price data, they ascertain the conditions of the sale with regard to special assessment liens as well as other conditions.

1338 (1). Valuation of Fragmental Properties. Valuators are required to place a value on all the property delineated and described by them as eligible security, in accordance with the rule cited in paragraph 1305. At the same time, they are required to set separate valuations on fractions or portions of eligible properties where such estimates assist in the patterning of an insurable loan or determining the value of the security remaining when there is to be a partial release of security. When only a portion of the property described in the application is found by the Valuator to be eligible security, he is required to delineate and describe and base his valuation on the portion which is eligible. This valuation of the eligible fragment is used by the Chief Underwriter in ascertaining the maximum amount of an insurable loan. The same figure is used in rating the first feature of the Rating of Mortgage Pattern grid.

1338 (2) When the property described in the Valuator's assignment is found to include eligible land which is in addition to the area required to suitably accommodate the buildings involved in the case, the Valuator must indicate on his report what portion of the property includes the building improvements and what portion is excess land. He must value the entire property described and in addition distribute this valuation between the fractions into which he divides the entire property. The prescribed valuation processes are followed in making the valuation of the entire property. The value ascribed to the excess land is the difference between the valuation of the entire land area and the valuation of the area required to suitably accommodate the building improvements. This latter area must be sufficient, of course, to constitute a natural, marketable real estate entity such as described in Section 5, Minimum Eligibility Requirements.

1338 (3). Cases arise in which mortgagors and mortgagees desire the Federal Housing Administration to approve of the partial release of property subject to the insured mortgage lien. Valuators are required to make special reports in connection with these cases. Frequently the area involved in the partial release is small and unusable by itself. On account of its lack of utility by itself, it might appear logical to assign it no value but this would be incorrect. Valuation of the area is accomplished by ascribing to it a portion of the utility attached to the entire land area of which it is an integral part and valuing it accordingly. Sometimes it appears that the value of the property which will remain under the mortgage after the partial release will be the same as that assigned to the entire property under the lien before the release and that, therefore, the area involved in the release is of no value. This would not be true. Inasmuch as the small area contributes something to the utility of the whole, it must, therefore, have some value, even though it is nominal. Usually the partial release is sought from the mortgagee so that the area involved may be sold to the owner of adjacent property. The purchase price under such circumstances is a guide to the desired conclusion, though it very often may greatly exceed a reasonable valuation because of such matters as the presence of necessity or extraordinary motivation on the part of the buyer. In partial release cases, the Valuator is to take the point of view of an owner of the subject property and decide what a fair and reasonable demand would be with reference to a proper consideration for the sale of the area concerned in the partial release transaction. Such a consideration would be that which is sufficient to compensate for any loss in value suffered by severing the area from the entire property. Sometimes consideration of the utility which the small area will have in conjunction with the property to which it is to be joined may be of controlling significance. However, the necessity of the buyer does not enter into this consideration. The Valuator must also report any restrictions which he concludes should be required to be imposed on the area sought to be released. Restrictions recommended should be such as would prevent use of the area in any way to adversely affect the property remaining under the insured mortgage lien or any other property in the neighborhood. In event the area involved in the release is capable of separate and independent use, the value is to be estimated in the customary way, that is, in view of the highest and best use of the site as an independent site. Thus, though ten lots might be valued at $7,000 as a unit, one lot for which an immediate demand for use exists might properly be valued at $1,000.

INTEGRAL FACTORS IN VALUATION

1339. In both the amenity comparison method and the capitalization method of valuation, Valuators are required to make four estimates which are integral factors in the appraisal process. These are:

a. The estimate of Rental Value
b. The estimate of Remaining Economic Life of Building
c. The estimate of the Value of Land by Comparison
d. The estimate of Replacement Cost of Property in New Condition

1340. Determination of Rental Value. In the risk rating system, rental data are used in rating the second feature in the Rating of Mortgage Pattern. Estimates of rental value are also used in valuation. By reason of the vital place which estimates of rental value have in the determination of valuations, the greatest care must be given to their estimation. Small differences are important and accuracy is attained only by the assemblage of large amounts of evidential data in the rental market. The estimates are not to be off hand opinions but the results of thorough investigation. In practically all residential neighborhoods when the "newness" of the district has disappeared, it is common to find many homes vacated by their owners and rented to tenants. Homes in such neighborhoods gradually acquire the characteristics of investments. They are no longer bought or sold as homes but merely as financial investments. The net rental returns they will produce become of primary importance in estimating their values.

1341. All rental estimates must be on a strictly comparable basis. The estimates of monthly rental values reported by the Valuator must be estimates which relate to the properties on an unfurnished basis. They are not to relate to properties on either a wholly or partially furnished basis unless this is the only feasible basis to use. Usually when single dwellings are rented on an unfurnished basis, the landlord agrees to pay only for the maintenance of the structure and for major repairs made necessary for defects in the structure or its equipment, or because of deterioration which has been allowed to accrue through no fault of the tenant. To secure the necessary uniformity the basis of the estimate must be as defined above. In comparing rentals for different properties, the same conditions of tenancy must apply. In other words, the agreement between landlord and tenant as to who is to pay for light, gas, water, or any other expenses must be the same in each case, or necessary adjustments must be made before comparing the rentals.

1342. Care should be exercised whenever properties are located in areas in which there are wide seasonal fluctuations in rents. Rentals in summer or winter resort areas are cases in point. Rental values at the height of the rental season should not be reported as the monthly rental value. The same restriction also applies to rentals at the ebb of the rental season. In every case the reported monthly rental value must be $1/12$ of the price which a prospective tenant would be warranted in paying for the right to occupy the premises on an unfurnished basis for a full year. This is not equivalent to the average per month of the rents obtainable from different tenants for different portions of the year.

1343. If a property contains more than a single rentable unit, the rental value estimate is the sum of the rental values of the individual units. This means the gross monthly rental which the property is capable of producing if all units are rented for the amounts determined as their monthly rental values, without any loss of rent from any cause. If an owner occupies a unit, its rental value is included.

1344. The estimate of rental value used for rating the feature Ratio of Total Payment to Rental Value of the Mortgage Pattern is the rental obtainable from a typical prospective tenant who will occupy the premises during the ensuing 12 months. The same estimate is used in an appraisal of an amenity income dwelling by the amenity comparison method of valuation. It is also used to estimate the net income during the first year in an appraisal of a rental income dwelling by the capitalization method of valuation. The rental value estimates applied to the second or other years, when several years' estimates are used, are predictions embracing probable changes in available rents in the several future early years.

1345. There is practically always a rental market. Sales prices of real estate have been subject to violent changes as have all other prices in times past. When realty prices fall, owners withdraw property from sale or else continue to ask prices that will enable them to recover their costs. The result is that real estate sales, except under compelling circumstances, cease to occur and a "frozen" market comes into being. However, there is usually a residential rental market, and since rent-paying ability determines rental levels, and rental levels and value levels are related and move up or down sympathetically, therefore rentals obtainable when the sales market is frozen become significant aids in valuation. Again, rent-paying ability usually is influenced little by speculation which creates artificial and unsustainable sales price levels. Therefore, residential rental levels are usually excellent aids in the estimation of residential property values and the estimation of the extent of changes in such values.

1346. Asking prices for rental purposes are somewhat different from prices asked for purposes of sale. Prices asked for sale frequently do not conform with values. Rental prices asked usually conform very closely, frequently they conform completely, with rental values and the rental prices actually paid or readily obtainable.

1347. Ordinarily there should be no difficulty in determining the proper rental estimate, inasmuch as there is usually an active rental market so that, by making intelligent comparisons and using verified data, an accurate estimate can be made. Rentals which are out of line with others involving similar properties and facilities are discarded. Competition between landlords and the discriminating judgment usually exercised by prospective tenants make most actual rentals for residential properties acceptable as a basis of comparison. In determining monthly rental value, rents paid or asked for like accommodations equally well-located must be ascertained. Rentals for inferior or superior accommodations are also useful by comparing and rating the various rental units. Actual rentals paid can be modified and used in estimating rental value for vacant or owner-occupied premises. The method of comparison used to estimate land values and available market prices of improved property are applied. The former method is described in Paragraphs 1361 to 1369. The latter method is described in Section 14, Valuation of Amenity Income Dwellings. It is incorrect to estimate and to report a rental value by basing it on a predetermined estimate of the value of a property to which an assumed ratio of rent to value is applied.

1348. Values of amenity income dwellings bear a relationship to monthly rental values. Properties of greater rental value will have higher values than those of lesser rental values, other things being equal. However, in amenity income properties, there exist differences in the ratios of the total amount of the value to the rental value according to the various price ranges. It is also important to note that while several properties may have the same monthly rental value, their capital values may be different because of such conditions as differencies in the remaining economic lives of the structures, and differences in tax burdens, maintenance costs, and in the stability of the neighborhoods. In the application of the Amenity Comparison Method of Valuation described in Section 14, the monthly rental value for the ensuing 12 months is estimated and recorded in all cases. However, in certain instances an additional estimate of monthly rental value must be made. In these cases it is this second estimate which is used as the basis for determining the Derived Monthly Value. This second estimate of monthly rental value is required when at the time of appraisal the Valuator concludes that at the expiration of the first or second year after the date of appraisal, there is likely to be a substantial drop in the monthly rental value of the property under consideration. Such a conclusion might be justified if it were ascertained that the demand factors affecting the real estate rental market substantially outweigh the supply factors, and have produced a seriously unbalanced and unstable condition. For example, there might be a shortage of housing accommodations and a strong active demand for additional residential units. A strong demand and inadequate supply would result in excessive rental values. This condition, however, could not continue indefinitely inasmuch as new construction would be undertaken and the shortage would be alleviated or entirely eliminated. During this period rental values would inevitably decline. Other conditions might also suggest to the Valuator that currently existing rental values might drop substantially and abruptly in the first few years subsequent to the time of appraisal. In any event, where the Valuator foresees such a decline, he is required to reach a conclusion as to the point to which the monthly rental value will probably fall after the circumstances and conditions which are causing the temporarily excessive rental value level have disappeared. He reports this second estimate of rental value and uses this amount in applying the Amenity Comparison Method. This procedure is prescribed only in those instances where an abrupt decline in rental value appears to be in prospect during the second or third year subsequent to the date of appraisal, as it is believed it would be extraordinary to find a reasonable basis upon which to make a specific prediction relating to years more distant in the future. Rental value changes which are likely to occur in these more distant years are taken into account at another point in the application of the Amenity Comparison Method, namely in the selection of Conversion Factors.

1349. In forecasting rental values for the first, second, or third years in the valuation, the rentals ascribed may be either the same or different for each year. In this connection it is appropriate to point out that frequently new dwellings, especially multi-family structures, experience marked decreases in rental value after the first few years but may be fairly stable thereafter. In every case the attempt is made to predict the probable actual levels as seen from the date of appraisal.

1350. Estimation of Remaining Physical and Economic Life of Buildings. Valuators are required to give estimates of the remaining economic lives and physical lives of buildings. Architectural Inspectors also make estimates of the remaining physical lives of buildings. In either case, the estimates should be for the period from the time of examination until the predicted end of life, rather than estimates of the total lives described in the following paragraph.

1351. Because buildings are subject to physical deterioration and obsolescence, their periods of usefulness are limited. As they deteriorate or obsolesce, their ability to serve useful purposes decreases, and eventually disappears. This decline and ultimate disappearance of utility may occur gradually or rapidly. The total economic life of a structure is the period of time between the completion of the building and the disappearance of its ability to produce services or net returns over and above a fair return on the land value. At the end of its economic life, it may still be structurally sound and in good physical condition, so that it can still be useful, though not profitably useful. The period of time between the completion of the building and the time when it is no longer fit or safe for use, or when it is no longer practicable to maintain it in safe, usable condition, is its total physical life.

1352. The difference between the value of the total services or total revenues of a property, and the expenses, is the net return. The flow of returns referred to in the foregoing paragraph is net. As the value of a property arises from its capacity to produce net returns, the characteristics of the future net income stream must be forecast in valuation. The future net income stream has three characteristics, namely, (*a*) quantity, or the size of the income stream at the time of appraisal and thereafter, (*b*) quality, or the changeability of the size in the future, and (*c*) duration, or the period of time during which the stream in any size will endure. Deterioration and obsolescence will decrease the average amount of net returns from time to time in the future, thereby decreasing the margin between amounts of net returns and the periodic amounts which represent a fair return on the value of the land. The availability of the services of the land as a building site is not limited as to duration, but continues indefinitely into the future, for the land does not deteriorate physically or disintegrate. Its earning capacity usually continues and is, for all practical purposes, interminable. It generally varies in accordance with the course of future utilization representing the highest and best use. However, the services of the buildings are limited in duration, owing to the fact that the buildings will eventually become useless due to the action of forces which cause deterioration, disintegration, and obsolescence. Therefore, that portion of the income attributable to the buildings, whether measured in services or dollars, is of limited duration and subject to decline during the period of its continuance. Gradually, the value of the property declines until eventually only land value remains. At such time the building has reached the end of its economic life.

1353. Economic life can never be greater than physical life. An estimate of the probable remaining physical life of a structure fixes the maximum estimate of remaining economic life. It also helps to determine the qualities of the building from an engineering standpoint. The remaining economic life may be, and frequently is, less than the maximum possible physical life. In valuation, estimates of both physical life and economic life are made. Both are dealt with and are jointly treated, because the factors which limit each of them operate to lessen property values, and often cannot be differentiated one from the other. However, in a great majority of cases the factors which result in obsolescence seem to operate with greater force than those which result directly in physical deterioration. In most instances, this results in the termination of economic life before the end of physical life. This fact causes the distinction which is made between the probable physical lives of buildings and their probable economic lives. It is the probable future economic life of a building, rather than its probable future physical life, which is of importance in valuation.

1354. In predicting remaining economic lives, six types of factors are considered:

a. The economic background of the community or region and the need for accommodations of the type represented

b. The relationship between the buildings and the immediate environment

c. Architectural design, style, and utility from the functional point of view; the likelihood of obsolescence attributable to new inventions, new materials, and changes in tastes *d.* The trend and rate of change of the neighborhood

e. Workmanship and durability of construction; the rapidity with which natural forces cause physical deterioration

f. Physical condition and probable cost of maintenance and repair; the policy of owners and occupants and the use or abuse to which structures are subjected

1355. If an old building is incapable of producing an annual income sufficient to pay the expense of repairs, insurance, and taxes, and to produce returns upon the value of the land, its useful life has come to an end. The improvements upon the lot possess no more value than the amount which can be obtained from a purchaser who will buy them and remove them from the site.

1356. Another example is an old residential property which produces annual revenue sufficient only to pay for taxes, insurance, maintenance, and an additional amount which is found to be only a proper and sufficient return upon the value of the site. In this case there is no return which might properly be attributed to the building. The building is producing only enough revenue to take care of necessary expenditures and a return upon the land value. The economic life of the improvements has therefore come to an end and it is found that the value of the property is approximately the same as that of the land alone.

1357. The future economic lives of buildings cannot be precisely determined, because it is impossible to foresee the occurrence of events or new discoveries which affect the values of existing structures by making them obsolete or by hastening and intensifying the operation of those forces which produce obsolescence. All that can be expected is that estimates of future economic life will be of such character as will cause them to be accepted as plausible by well-informed and reasonably minded people. While it is impossible to gauge the accuracy of economic life estimates except in a very general way, it is possible and necessary for Valuators to be consistent in making such estimates. In cases of properties of very similar character and situation, the estimates will also be similar. Poorly built structures will be ascribed shorter lives. Better built structures will be ascribed longer lives. Prospective changes in environments may affect the estimate in either direction. Estimates of remaining lives have significance in terms of each other. That is, the estimates cannot represent reliable determinations of the actual lives but do indicate probable relative lives as between different properties. While it is impossible to know how long any building will produce net returns, it can be indicated that a given building will probably have a longer or shorter economic life than other buildings.

1358. In making these estimates Valuators should receive material assistance from analyses of the conditions and relationships reflected in individual feature ratings in the Property and Location categories. The feature ratings in these categories are indexes of the relative stability of the income stream, either in the nature of dollars or services, which may be expected from the properties to which they apply. High feature ratings in the Property and Location categories will indicate that estimates of remaining economic life should be high when compared to the possible maximum which the Valuator considers might apply under the most favorable conditions, and the higher the ratings the nearer the estimate should approach the possible maximum.

1359. Low ratings of the features in the Property category will indicate that the estimate of remaining economic life should likewise be relatively low. The lower the ratings, the farther should be the estimate from the possible maximum applicable under the most favorable conditions.

1360. Low ratings of the features in the Location category will not necessarily indicate that the estimate of remaining economic life should also be relatively low. The economic life estimate may be relatively high if the Rating of Property is high, although the Rating of Location may simultaneously be low. This is true because of the opposite effects produced on the economic life estimate and on the Location rating by threatening or probable encroachments of incongruous land uses and by threatening or probable infiltration of inharmonious racial groups. The probability or imminence of such encroachments or infiltrations will result always in low ratings of some of the features in the Location category. However, these same forces may operate to either extend or shorten the remaining economic lives of structures in the areas involved. For example, if there is any possibility of encroachment by an incongruous use which will tend to raise the level of land values in the neighborhood under consideration, it will have the effect of shortening the remaining economic lives of residential structures in the district. On the other hand, if the threatened encroachment involves the introduction of land uses which will result in lowering the levels of land value in the neighborhood, the effect will be to lengthen the remaining economic lives of the residential structures therein. In the first instance the introduction of the more profitable uses will result in higher tax burdens, decreased percentage of owner occupancy, and a decline in the gross rental value of properties in the neighborhood. These forces will operate to hasten the time when the residential structures cannot produce income in excess of a fair return on the value of land and, therefore, will shorten the span of remaining economic life. In the second case, the introduction of less profitable uses will tend to lower tax burdens, and, while it will also decrease the percentage of owner occupancy and the gross rental value—and probably will lessen the amount of net returns that can be produced—it will tend at the same time to maintain net returns at a point sufficient to provide a return on the buildings. The infiltration of inharmonious racial groups will produce the same effects as those which follow the introduction of incongruous land uses, when the latter tend to lower the level of land values and lessen the desirability of residential areas.

1361. Land Valuation by Comparison. In the prescribed methods of valuation, the land value is separately estimated by determining the fair price at which comparable sites are available in the same or in competing localities. The Valuator is required to assemble and analyze data regarding sales and asking prices of sites similar to those he must appraise.

1362. It is recognized that market sales data do not absolutely control the establishment of land value by comparison. It is acknowledged that the Valuator must deal with the factors which cause buyers to pay certain prices, as well as directly with the prices they have paid for sites. In many instances the prices paid may have resulted from necessities and points of view of particular purchasers. Sales data are important only if they embrace information which accounts for the prices paid. Such information includes:

a. The actuating motives of buyer and seller
b. The relative intelligence of buyer and seller in negotiating the sale
c. The relative skill in bargaining of the buyer and seller
d. The fairness of the price paid in view of prices asked for available sites affording equal advantages and subject to equal possibilities of enhancement or loss of value
e. The date of the sale and the general and specific environing and economic conditions which then existed and whether or not such conditions have changed since that date

1363. It must be noted, too, that sales prices are of varying usefulness and importance according to the rapidity with which price levels of sites may be changing. In an unusually active sales market, such as exists in "boom" times, rising prices, stimulated by strongly competing buyers, reach a point where fairness disappears, insofar as prices are concerned. Stability and permanence are nonexistent at such times, as well as in times of rapidly declining prices, and the prices then obtained in sales are almost worthless as information in estimating value. However, their frequency, coupled with pyramiding prices, constitutes a warning of the imminence of a reversal of the price trend. Only in times of comparative stability of the price structure are sales prices of substantial worth in valuation. Thus, after a price decline has set in, developed, and finally spent its force, as at the end of a period of economic distress, and voluntary sales transactions begin to occur, it is probable that the sales prices in such transactions will closely approximate value, provided the parties are well informed and act intelligently. A Valuator will generally overvalue property unless he recognizes the changing relationships between sales prices and value. He should understand that in certain periods, sales prices may generally exceed value, while during other periods the prices may be below value. Only in times of comparative stability of the general economic structure, and during periods when there is a fairly well balanced relation between the factors of supply and demand, will sales prices approximate or actually equal value. As sales prices increase in a rising market, value estimates will accompany the prices in their climb toward a peak. Before sales prices reach their peak, however, they may have outstripped value. Later when a break occurs and prices start down, the Valuator's point of view may cause him to maintain his value estimates at higher levels, although the value levels are below the sales prices at the peak and stay below them in the early stages of the decline. In the later stages they will become equal to the prices and then, for a time, exceed them.

1364. In general, the rate of change of real estate prices will indicate the relative usefulness and importance of sales prices. The greater the rate of price change, the lesser the significance of sales prices, and vice versa.

1365. Generally, prices at foreclosure or forced sales are not fair and are therefore of no use. This may or may not be true in every case. In times of declining price levels, a forced sale might be made quickly for an amount which would be higher than that obtainable if a reasonable time elapsed during which efforts to obtain a higher price were made. Such a forced sales price could easily be as much as, or even more than, was warranted at the time. In periods of comparative stability, or of advancing price levels, it is probable that forced sales prices are unfair and of little worth as useful data in valuation.

1366. Sales prices are of importance when they can be analyzed and made to reveal points of view regarding value held by a substantial number of persons. Insofar as they represent the value estimates of isolated individuals, they are of little worth as part of the data. This places emphasis where it belongs, namely, on the why and wherefore of the particular prices paid in specific transactions, rather than upon the prices themselves.

1367. Unless information is gathered on sales transactions which occurred close to the time at which the Valuator makes his appraisal, correction may be necessary because of changed environing and economic conditions.

1368. When sales prices are found to be reasonable and are used by the Valuator, it is of extreme importance that careful comparison be made of the environmental influences and their probable future effects on the desirability and value of each property. The site under appraisal must be intelligently and correctly graded in terms of its relative desirability as compared to the others. The sales price of one can be modified accordingly and regarded as a tentative index of the value of the other. For example, a comparable site was sold for $750. Investigation convinces the appraiser that the sale price was reasonable. A comparison percentage of 100 is assigned to the site being appraised. The two properties are compared. The Valuator notes similarities and differences with respect to the relative stability and permanence of the desirability of their respective environments, tax burdens, and other factors. A percentage of comparison is then ascribed to the other site. This percentage must indicate his opinion as to the relative desirability of the site, measured in terms of the desirability of the site being appraised. If the site compared to the one under appraisal is graded at 125%, the sales price $750 is divided by the grading 125%. The resulting figure of $600 is tentatively assigned as the value of the site being appraised.

1369. Many of the considerations herein with regard to sales prices also apply to asking or listing prices for sales purposes. The latter are useful when comparisons are made between listed properties and a site being appraised. The listing prices are modified so as to determine a probable sales price for the property involved. The procedure is the same as in the use of sales prices. Listing prices generally may be regarded as fixing the maximum valuation for properties of equal desirability. However, they do not, of themselves, indicate the values.

1370. Replacement Cost of Property. The approximate upper bracket or limit of possible value is the cost of replacement of the property, assuming the building improvements to be in new condition. Estimates of the cost of replacement of building improvements in new condition are made, and are then used by the Valuator to estimate the cost of replacement of the entire property—land, buildings, and all miscellaneous costs—in new condition. This latter estimate becomes the approximate upper limit of possible value.

While value may possibly be equal to this uppermost limit, it is also possible that it may be any amount below this limit. Value depends entirely upon usefulness, not upon the cost of construction or replacement. Value tends to conform to cost but this is not to imply that it is always equivalent to cost. The expenditure of money for a dwelling structure does not necessarily create value equal to the cost. Estimates of replacement cost of property are not intended as measures of value, and are not to be so regarded. They merely indicate the possibility that value may exist to an equivalent amount. It is the Valuator's task to decide whether or not the possibility is an actuality in any case.

1371. Cost of construction also may be in excess of value at a given time because under some circumstances a reduction in cost may be in prospect. If construction costs decline, value will also decline if it was originally equal to cost. Thus, it might be assumed that a new method of constructing buildings is invented. At first the costs of using it are great, (*a*) because of high production costs attendant upon the construction of newly devised machinery required to manufacture special materials, or to fabricate special units used in the new construction method, (*b*) because of high promotional costs attendant upon the introduction of a new method to the public, and the creation of a public demand for its use, and (*c*) because of high labor costs while the method is being introduced, resulting from lack of skill of building craftsmen in dealing with unorthodox materials, or in utilizing construction devices or methods not familiar to them. Obviously, when the pioneering stage has been passed, production costs will be decreased through mass production, and labor costs will decline through increased skill of the laborers. It is plain that the costs involved in the beginning must exceed value because of the prospect of declines in costs, if for no other reason. Perhaps this would not be true if a dwelling were a short-lived commodity. For example, certain articles of wearing apparel when they are new may be much more valuable than their cost because they represent the first appearance of a new style. The satisfaction of having been first to introduce the style compensates the wearer for the initial excessive cost. Although he may quickly discard the article, he feels that he has received value for his money. But dwellings involve substantially large expenditures and they must last for a long time. Therefore, if a decline in construction cost is in prospect, the intelligent buyer will consider the value, at most, to be no higher than the point to which construction costs will decline. He may believe that some benefit will accrue to him by being the first to own a house of a new style, but it is more than likely that he will not believe any such benefit will accrue from style alone. Any benefit would have to come from superior living qualities and lesser operating and maintenance costs, combined with lower construction costs than for houses of usual type. It follows that, in cases involving new construction methods or materials, replacement costs may be of relatively little significance in valuation analyses, while the costs of replacement of building improvements of the same design, size, and layout, but built with orthodox materials and by traditional methods, are likely to be of greater significance. In such cases, the latter costs rather than the former tend to fix the upper limit of possible value.

1372. The replacement cost of property is estimated to make possible the application of the substitution theory described in paragraph 1321. As a consequence, the concepts on which the substitution theory rests constitute the basic assumption on which the replacement cost estimate must rest. Therefore, the estimate of replacement cost of property should include all items of expense to which a typical prospective owner would be subjected if he were to undertake to replace or reproduce the improvements involved upon a site of equal value. These items include not only cost of land and buildings, but additional items. The items are indicated in the following list:

a. Price at which an equally desirable site can be purchased or the value ascribed to the subject site
b. Cost of survey
c. Cost of preparing site for improvement, including cost of finished grading, terracing, retaining walls, and landscaping.
d. The cost required to replace building improvements in new condition, determined in accordance with the instructions in Section 16
e. Appraisal fee of lending institution, if customary
f. Federal Housing Administration examination fee
g. Initial service charge
h. Cost of showing condition of title
i. Cost of revenue stamps
j. Preparation of mortgage or deed of trust
k. Recordation of mortgage or deed of trust
l. Preparation of note or bond
m. Notary fee
n. Settlement fee
o. Pro rata expense for taxes on land during the construction period
p. Pro rata expenses for taxes, if any, on building improvements during the construction period

q. Pro rata premium expense for fire, windstorm, and other hazard insurance during the construction period

r. Interest on invested capital during the construction period

From the foregoing, it is apparent that the Valuator's estimate of the replacement cost of a property in new condition would exceed the sum of the replacement cost of the building improvements and the land, as such. At the same time this emphasizes the distinction between "land and buildings" and "property". The land and buildings are simply material things, while the property which an individual purchaser seeks and buys is, in reality, the rights and benefits arising from ownership. It is the replacement cost of the property, rather than merely of land and buildings, which sets the upper limit of possible value.

1373. An illustration of an estimate of the cost of replacement of a property in new condition is given below.

Estimated Cost of Replacement of Building Improvements in New Condition

Main building	$6,447
Garage	412
Other Improvements	205
Total	$7,064

Estimated Cost of Replacement of Property in New Condition

Price of site	$1,350		$1,350
Survey of site	25	$25	
Grading and landscaping	320		320
Building improvements (as above)	7,064		7,064
Appraisal fee of lender	10	10	
FHA examination fee	21	21	
Initial service charge	70	70	
Title insurance	49	49	
Preparation of deed	5	5	
Recordation of deed	5	5	
Preparation of note	5	5	
Notary fee	2	2	
Taxes on land during construction period of 4 mos. ($30×4/12)	10	10	
Taxes on building improvements during construction period. (No tax)	0	0	
Hazard insurance during construction period	10	10	
Subtotal (Total cash investment)	$8,946		
Interest on invested capital at 6% per yr. for construction period of 4 mos. ($8.946×6%×4/12)		179	
Subtotal (Miscellaneous items)		$391	391
Total Estimated Cost of Replacement of Property in New Condition			$9,125

1374. Prepaid future items of expense attendant on acquisition of the property are not allowable items for inclusion in the estimate of replacement cost of property. Taxes for any period beyond the typical construction period may not be included, nor may any portion of the premiums for hazard insurance extending beyond completion of construction. The premium paid on account of mortgage insurance is a prepaid expense item and may not be included in the estimate of replacement cost of property. No allowance is permitted to cover commissions to brokers for the arrangement of a sale of either the site or the finished property, or for the arrangement of mortgage financing.

1375. Some of the items or allowances in the cost estimate may not create equivalent value in a particular case. For example, the structure erected might be inappropriate to the neighborhood, and the completed property would be less valuable than its cost. This again calls attention to the fact that estimates of replacement cost are of little significance in valuation work, except as maxima. An owner might erect a house which would cost him 50% more than the houses which generally characterize the neighborhood, but the value might be less than that of other houses nearby providing the same facilities. The expenditure of money for retaining walls and terracing and landscaping may also prove wasteful, since excessive expenditures on account of such items may create value to the extent of but a fraction of their cost.

1376. The building cost estimates which are used by the Valuator give the cost of duplicating the structures in new condition. The significance of such estimates is greatest in the case of new, or nearly new, structures. They become of less and less significance as older and older buildings are the subjects of valuation. In a great many cases the buildings to be appraised will not be new ones. The cost estimates, therefore, will be of little significance in such cases.

VALUATION CONCEPTS

1377. Plottage Increment. Plottage increment is defined as the increase in unit land value produced by combining smaller ownerships into larger single ownerships. The presence of the plottage increment is accounted for solely in the greater utility of larger tracts. Plottage increment is not a characteristic of a single tract of land. It is a concept which applies only in comparing a large tract with the specific smaller units of which it is composed, and is based upon the potential utilization. In residential real estate, the assemblage of smaller parcels produces a plottage increment only if the smaller parcels by themselves are of such a size and character as to have small utility. The maximum effect of plottage obtains if the lot and the improvements together constitute a naturally marketable real estate entity. Excess land is rarely worth as much per unit of area. As a consequence, land cannot be valued except in terms of the actual amount of land in single ownership.

1378 (1). Marketability and Conformity. The essence of the analysis used to estimate the value of a dwelling property is found in a consideration of marketability factors. Marketability refers to the state of being salable. Ease of marketability may result from fitness and adaptability, or from demand. Current salability at a price is significant, but of relatively less significance than factors which improve or detract from the continuous probability of ready sale during a long period of time in the future. The odd and strange, the peculiar and the unusual tend to impair long time marketability and to reduce values. The typical, usual, regular, and popular increase marketability. The study of the extent to which properties may be expected to be marketable should include cognizance of the lack or existence of, and probable breadth of markets. Any factor which limits the probable number of possible willing purchasers becomes a valuation factor and not infrequently estimates of value must be deliberately lowered until the estimates reach a level at which a reasonably general market is tapped.

1378 (2). The extent to which the property being appraised is suited to its environment must be determined by the Valuator. This matter is dealt with in some detail in Sections 8 and 9. Data relating to conformity are of very great importance because nonconformity may produce adverse effects, such as the shortening of economic life, hastening of obsolescence, and limiting of marketability, thereby affecting value. Regardless of the characteristics of any residential property, its value can be utterly destroyed by influences external to itself.

1379 (1). Environmental Changes. A superficial examination of residential areas in any American city reveals the fact that, with practically no exception, such districts decline in desirability with the passage of substantial periods of time. It is possible that the rate of such declines will generally be slower in the future than it has been in the past, because the rate of population growth in the United States is, and has been, on the decline. This factor, population growth, has been one of the main causes of the loss of desirability which residential districts have experienced. It is obvious that as new population comes into a given region, new residential areas spring up within communities that have already been established. These newer districts present a strong appeal as places of residence, and people living in the older districts experience the urge to sell or rent their old homes and acquire new ones in the newly developing residential areas. In this matter the older districts gradually lose the aspects of owner-occupant communities and take on the aspects of tenant-occupant districts.

1379 (2). The older district still remains desirable, but only to families whose social status or standards of living are lower than those of the families which have vacated the district. This process of change in occupancy by families of successively lower standards of living is accompanied by declines in desirability and value. The value decline may be arrested in some cases where the utility of the sites in a particular district undergoes a transition to more productive uses. However, the district almost inevitably declines in desirability, and usually in value as well, after it is once established and before any such transition to higher uses takes place. The rate of decline varies in different districts according to the rapidity with which new forces destructive of residential values operate within each district and according to the intensity with which these forces act. Many districts enjoy sustained value levels for long periods of time. In fact, most of them decline very slowly and the lapse of a number of years is necessary before the fact that a decline is taking place becomes obvious.

1379 (3). The phenomenon to which attention is here directed also results from causes other than population growth. The development of modern transportation systems, extensions of, and changes in the routes of transportation lines within individual communities, and the making available of automobiles to families of comparatively low purchasing power, have promoted the development of new residential districts and greatly speeded the rate of declines in the desirability and value of the established ones. The encroachment of nonconforming uses in residential sections, such as the introduction of commercial, manufacturing, and industrial enterprises, and the physical deterioration of the buildings in these sections are other obvious and common causes.

1379 (4). It is very important that the Valuator make a study of the causes of declines in the desirability and utility of residential districts. Otherwise he will not develop the greatest accuracy in his valuation estimates and in the ratings which he must make.

1379 (5). It is not possible to totally exclude or prevent the growth or operation of value destroying influences, for it is practically inevitable that all residential property will eventually decline in desirability or utility, and therefore in value, even though it may require substantial periods of time. This risk is known and acknowledged. If the decline is slow, the resulting risk can be offset in mortgage transactions by requiring periodic amortization payments on the loan. However, the important thing is to discover whether, during the mortgage loan period, especially during early life, the property involved will be subject to unusual, extraordinary, and excessive loss of desirability, such as would occur if the district experienced a transition from fine residential use to industrial use, or from occupancy by people with high annual family incomes to people with low incomes.

1379 (6). It is, therefore, especially important to search diligently for the presence of any adverse influences which lessen or destroy desirability or utility, and to discover the absence of safeguards which are intended to protect against declines in value or desirabilty. In such categories the following are included:

a. A declining population in the neighborhood or community or region
b. A decline, or danger of decline, of the desirability of the neighborhood through the influx of people of lower living standards
c. A decline, or danger of decline, of the desirability of the neighborhood as a place of residence through the introduction of commercial, industrial, or manufacturing enterprises, or nuisances or inharmonious uses of any kind
d. Lack of appropriate and adequate deed restrictions and effective provisions for the enforcement thereof
e. Lack of appropriate and adequate zoning regulations

1380 (1). Depreciation, Deterioration, and Obsolesence. Depreciation is defined as loss in value from any cause whatever. Frequently the term is used in the narrow sense of loss in value caused by physical deterioration, and sometimes it is used to signify deterioration itself. Accrued depreciation at any time is defined as the difference between value at the time of appraisal and the replacement cost of the structure in new condition. The word "deterioration" refers to the decay and disintegration which takes place in structures with the passage of time. It is caused by natural forces, by the elements, and by use. It operates to terminate the physical lives of buildings. The term "obsolescence" refers to those changes in the usefulness of structures which causes them to become less desirable and less useful. It operates to terminate the economic lives of buildings. It does not affect physical life as it does not cause deterioration. Deterioration and obsolescence cause a lessening of utility and thereby result in depreciation, that is, loss in value. It is essential to understand the nature of the causes of depreciation, not because of any necessity of measuring the amount of depreciation which has occurred since the completion of a building, but because of the necessity of estimating how these forces will probably affect utility in the future. The forces which cause deterioration and obsolescence operate continuously. They may operate in the future in the same manner or in different manner than in the past. By studying the manner in which they have operated in the past, greater accuracy in the estimates as to how they may operate in the future is attained.

1380 (2). Obsolescence has greater significance in valuation than deterioration. It is caused by:

a. New inventions and discoveries
b. Changes in the preferences and tastes of the public, as for example, with regard to styles of architecture, geographical locations as places of residence, the extent of plumbing facilities provided in residences, sizes of rooms, and heights of ceilings
c. The encroachment of incongruous uses, as when commercial and industrial enterprises are introduced into residential neighborhoods
d. The infiltration into residential districts of people whose living standards are lower than those of the people who already inhabit these districts
e. The failure of substantial numbers of property owners in the district to maintain their properties in good condition
f. Increases in land values which result from changes in the highest and best uses for which land is suited

1380 (3). Accrued depreciation is not of primary importance in valuation. It is the difference between value and cost of replacement. To measure it, it is necessary to make two estimates: the value as of date of appraisal, and the cost of replacement in new condition as of the same date. The difference between the two estimates is the amount of accrued depreciation. The determination of accrued depreciation is a byproduct of the valuation process rather than an essential step in it because value always depends on the amount of future benefits, not upon the deduction of expired benefits from the benefits presumed to be indicated and measured by the cost of replacement. Therefore, the valuation process is properly confined to the estimation or forecasting of the probable extent and nature of future benefits and the translation of such predictions into estimates of present value.

1380 (4). Attempts to estimate accrued depreciation directly, rather than to measure it after the value estimate has been made, are likely to produce grossly inaccurate results. Such attempts usually start by estimating the replacement cost of the building in new condition. It is then assumed that this cost represents the value of the building new, an assumption which frequently is incorrect. Next, it is assumed that the amount of accrued depreciation caused by deterioration and obsolescence can be determined (*a*) by ascertaining the time which has elapsed since the building was completed, (*b*) by considering the physical condition of the structure as revealed by examination, so as to discover how deterioration has occurred, and (*c*) by observing the extent to which the structure is obsolete in architecture, design, and equipment. Then accrued depreciation is presumably determined by (*a*) assuming some annual percentage rate of depreciation due to deterioration, (*b*) multiplying it by the replacement cost and the age of the building, and (*c*) adding an amount equal to the cost of needed repairs and of modernizing the structure to offset unusual deterioration and obsolescence. However, the resulting total may be, and usually is, very inaccurate. In valuation, the emphasis properly belongs upon the length of the probable remaining economic life, rather than upon the length of the past physical life, and upon probable future benefits, rather than replacement costs. The reason for this is: all value derives from the future, none from the past.

1380 (5). In valuation great reliance, unfortunately, is commonly placed upon a valuation procedure which starts with replacement cost in new condition, then estimates accrued depreciation of building value by a direct method—usually the so-called straight-line method or some variation of it—next deducts this item from cost, then adds present land value, and calls the result the value of the property under appraisal. Sometimes, by coincidence, use of this procedure gives a correct conclusion, but it is erroneous in principle, since it places major emphasis upon the past and does not estimate the extent of future utility. The straight-line method of estimating accrued depreciation is defective in a number of important particulars. Its use requires acceptance of the premise that replacement cost in new condition is equivalent to value in new condition, and therefore that so-called "depreciated replacement cost" is equivalent to value. In other words, it is assumed that replacement cost, less accrued depreciation calculated by some arbitrary method of direct estimation based on cost and age data, is equivalent to value at the time of appraisal. The straight-line method is also defective in that it is based upon the premise that buildings decline in value in equal yearly amounts. While the average depreciation per year may be 2%, it does not follow that in 10 years the building value will have declined 20%, in 30 years 60%, 45 years 90%, and so on. Therefore, such a procedure is of questionable merit. Methods of depreciation which utilize sinking fund computations are subject to the same criticism and have no place in real estate valuation.

1381 (1). Distinction between Cost and Value. Cost and value are sharply distinguished. Value depends on the extent of utility in the future, while cost may depend on conditions in the market or on outlays for labor and materials, and these conditions or outlays do not necessarily deal with factors which create value. The only exception is the case of a building which is new and represents the highest and best use for the site. This implies there must be a proper relationship between supply and demand and also between construction costs and other costs in general. Costs are related to value only from the point of view of substitution, the cost required to replace an equal amount of function. In this sense, cost of replacement becomes the approximate upper limit of value. There is a tendency, but no certainty, that value of a dwelling in new condition will be equivalent to replacement cost in new condition. Since value and replacement cost can be equal, estimates of replacement cost in new condition can be used as approximate "ceiling" estimates of possible value, thereby acting as controls on the judgment of the Valuator.

1381 (2). The distinction between cost and value is better appreciated by a consideration of certain valuation concepts, including highest and best use, overimprovement, and underimprovement, and improved value.

1381 (3). *Highest and Best Use.* The highest and best use of a real estate site is that use or succession of uses which makes the land most productive. In determining highest and best use, the test is to discover which program of future utilization is capable of developing the highest return on the land over a substantial period of time. Highest and best use does not refer to a building of the greatest size that someone might be induced to erect. The concept of highest and best use is without meaning unless the available uses compared are thought of in terms of buildings having different functional designs.

1381 (4). *Overimprovement and Underimprovement.* An overimprovement is an improvement so costly or so large as to produce land returns lower than those which could have been produced on the same site by a less costly or smaller improvement. An underimprovement is an improvement which, because of its size or cost, produces a land return less than could have been produced on the same site by some other larger or more costly improvement. Both overimprovement and underimprovement fail to develop fully the potential capacity of the site. The land value is not modified or changed, but the total value of the property is adversely affected. Therefore, buildings which are overimprovements or underimprovements are always worth less than the costs required to replace them.

THE ACCURACY OF VALUATIONS

1382. **Sources of Errors.** Incorrectness or inaccuracy of valuations results from various causes. The following list is provocative of thought:

a. Lack of judgment and experience
b. Haste and carelessness
c. Inadequate data
d. Data of poor quality
e. Incorrect interpretation of data
f. Incorrect method of valuation
g. Faulty application of correct method
h. Influence on Valuator

The lines of action required to minimize inaccuracy in valuations are obvious. At the same time, the considerations discussed in following paragraphs are worthy of examination.

1383. The accuracy of valuations is relative only. Valuations are based on judgment and cannot be regarded as precise measurements. Relative accuracy is obtained when the estimate of value falls between limits which are reasonable. Valuations are deemed correct when expressed precisely in dollars at any point between the limits. Valuators with long experience find that their opinions with respect to values take form, during the process of appraisal, by direct and simultaneous comprehension of all factors, as much as by the detailed method itself. The process tends to be a corroboration rather than the source of the final opinion.

1384. *Reasoning Used in Estimation.* The technique of estimating embraces the use of thought habits and patterns of mental discipline. Reasoning to correct conclusions requires the subordination of prejudices and preconceived notions, and necessitates a rigid application of logic.

1385. *Integration of Items.* The principal justification for the use of analytical methods of appraisal is that the number of items on which the appraiser's judgment is permitted to play is materially increased. The formation of an opinion by an over-all "sizing up" of the problem can rarely be as accurate as one formed after integrating a number of estimates which relate to individual items. Therefore, valuation procedure which progresses first by the making of a number of estimates of individual items and then progresses to a logical integration of the estimates, leads to greater accuracy in the final estimates of value.

1386. *Plausibility.* Accuracy is derived only when the integral and final estimates are characterized by plausibility. Valuators should always set estimates at the most reasonable, most fair, and most likely amounts, as opposed to placing them at possible extremes.

1387. *Bracketing.* In establishing criteria to determine plausibility and probability, competent Valuators test them in terms of possible upper and possible lower limits of items, thereby bracketing the zone within which the final estimate should lie. Next, they proceed to narrow the limits as much as possible, and finally select as their estimate a figure lying approximately midway between the narrowed limits. It may not always be precisely midway between the limits, but in general the bracketing process does conclude with a strong presumption of correctness attaching to some one level of estimate.

1388. *Interpolating.* In many problems of estimation, the bracketing limits established will be derived from estimates made in connection with other properties. In such cases, it is logical to derive the new estimate by sandwiching it between established estimates. For instance, the approximate levels of value of two types of properties may have been set. The level of value attributable to a third type may be recognized as "more than", or "less than" the others. The directions in which estimates tend to move under changed conditions are usually known. Thus, by interpolation between established limits or extension beyond limits it is possible to give some control to the process of estimation and thereby secure consistency and plausibility in final opinions.

1389. *Averages.* A word of caution should be given in connection with the use of averages. Expressions such as "average conditions", "average price", "average value", "average house", or "average lot", are frequently used. Ordinarily, "typical" is meant rather than "average." An average figure or condition can only be of substantial use in appraisal procedure if it is composed of quantities that do not vary considerably from the average itself. Some appraisers are tempted to use published statistics reporting various facts applying to entire municipalities. This practice is dangerous unless it is first ascertained that the average figure can be properly utilized in the specific case.

1390. *Normal Relationships.* Ordinarily, the relationships between several individual estimates are reasonably similar insofar as typical properties are concerned. It is well to bear in mind and use the normal relationships as checks and guides in making estimates.

1391. *Consistency by Arbitrary Treatment.* The general valuation problem, from the point of view of estimation, may be divided into two parts. First, there is the desirability of ascertaining the correct general level of values. Secondly, there is the desirability of placing valuations on a large number of properties in such a manner that they are consistent one with another. As estimation problems, the two phases of valuation fall in different ranges. The first is solved by the application of adequate data and sound method. The second is secured by arbitrary but reasonable adjustments which bring about consistency. Consequently, after the limits within which an estimate of value should fall have been established, the actual setting of the precise dollar valuation is and should be done by making the estimate consistent with other valuations.

1392. *Probability.* Inasmuch as prospective services of properties occupy such a dominating position in the valuation process, the accuracy of results necessarily depends upon the quality of the forecasts which are made. The Valuator cannot know to a certainty which future events will occur. Therefore, he bases his predictions upon the most probable course of future events. Forecasting is a necessity in valuation. It is impossible to assume a position which declares that it is neither feasible nor justifiable to make forecasts. The very nature of value itself makes prediction an integral part of valuation method. All the devices which aid in forecasting the most probable course of future events are used. The principal one of these is the use of information relative to the past because there is a strong presumption that, under like circumstances, future events will follow much the same course and derive from much the same causes as did past events.

1393. *Desirability of Methodical Procedure.* The advantages of methodical procedure in valuation include the following:

a. The discovery, isolation, and identification of individual influences which combine to create, sustain, or destroy value is accomplished

b. Appraisal procedure is standardized to a reasonable and desirable degree

c. The extent of the zones within which acceptable valuation estimates must fall is limited, bringing under some control the estimates of individual appraisers

1394. In valuation it is preferable to resort to analytical methods rather than to depend on unaided judgment. Judgment controls the valuation process, but a methodical procedure will serve to break down the complexities of the problem. It allows the Valuator to piece together and weigh more phases of the problem, and to consider the manner in which various factors operate in creating value. Part of the relative accuracy is derived directly from the quality of the data. The remaining accuracy is derived from the method of valuation employed. Illogical reasoning in correlating the elements and a faulty process impair accuracy, while a logical process, sound methods, and the correct interpretation of the factors contribute to accuracy. The methods used in valuation have definite limitations and are useful aids only when the appraiser knows their limitations and uses the methods intelligently. No method of calculating realty values can be relied on implicitly to the exclusion of what the experienced appraiser knows to be in accord with common sense and good judgment. The data deal with many matters that are incapable of exact measurement. Furthermore, valuation requires forecasting of matters that cannot be definitely ascertained. Estimates are used in place of measurable quantities. If the estimates are based on such knowledge as is available with regard to the matters considered, and are in accord with sound, common sense principles, the conclusions produced will be sound and will be acceptable as reasonable and accurate estimates by reasonable and well informed individuals. Absolute necessity for good judgment characterizes every step in valuation procedure.

1395. **The Valuator's Final Judgment.** The Valuator should never lose sight of the fact that the value which he must estimate is the price which a well-informed typical buyer would pay, and be warranted in paying, for the property appraised, rather than the maximum price which could be obtained if the property were offered for sale. In determining such a warranted price, a buyer will give consideration to both the cost and the value which may be assigned separately to the land and to the improvements upon it. He will also consider the prices at which he can obtain other equally desirable properties of like characteristics, from well-informed sellers who, when selling, would be acting intelligently, voluntarily, and without necessity. He will contrast the advantages of renting with the advantages of buying, as indicated by comparison of the cost of renting and cost of buying, and he will consider the many other matters to which attention is drawn in this Section of the Underwriting Manual. He will not be especially interested in, or greatly influenced by what the property has cost someone else in times past, or what it would cost to build it today, though he will desire information regarding these matters; but he will be vitally interested in the ability of the property to produce a stream of future benefits for him if he were to purchase it. The characteristics of this stream of benefits—its present size, the extent of any probable diminution in its size in the future, the certainty of the continuation of the flowing stream, and the length of the period during which the flow may be expected to continue—will determine the price which he is warranted in paying, and, hence, the value of the property.

1396. There is no virtue in undervaluation of properties, and great risk of loss is introduced by overvaluation. Federal Housing Administration Valuators must avoid both undervaluation and overvaluation. Their attention is directed to the fact that speculative elements cannot be considered as enhancing the security of residential loans. On the contrary, such elements enhance the risk of loss to mortgagees who permit them to creep into the valuations of properties upon which they make loans. Valuators shall not report valuations that cannot be justified by existing conditions which they find and of which they are aware, and by reasonable and plausible estimates with regard to the effects of conditions which may reasonably be expected to prevail in the near future subsequent to the date of valuation.

1397. The valuation process requires the Valuator to gather, analyze, and interpret a great volume and variety of data. Because the necessary data are gathered piecemeal, there is danger that he will assign greater importance to some of the data than they are rightly entitled to receive, and reach a conclusion which is premature and unsound. Before reaching his final conclusion, it is essential that he place himself at a distance, figuratively speaking, from the problem with which he is dealing in order that he may get a broad, comprehensive view of the whole group of data and of the aspects of the problem in its entirety. He must not remain so close to the great volume and variety of data which he must consider that he will fail to properly appraise the relative importance of the various matters which comprise the data and lose sight of the general characteristics of the entire problem. Let him stand off at a distance after analyzing the data, and consider the resultant effect produced by the multiplicity of influences which operate in every case. Then it is more likely that the conclusions which he reaches as a result of any valuation method or procedure which he may follow, or comparisons which he may make, will accord with that which will be required of all Federal Housing Administration Valuators, namely, that their conclusions in every case shall be fully supported, reasonable, sound, and sensible.

PART III

SECTION 14

VALUATION OF AMENITY INCOME DWELLINGS

CONTENTS

Effective February, 1938
Federal Housing Administration

PART III

SECTION 14

VALUATION OF AMENITY INCOME DWELLINGS

VALUATION PROCESS

1401. Most single family and certain multi-family properties, salable to prospective owners interested to some degree in direct services and amenity income, are best appraised by the amenity comparison method of valuation. This method consists of four principal operations, as follows:

a. The making of an estimate of the value of the property by determining the gross returns which the property is capable of producing, and then converting them into an estimate of derived capital value

b. The setting of possible upper limits of valuation by making estimates of the replacement cost of the property in new condition and of the price which the property would probably bring in a reasonable time if offered for sale in the market

c. The establishment of a final valuation by comparing the estimates of derived capital value, replacement cost of property in new condition, and price available in a sale

d. The distribution of the final valuation to its component parts.

1402. In the process, the estimation of derived capital value constitutes the essence of the method and is the major attempt to ascertain a proper valuation. The estimates of replacement cost of property are used solely as possible upper limits of value. Estimates of available market price, if lower than either of the other two, are used, with certain exceptions, as approximations of the upper limits of valuation.

1403. The process requires the separate estimation of the total value and of the land value, but not a separate valuation of the building improvements. However, the building improvements are ascribed values which are the portion of the total valuation remaining after deducting the separately made land valuation.

1404. Selection of Method. The first step in any valuation is to determine the basic assumption on which the valuation is to rest by following the line of thought developed in Section 13, Methods of Dwelling Valuation. The Valuator is required to study the characteristics and environment of the property being appraised so as to ascertain whether it exerts appeal to prospective purchasers who are interested typically in the amenity returns, i. e., direct services and satisfactions, which the property is capable of producing for an owner-occupant; or whether it exerts appeal *solely*, or almost solely, to prospective purchasers interested typically and only in the monetary returns obtainable through ownership and renting of the property. This enables him to select the proper method of valuation. If the appeal is *solely*, or almost solely, to purchasers desiring only monetary returns, the property should be appraised by the capitalization method described in Section 15, Valuation of Rental Income Dwellings. If a measurable degree of appeal is exerted to purchasers for amenity returns receivable through owner-occupancy, then the property should be appraised by the amenity comparison method of valuation described in this Section. This method rarely applies to the valuation of four-family properties.

1405. Steps in Valuation Process. The first step in the valuation process is the determination of the basic assumption on which the valuation is to rest. This is described in paragraph 1404. If the amenity comparison method is found to apply to the case, the valuation process normally proceeds in 14 additional steps. The order of the steps is designated by letters as follows:

a. The Rating of Location is determined in accordance with the instructions in Section 9.

b. The Rating of Property is determined in accordance with the instructions in Section 8.

c. An estimate of the *remaining economic life* of the building is made in accordance with instructions in Section 13.

d. The *monthly rental value* of the property is ascertained in accordance with instructions in Section 13.

e. A study is made to determine the degree to which the property exerts *owner-occupancy appeal*, that is, the extent of its ability to satisfy fully all the desires which owner-occupants typically seek from a property. The results of this study are expressed as a percentage, thus: "Owner-occupancy appeal 60%." This analysis is described in paragraphs 1412 and 1413.

f. Selection is made of an *amenity increment percentage* which reflects the degree to which the monthly value of the services of the property to a typical owner-occupant exceeds the monthly rental value. The owner-occupancy appeal percentage enters into this selection. Amenity increment percentages and the methods of selecting them are described in paragraphs 1414 to 1417.

g. The *derived monthly value* is determined by multiplying the monthly rental value by the selected amenity increment percentage and adding the amount thus derived to the monthly rental value. This step is described in paragraphs 1418 to 1420.

h. Selection is made of a *conversion factor* reflecting the certainty, quality, and duration of the derived monthly value. Conversion factors and the methods used to select them are described in paragraphs 1421 to 1424.

i. An estimate of the value of the land is made by comparison in accordance with the instructions in Section 13. If excess land, as defined in paragraph 1425, exists a separate valuation of the excess area may be required. Instructions are found in paragraph 1425.

j. The *derived capital value* of the property is determined by multiplying the derived monthly value by the selected conversion factor and adding the valuation, if any, of excess land. This process is described in paragraphs 1425 and 1426.

k. A judgment is formed with respect to the *available market price* of the subject property in accordance with the instructions in paragraphs 1427 to 1432. This requires consideration of sales data relating to improved properties of similar type and characteristics in the same or in competing neighborhoods.

l. An estimate of the *replacement cost of property in new condition* is made in accordance with the instructions in Section 13.

m. The derived capital value is compared with the estimates of available market price and replacement cost of property in new condition. This comparison leads to the determination of the *estimate of value*. The latter figure is the Valuator's final total valuation. The instructions covering the making of the comparison and the determination of the final value estimate are given in paragraphs 1434 to 1439.

n. Finally, the total amount of the estimate of value is distributed to the component parts of the property in accordance with the instructions in paragraphs 1440 to 1442, and the results are entered on FHA Form No. 2015.

THE DETERMINATION OF DERIVED CAPITAL VALUE

1406. The estimate of derived capital value is found by first determining the derived monthly value attributable to the property for the ensuing 12 months, multiplying this amount by a conversion factor, and then adding the value ascribed to excess land, if any. The derived monthly value is determined from an analysis of the rent obtainable from a typical tenant and an analysis of the direct services the property is capable of rendering an owner occupant during the ensuing 12 months. The validity of the method depends, in part, upon the assumption that expense ratios are quite similar for amenity income dwellings of the same type, in the same general locality. The translation of derived monthly value to the estimate of derived capital value by the use of conversion factors reflecting the probable certainty, quality, and duration of the returns in future years, is in accord with general capitalization theory. It is practical to the extent that data compilation is thorough, judgment is used in the determination of derived monthly value, and consistency characterizes the selection of conversion factors.

1407. The use of estimates of gross returns as the basis of valuation is justified because expense ratios in amenity income dwelling properties of the same type, quality, and price group are relatively constant and variations are adequately allowed for in the conversion factors. The only items of expense subject to wide variations in these properties are the expenses for repairs, maintenance, replacements, and taxes. These expense items are factors which affect the ratings ascribed to the Property and Location categories in the risk rating system. These ratings, in turn, are used as criteria in the selection of conversion factors. Therefore, the use of estimates of gross returns is feasible in the process.

1408. Ratings and Economic Life. After the Valuator has determined that the amenity comparison method applies to the case, he proceeds with the first steps. The first three steps comprise the determination of the Rating of Location, the Rating of Property, and the estimate of remaining economic life. These steps are included early in the process because they require the Valuator to become thoroughly familiar with the detailed characteristics of the property and its environment. As finally used for valuation purposes, the two risk categories will have significance both because of the ratings ascribed to individual features of the categories and because of the total ratings of the categories as well.

1409. For purpose of illustration the steps in the amenity comparison method of valuation are shown by means of an example. The conclusions thus far reached may be listed as follows:

a. Total Rating of Location	57
b. Total Rating of Property	86
c. Remaining Economic Life of Building	35 years

1410. Monthly Rental Value. Instructions regarding the estimation of monthly rental values are given in Section 13. The instructions deal with the making of rental value estimates in rental markets in which the demand and supply factors are approximately balanced and rental values reasonably stable. They also deal with markets in which the demand factors substantially outweigh supply factors, resulting in seriously unbalanced conditions and excessive and unstable rental values. Under such circumstances the instability of the rental value structure cannot be given effect satisfactorily in the amenity comparison method of valuation except by use of an estimated monthly rental value which the Valuator determines to be a reasonably stable one. He must, therefore, reach a conclusion as to the point to which the temporarily inflated rental values are likely to decline when forces which have produced the inflated conditions have spent themselves. For example, assume that in a particular case the rental actually obtainable for the ensuing 12 months is estimated at $70 per month and this figure is found to be the rental value for that period, that is, it is found to be in line with rentals asked and paid for residential accommodations of the type and quality under consideration. However, the Valuator concludes that in a year or two the rental obtainable and rental value will probably drop to $60 per month. In this case $60, rather than $70, is the monthly rental value to be used in the amenity comparison method. Aside from this modification, the Valuator proceeds in accordance with the procedure as described in this Section. It might appear that some adjustment will be needed on account of the use of a figure for monthly rental value lower than the amount actually obtainable. However, no adjustment is needed. This is true because the amount by which the currently existing monthly rental value is excessive represents a premium which prospective tenants in the market are willing to or must pay in order to secure residential accommodations of the type and quality desired by them or available for their use. A purchaser for owner-occupancy could avoid the necessity of paying this premium. It would be manifestly improper to use a currently existing excessive rental value in the amenity comparison method and make an addition thereto of an amenity increment determined by using the temporarily high rental value as a base. If this were done it would presume that the typical purchaser for owner-occupancy could avail himself of both a rental return as an owner-landlord during the period of excessive rental value levels and an amenity return as an owner-occupant at the same time. Obviously this is both impossible and an illogical assumption. The currently existing high rental value cannot be used because the amenity comparison method postulates a typical purchaser for owner-occupancy. The point at which the prospectively declining rental values are likely to become relatively stable must, therefore, be used. It is emphasized that the foregoing procedure is to be followed only in instances where the Valuator is reasonably certain that there will be an abrupt and unusual decline from rental value levels within a year or two from the date of appraisal. Declines which may occur in more distant years are taken into account directly when selection is made of the conversion factor applicable in any given case.

1411. In instances where the Valuator is required to make two estimates of monthly rental value covering different periods of time in the future he records his conclusions in this manner opposite question (21) on FHA Form No. 2015:

	($70)	$60
(21) Monthly rental value, unfurnished		

The example being used in this Section assumes that only one estimate of monthly rental value is required. The Valuator's conclusion is expressed as follows:

d. Monthly Rental Value -- $40

1412 (1). Degree of Owner-Occupancy Appeal. The Valuator next proceeds with step (*e*) to ascertain the degree to which the property exerts owner-occupancy appeal. He must study the property and its environment so that he may reach a conclusion as to the relative intensity of the desire for ownership and owner-occupancy of the subject property which would be aroused on the part of a typical person or family which could afford to own the property and which is in the market to purchase and occupy a home. He must outline in his own mind the nature of the conditions with reference to a property, neighborhood, and neighborhood inhabitants which would be most acceptable to such typical persons or families. The immediate objective of this phase of the valuation process must be uppermost in his mind. That is, he must constantly remember that this step is the major one in estimating the extent to which the services of the subject property may be more valuable to a typical owner-occupant than to a typical tenant-occupant, or the extent to which the returns a typical owner-occupant would receive may have a monthly value in excess of the monthly rental value. It is obvious that anything pertaining to the property or the immediate neighborhood which enhances the owner-occupancy appeal of the property will likewise enhance its appeal for tenant-occupancy. While the prospective owner-occupant will demand at least as much as a prospective tenant-occupant, the former will be more exacting in his requirements, more discriminating, and more critical of the property and its surroundings. Therefore, in considering significant factors which determine the degree of owner-occupancy appeal, the Valuator must view them from the standpoint of the highly critical and carefully discriminating attitude of a prospective typical owner-occupant, rather than from that of the relatively tolerant and superficial attitude of a typical tenant-occupant.

1412 (2). Shelter is a universal necessity and is obtained either by renting residential accommodations or by purchasing them. Nearly all individuals at some time or other have a desire to own and occupy their own homes. The hopes and wishes from which this desire emanates are fulfilled in varying degrees by home ownership and owner-occupancy. The extent to which they are satisfied in this way depends upon matters pertaining to the properties purchased, to the neighborhoods in which they are located, and to the characteristics of the people inhabitating these neighborhoods. When the best possible conditions exist relating to a property, the neighborhood, and the neighborhood's inhabitants, fulfillment of these hopes and wishes is possible to the greatest degree and the owner-occupancy appeal of the property will likewise be greatest. There is no statistical or mathematical basis of measuring the degree of owner-occupancy appeal in any case; therefore, degrees of owner-occupancy appeal ascribed to properties are merely relative. However, the standard, in terms of which comparative degrees are expressed, embraces the very best conditions which would have to exist with reference to properties in various price groups, neighborhoods for such properties, and inhabitants of such neighborhoods in order to fulfill completely the hopes and wishes which depend for realization on ownership combined with occupancy of a home. A property which exerts strong owner-occupancy appeal will arouse an intense desire for both ownership and occupancy of it on the part of a person or family financially able to buy and maintain such a property and in the market to purchase and occupy a home. This desire would be aroused as the person or family would approach the neighborhood. It would be stimulated upon approach to the property, and would attain to great intensity upon inspection of the property and the gaining of knowledge that the neighborhood inhabitants were considered very desirable from the standpoint of the person or family inspecting the property. To the extent that characteristics of the approach to the neighborhood, the neighborhood itself, the subject property, and the neighborhood inhabitants were less favorably regarded, the intensity of the desire for ownership combined with occupancy of the property would be restricted, and owner-occupancy appeal would likewise grade downwards.

1412 (3). In determining the extent to which a property exerts owner-occupancy appeal, the Valuator may be guided, in part, by the evidences indicated in recent sales. The fact that buyers have been purchasing with occupancy in mind probably indicates a degree of owner-occupancy appeal. However, such indications can be used as evidence only by considering the actuating motives of the buyers and numerous other significant factors. The real test is: To what extent would the existing condition with reference to any significant factor under consideration meet the maximum requirements of an exacting and discriminating typical prospective owner-occupant? This calls for a contrasting of the maximum requirements pertaining to the condition from the point of view of prospective typical owner-occupants with the requirements of prospective tenant-occupants. The matters listed below are considered to be significant factors in estimating the degree of owner-occupancy appeal. The first four and the eighth items relate to the neighborhood and the others relate to the specific property being appraised.

a. The appearance of the immediate neighborhood and of the approach to it as they affect or create owner-occupancy appeal.

b. The life-stage of the immediate neighborhood. Residential neighborhoods usually enhance in desirability if they build up sufficiently fast. When building stops, they remain relatively stable for a period of time, and then decline. The tendency is for owner-occupancy appeal to go up, level off, and then go down as the life-stage progresses. Evidences of the life-stage, so far as owner-occupancy appeal is concerned, may be found in the age of the neighborhood, though this may not be of major importance; the proportions of owner-occupancy and tenant-occupancy; the percentage of vacant residential units in the neighborhood; the percentage of vacant lots in the area and the rate of absorption of such lots into use; the rate of increase or decrease in population in the neighborhood; and the general impression gained from an inspection of the area to ascertain if evidences of obsolescence are observable.

c. The degree of prestige associated with the neighborhood as a place for owner-occupancy in contrast with tenant-occupancy.

d. The degree of social and racial compatibility of the inhabitants of the neighborhood. The presence of socially or racially inharmonious groups in a neighborhood tends to lessen or destroy owner-occupancy appeal.

e. The extent to which the subject property in its external aspects and interior finish and appointments are especially attractive to the eye and create a desire for ownership as contrasted with tenancy.

f. The extent to which the functional quality of the property, as evidenced by the ratings of the "Function" features in Rating of Property, would be satisfactory to a prospective owner-occupant in contrast with a tenant-occupant.

g. The relative newness of the building improvements of the subject property, considered from the standpoint as to how this condition adds to the desire to own and occupy rather than to merely occupy as a tenant.

h. The extent and effect of neighborhood detractions, that is, of things or conditions not already mentioned which detract from appeal for owner-occupancy. A dilapidated or ugly or obsolete building would lessen the owner-occupancy appeal of adjoining and nearby properties. Traffic hazards, noise, smoke, and obnoxious odors also are detractions.

i. The extent and effect on owner-occupancy appeal of any inappropriateness of the subject property to its immediate neighborhood.

The first seven matters listed may be considered positively, while the last two require consideration as negative factors; that is, they operate to reduce the degree of owner-occupancy appeal.

1413. The conclusion takes the form of a percentage expression which represents the degree of appeal for owner-occupancy. If the conclusion is that the owner-occupancy appeal is negligible, then the amenity comparison method will not be applicable. In such cases the capitalization method described in Section 15, Valuation of Rental Income Dwellings, should be used. It is assumed for the purposes of the example, that the Valuator has reached a conclusion in this step as follows:

a. Owner-Occupancy Appeal ---------------------------------- 65%

1414. Monthly Amenity Increment. A residential property which exerts owner-occupancy appeal will produce returns or services to typical owner-occupants which are more valuable than is indicated by the monthly rental value to typical tenants. For example, owner-occupants of such properties obtain returns which include independence in use and control, satisfaction and pride from the mere fact of ownership, and enhanced social status. Tenants cannot realize these returns in the same degree, if at all. Therefore, while the monthly rental value fully represents the value of the returns received by the tenant, the value of the returns realizable by a typical owner-occupant is greater. The amount by which it is greater is designated herein as the *monthly amenity increment.* Amenity increment percentages are utilized for the purpose of ascertaining monthly amenity increments which in turn are used to determine the value of the monthly returns to typical buyers desiring to become owner-occupants.

1415. Amenity increment percentages indicate the extent to which the value of the monthly returns or services of a property to a typical purchaser for owner-occupancy exceeds the monthly rental value of the property to a typical tenant. The returns to the owner-occupant are not received in monetary form but rather in the form of direct services and satisfactions. However, for the purposes of valuation a monetary value must be ascribed to these returns. This is accomplished by multiplying the monthly rental value by the appropriate amenity increment percentage and adding the amount thus derived to the monthly rental value.

1416. Amenity increment percentages are ascertained by studying cases in which valuations have already been established. In this study the various conditions entering into the valuation and justifying it must be known and available for analysis. The factors vary for properties in different value groups and for properties exerting various degrees of owner-occupancy appeal. Thus, within any one value group, the higher amenity increment percentages are found to relate to properties of higher owner-occupancy appeal. With regard to properties in different value groups, the higher percentages relate to the properties in the higher value groups, assuming equal degrees of owner-occupancy appeal. Amenity increment percentages are assembled in tabular form so that an appropriate increment may be readily selected after classification of a property into the proper value group and after a conclusion has been drawn as to the owner-occupancy appeal percentage.

1417. Amenity increment percentages are used to estimate the monthly value, for the ensuing 12 months only, of the returns to typical owner-occupants. The certainty, constancy, and duration of returns thereafter do not enter into the selection of amenity increment percentages. These characteristics of the future returns are given consideration at another point in the valuation process. The value range and owner-occupancy appeal percentage are the criteria which dictate selection of these increment percentages. In the example it is assumed that the amenity increment percentage selected by the Valuator is as follows:

f. Amenity increment percentage for value range $4,000 to $6,000 and for owner-occupancy appeal 65% 10%

1418. Determination of Derived Monthly Value. The next step requires the Valuator to determine the derived monthly value imputable to the property for valuation purposes. Like the estimate of monthly rental value, the derived monthly value is for the period embracing the ensuing 12 months.

1419. The derived monthly value represents the value ascribed for the next 12 months to the services and satisfactions realizable by a typical purchaser of the property for owner-occupancy. It is always in excess of the monthly rental value, although sometimes the excess may be small as in cases where relatively low owner-occupancy appeal percentages apply.

1420. The derived monthly value is ascertained by multiplying the monthly rental value by the applicable amenity increment percentage, thus:

g. Determination of Derived Monthly Value:

Monthly Rental Value	$40
Amenity Increment Percentage	×10%
Monthly Amenity Increment	$4
Derived Monthly Value ($40+$4)	$44

If the amenity comparison method is used in appraising a small multi-family property, the process is the same as in the case of a single-family amenity income dwelling except that a slightly different treatment is prescribed in determining the derived monthly value. The monthly rental values of the individual units are estimated as in other cases. The owner-occupancy appeal percentage will be lower than in the case of the single-family property, inasmuch as the owner occupant must share the premises in certain respects with tenant occupants and must also assume the burdens of operating a rental business in connection with his own home accommodations. The amenity increment percentage will be applied only to the rental value of the unit likely to be occupied by a typical purchaser. After this addition has been made, the derived monthly value is determined by obtaining the sum of the resulting figure and the monthly rental value of the accommodations which would be rented. This step in the process, in the case of a two-family amenity income dwelling is illustrated as follows:

g. Determination of Derived Monthly Value:		
Owner-Occupant's Unit:		
Monthly Rental Value	$40.00	
Amenity Increment—10%	4.00	
Total		$44.00
Tenant-Occupant's Unit:		
Monthly Rental Value		40.00
Derived Monthly Value		$84.00

1421. Conversion Factors. There is a relationship between the level of the returns a property is capable of producing and the value of the property. The ratio of the total amount of the value to the monthly amount of the returns will be relatively high or low depending upon the certainty, quality, and probable duration of the returns in the future. This ratio is described as the conversion factor. The conversion factor in any given case is equal to the value of the property divided by the derived monthly value. Such a ratio may be used to determine a derived monthly value figure when the value of the property is known, or to ascertain an estimate of value when the derived monthly value is known. When a conversion factor is used, it serves the same purposes as do capitalization rates and remaining economic life estimates in the capitalization method of valuation described in Section 15.

1422. Tables of conversion factors are established by Chief Valuators to make certain that they conform to conditions in local areas and in all types of markets. In setting up tables Chief Valuators select a number of typical properties, the total valuations and derived monthly values of which, have been previously established. A substantial number of properties should be selected for this purpose. The Chief Valuators ascertain then what conversion factors will produce the individual derived monthly values previously estimated for each property. Thus, if the total valuation of a property is $5,000, and the derived monthly value is $45, the conversion factor is 111. A tabulation should be made so as to facilitate study of the various cases in order to discover and analyze the causes for differences in conversion factors. The significance of remaining economic life estimates, and of category and feature ratings of Location and of Property should be analyzed in each case.

1423. Tabulations should be separately made according to economic background areas, and should include properties characterized by upper and lower extremes and midway points as to factors of major significance, such as remaining economic life estimates, location ratings, and property ratings. Properties having substantially similar characteristics are arranged in the tabulation by separate groups, and a table of conversion factors is set up by analysis of the various significant factors. Valuations on the individual properties selected for the purpose are deemed correct when the estimates of value are supported by market prices, the level of which has developed during a period characterized by the absence of extreme conditions of the real estate market. This is evidenced when supply and demand are in close correspondence, when the sales prices are in proper relation to the various group income levels of purchasers, and when sales have been consummated on sound financial bases. In using the tables, Valuators make adjustments and interpolations as their judgment dictates. They are required, however, to use the same conversion factor when identical conditions apply to various cases and to use higher and lower factors in logical relation to the differences in conditions applying to different cases.

1424. High ratings of the features in the Property and Location categories when combined with long remaining economic life estimates indicate the applicability of high conversion factors. Lower feature ratings combined with shorter economic lives require the use of lower conversion factors. Intermediate combinations of these elements, which reflect the quality and duration of future returns, indicate the application of intermediate conversion factors. In the example it is assumed that the Valuator's decision is as follows:

h. Applicable Conversion Factor............................... 103

1425 (1). Valuation of Land. The Valuator is next required to reach a conclusion as to the value to be ascribed to all the land which comprises an eligible area. This is accomplished in accordance with instructions contained in Section 13. In determining the extent of an eligible land area, the Valuator is guided by instructions in Section 5. In the example it is assumed that the Valuator's conclusion is as follows:

i. Valuation of land.. $650.00

1425 (2). If eligible excess land is found to exist, the Valuator treats it in accordance with instructions which follow. Excess land is defined as an area in excess of the area of a land unit which is typical in the immediate neighborhood, or an area in excess of that which is adequate to suitably accommodate the building improvements in the case. If the excess land enhances the rental value of the property, or the amenity increment percentage which is applicable, or both, no special treatment is necessary. If the eligible excess land does not enhance the rental value or the amenity increment percentage, the Valuator estimates the value of the entire eligible land area and ascribes a value to the excess land equal to the difference between the valuation of the entire eligible area and the valuation of an area typical in the immediate neighborhood, or one which is adequate to suitably accommodate the building improvements. In such cases, therefore, three land valuations are necessary, namely: (*a*) Valuation of the total eligible area; (*b*) valuation of typical area or area suitable for building improvements; (*c*) valuation of the remaining portion of the eligible area, that is, the excess land. If it is assumed that excess land exists in the example, the Valuator's conclusions might then be as follows:

i. Valuation of Land (i. e., the entire eligible area)		$1,050.00
Valuation of area suitable for building improvements	$650.00	
Valuation of excess land	400.00	

1426. Determination of Derived Capital Value. The Valuator next proceeds to the determination of the derived capital value. This merely involves multiplication of the derived monthly value by the applicable conversion factor and the addition to the amount thus determined of the valuation, if any, ascribed to excess land. The process is illustrated in the following.

j. Determination of Derived Capital Value:

Derived Monthly Value	$44
Applicable Conversion Factor	×103
	$4,532
Excess Land—none	00
Derived Capital Value	$4,532

THE ESTIMATE OF AVAILABLE MARKET PRICE

1427. After the Valuator has made the estimate of derived capital value he proceeds to make the estimate of available market price. He assembles data on sales of similar improved properties in the same locality or in competing localities and forms a judgment with respect to the available market price of the subject property.

1428. Market price estimation requires the use of sales, asking prices, and offers, for the purpose of estimating prices obtainable for properties in the open market at the time, or within a reasonable period after the date of appraisal. This necessitates many comparisons relating to the nature and mutability of the characteristics, environments, desirability, and utility of the properties under appraisal, and of those of like properties involved in the sales and listing transactions or negotiations. In making such comparisons, consideration is given to the entire range of data useful in estimating residential property values. Inasmuch as sales and asking prices may be greater, or less, than acceptable value estimates, it is plain that market price estimation merely produces a conclusion with respect to the price obtainable, irrespective of whether this price is warranted. Of course, if the sales and asking prices considered are fair, when viewed from the standpoint of future benefits which are likely to accrue to an owner, then the final conclusion as to the market price obtainable for any property under appraisal will also be the final conclusion as to a reasonable estimate of the value of the property. Therefore, after making the comparisons and analyses necessary in market price estimation, the Valuator must realize that the resulting conclusion cannot be accepted as a reasonable value estimate unless results produced by other estimates indicate that the market price obtainable represents a price that is warranted. This is tantamount to indicating that the estimate of available market price is not a method of valuation. The final use of the estimate in the amenity comparison method is to establish one of the approximate upper limits of possible valuation, except as noted in paragraph 1438.

1429. There are several devices used by Valuators in making comparisons between properties. One obvious device is to make direct comparisons of properties by over-all judgments of their relative values. Another is to assign a comparison percentage to the various properties, basing the percentages on a figure of 100% for the property under appraisal. A third device is to make the comparisons in terms of lump sum differences in market price by allowances for variations, such as sizes, accommodations, and locations.

1430. When comparison percentages are used, the property being valued is assumed to have a market price status of 100%. Comparison percentages are then ascribed to the other properties with respect to which the Valuator has obtained sales data. These percentages must indicate his opinion as to the relative desirability and worth of the properties, measured in terms of desirability and worth of the property being appraised. Before ascribing percentages, he should familiarize himself with all the characteristics, physical and otherwise, of all the properties to be embraced in the comparisons. Furthermore, he must consider the characteristics of the environments in which the several properties are located, the nature, prospects and the probable effect of any changes which may occur. After making the comparisons, he ascribes percentages and applies them to the purchase prices of the properties compared with the one under appraisal. He thereby obtains indications of the available market price for the property which he is appraising. The illustration below indicates how the comparison computations are made:

k. **Estimate of Available Market Price:**

Properties Compared	Sales Prices	Comparison Percentages	Indicated Available Market Price for Property Under Appraisal
A	$5,000	105%	$4,762
B	4,250	90%	4,722
C	4,700	95%	4,947
D	4,850	95%	5,105
E	4,000	85%	4,706

Estimate of Available Market Price $4,850

The above method of computation enables the Valuator to visualize easily the comparisons, and his judgment is partially guided by "bracketing." The amount finally selected as the estimate of available market price is not determined by averaging the indicated available market prices, because some of the sales used in the comparison may have been made under varying conditions such as all cash, substantial cash or instalment payments, or for motives which may have affected the sales price.

1431. Some Valuators may find it easier to think in terms of market price differentials. By "price differential" is meant a lump sum addition or deduction from the price paid, asked, or offered, in order to correct for differences of whatever nature between the properties used for comparison and the one under appraisal. These differences may relate to number of rooms, number of baths, basement area, quality of materials or workmanship, or livability. For example, suppose that property "E" recently sold for $4,000. Suppose that the property to be appraised is apparently on a par with "E", except that the one under appraisal has one more room. Assume also that the Valuator is justified in concluding that the extra room would enhance the ability to command a price in the market to the extent of $750. The price differential then would be "plus $750." The indicated price obtainable for the property to be appraised would be $4,750. The illustration below shows how this type of comparison is made:

k. Estimate of Available Market Price:

Properties Compared	Sales Prices	Price Differentials	Indicated Available Market Price for Property Under Appraisal
A	$5,000	−$450	$4,550
B	4,250	+ 350	4,600
C	4,700	+ 400	5,100
D	4,850	+ 350	5,200
E	4,000	+ 750	4,750

Estimate of Available Market Price $4,850

1432. When the Valuator has made the estimate of available market price, he enters the result in the place provided for it on FHA Form No. 2015, Report of Valuator.

THE ESTIMATE OF REPLACEMENT COST OF PROPERTY

1433. After the Valuator has completed the estimate of available market price, he is required to determine an estimate of the replacement cost of property in new condition in accordance with the instructions in Section 13. In the example, the conclusions are as follows:

l. Replacement Cost of Property:

Main building	$3,900	
Garage	------	
Other improvements	400	
Total Replacement Cost of Improvements		$4,300
Land valuation		650
Miscellaneous allowable costs		150
Total Replacement Cost of Property		$5,100

DETERMINATION OF ESTIMATE OF VALUE

1434. The determination of the total value estimate is, in its simplest form, merely the acceptance of the particular one which happens to be the lowest of the three estimates. If the estimate of derived capital value is less than either the estimate of replacement cost of property or the estimate of available market price, then it is accepted as the total valuation. If, however, the estimate of derived capital value is not the lowest of the three estimates, it cannot be accepted as the final estimate of total value. This is the practical application of the substitution theory described in Section 13. The final estimate of value may not exceed the replacement cost of the property. Furthermore, except as noted in paragraph 1438, it cannot exceed the price at which an equivalent property is available to a purchaser, either by purchasing a lot and building the structures or by purchase of a completed property. In the example the following comparison of the three estimates occurs:

m. Determination of Estimate of Value:

Estimate of Derived Capital Value	$4,522
Estimate of Replacement Cost of Property	$5,100
Estimate of Available Market Price	$4,850
Estimate of Value (lowest of the three)	$4,525

1435. Judgment Control of Results. All estimates of value are reported in round numbers to the nearest $100, $50, or $25, depending upon the general price range within which the estimate lies. While the general rule which usually governs the setting of the estimate of value is to adopt the lowest of the three estimates, there are certain exceptions. Thus, when the difference between the highest and lowest is less than 3% of the highest of the three, the Valuator may report a valuation equal to any amount within the limits of the three figures. Another exception is stated in paragraph 1438.

1436. In the case of new construction or properties in early life, the three estimates are frequently reasonably close together. In a runway market in which building costs, land prices, and real estate sales prices are soaring far beyond levels which can be sustained for reasonably long periods they would not be close.

1437. In the case of existing properties in midlife or new properties which are overimprovements or underimprovements, the three estimates are usually different by greater amounts. For example, the estimate of derived capital value may be $3,900, and the other two estimates may be $4,100 and $4,600. In such a case the derived capital value of $3,900 is accepted.

1438. In some cases during recessions the estimate of derived capital value may exceed the estimate of available market price. For example, the estimate of available market price may be $4,100, and the other two estimates may be $4,525 and $4,610. The general rule would require the Valuator to submit $4,100 as his valuation. However, because the valuation is made for the purpose of long-term mortgage financing, and because the prices which properties command in such depressed markets may be unduly low, the Valuator is justified in giving consideration to the propriety of submitting a figure higher than the estimate of available market price. In the case cited, he might very properly submit $4,300 as his final valuation, that is, the figure lying between the estimate of derived capital value and the estimate of available market price. This line of reasoning may be applied only during periods of recession. It is always incorrect and is conducive to overvaluation during periods of reasonable or intense market activity or during short lived periods of inactivity.

1439. In localities where operative builders erect numerous homes for sale on a volume production basis, it frequently happens that of the three estimates the cost estimate is highest, the derived capital value estimate is intermediate, and the available market price estimate is lowest. In such cases, the reasons for this relationship may be as follows: the replacement cost estimate is based on the presumption of a single building operation such as described in Section 16, Methods of Dwelling Cost Estimation, whereas the actual cost to the operative builder is substantially less. This permits the builder to quote reduced prices to the buying public in order to stimulate demand, and accounts for the fact that the available market price is the lowest of the three estimates. Where this condition exists, the substitution theory applies with full force and the lowest of the three estimates, namely the estimate of available market price, is the accepted final valuation. If the three estimates are: derived capital value, \$5,100, replacement cost of property, \$5,240, and available market price, \$5,000, and if, in addition, the actual cost of replacement of the property to the operative builder and land developer is only \$4,500, the Valuator uses the \$5,000 figure as his final valuation. The \$500 difference is the profit of the operative builder and land developer.

DISTRIBUTION OF ESTIMATE OF VALUE

1440. After the Valuator has determined his final estimate of the total value of the property, he proceeds to make a proper distribution of the total to the several component parts of the property. This is done by ascribing to the land the land valuation secured in step *i* and distributing the remainder between the main building and other improvements in approximate proportion to the amounts of the several items as they appear in the estimate of replacement cost of property. Computations may be rounded off to the nearest \$10 or \$25, as judgment suggests. The results so obtained are entered on FHA Form No. 2015.

1441. The distribution of estimate of value, in the case of the example, appears as follows:

n. Distribution:

	Replacement Cost of Property	Distribution of Estimate of Value
Land	\$650	\$650
Main Building	3,900	3,500
Garage	------	------
Other Improvements	400	375
Miscellaneous Allowable Costs	150	------
Total	\$5,100	\$4,525

1442. When the difference between the total valuation and the land valuation is less than the cost of replacement of property minus the land valuation, the difference is the amount of accrued depreciation as a result of overimprovement, underimprovement, deterioration, or other causes.

COMPARATIVE VALUATIONS

1443. Valuations will customarily be made according to the complete amenity comparison procedure described in foregoing paragraphs, unless the capitalization method described in Section 15 applies. However, it is desirable to make direct comparisons between *very* similar properties which have recently been carefully appraised by the amenity comparison method, not only to save effort and expense, but to make the valuation activities result in strictly consistent conclusions. Such comparative valuations are therefore prescribed as sound procedure when large numbers of directly comparable properties are found in the same immediate neighborhoods and are made the basis of large numbers of applications for mortgage insurance.

1444. If an operative builder or land developer is engaged in large operations, the valuations of properties will be advantageously made by direct comparisons in many of the cases after a satisfactory valuation has been made of one or more properties in the building operation. The various elements which are standard should be jointly considered for all properties simultaneously, if possible. By comparison, the valuation of properties differing only in minor details may be determined by making adjustments which adequately compensate for the differences. This should result in the establishment of suitable tentative valuations before applications for commitments are formally received.

PART III

SECTION 15

VALUATION OF RENTAL INCOME DWELLINGS

CONTENTS

Effective February, 1938.
Federal Housing Administration.

PART III

SECTION 15

VALUATION OF RENTAL INCOME DWELLINGS

VALUATION PROCESS

1501. Multi-family dwelling properties and single family dwellings which, because of their character or location, are salable to investors interested only in monetary returns, are best appraised by the capitalization method of valuation. This process consists of four major steps, as follows:

a. The making of estimates of the probable effective gross revenues to be derived from rental operations under the supervision of ordinary competent management

b. The making of estimates of the probable expenses of operation, under the supervision of ordinary competent management which would have to be incurred in producing the effective gross revenues in the amounts estimated

c. The estimation of the net earning expectancy in both quantitative and qualitative terms. The amount is determined by calculating differences between the estimates of effective gross revenue and the estimates of expenses of operation and taxes. The quality or character of the net earning expectancy is determined by analyzing the factors which indicate the certainty, stability, possible and probable fluctuation, and duration of the earning expectancy

d. The translation or conversion of net earning expectancy by capitalization into an estimate of the value of the property

1502. The capitalization process, herein prescribed, establishes the land valuation by comparison and assumes that the building value is the remaining portion of the total valuation. In other words, the value of the building is estimated by capitalizing the portion of the net income remaining after deducting land returns. The process of valuation in which the land valuation is determined by capitalizing the land returns which remain after building returns are deducted from the total net income, is not applicable to rental income dwellings of the type with which the Federal Housing Administration is concerned. It provides no control over the land value estimate because the land value is ordinarily but a small portion of the total valuation and slight variations in the earning estimates produce great differences in the estimate of land value.

ESTIMATES OF GROSS REVENUE

1503. *Gross revenue at 100% occupancy* is defined as the estimated total income actually derived from operations derivable at 100% occupancy before deductions for operating expenses, taxes, insurance, management, maintenance, and replacements. *Effective gross revenue* is defined as the gross revenue actually anticipated. It is distinguished from the gross revenue at 100% occupancy and is an estimate of total collections. It equals the gross revenue at 100% occupancy less allowances for expected vacancy and collection losses and allowances for all other contingencies which reduce the amount of revenue collections.

1504. Estimates of effective gross revenue are usually made for yearly periods commencing with the year following the date of appraisal and running for as many years as the Valuator can make plausible forecasts. Ordinarily, forecasts are made for one, two, or three years only. This is accomplished for each year by (*a*) ascribing rental values to all rental spaces in the property, (*b*) adding them to secure the total rental value of space, (*c*) adding to the total the estimates of miscellaneous revenue other than rents, (*d*) determining the probable percentage of occupancy for the year, and (*e*) calculating the estimated effective gross revenue. Each of these steps is described below.

1505. Determination of Rental Values. There are usually ample evidences upon which to base estimates of current rental value. Rental values must be ascribed to each individual rental unit. This is necessary because very often the units in a structure have different sizes, layouts, elevations, equipment, and exposures and differ in appeal and desirability. Rentable units occupied rent free shall be included at their rental values.

1506. Rental values are ascribed for each of the ensuing years for which plausible estimates can be made. Ordinarily, this will be for one year only, the ensuing 12 months, and will reflect the current rental values of the units. The Valuator must reach a decision as to whether these rental values are likely to increase or decrease during the yearly periods following. If the information gathered shows the probability or certainty of an increase or decline, then the next step will be to estimate the rental values of the units for each succeeding year, during the years subsequent to the time of appraisal, during which predictions can be made with reasonable confidence. In this connection it is appropriate to point out that very often new rental income dwellings experience marked decreases in rental value after the first few years of their existence, after which the downward trend is likely to continue at a much slower rate.

1507. Total Rental Value of Space. After ascribing rental values to each rental unit for each early year, the results are tabulated in the following manner:

Monthly Rental Value	1st Year	2nd Year
Apartment A–1	$62.50	$62.50
Apartment A–2	65.00	67.50
Apartment B–1	62.50	62.50
Apartment B–2	67.50	70.00
	$257.50	$262.50
Total Yearly Rental Value	$3,090.00	$3,150.00

1508. Miscellaneous Revenues. In certain cases there will be miscellaneous revenues in addition to revenues derived from rents. These include items such as collections for gas, electricity, equipment rentals, and garage rents, if not included as rental units. These should be estimated on the basis of 100% occupancy and added to the total rental value of space, as follows:

	1st year	2nd year
Total Yearly Rental Value	$3,090	$3,150
Extra Garage Spaces, 4 at $4.00 per month	192	192
Total Revenue at 100% Occupancy	$3,282	$3,342

In the typical properties with which the Federal Housing Administration deals, there are seldom miscellaneous revenues.

1509. Occupancy Percentage. "Occupancy" refers to performance in relation to the securing of gross revenue. The estimate of gross revenue at 100% occupancy is taken as the standard, and "occupancy" is expressed as the ratio between actual gross revenues or estimates of effective gross revenues and the standard. The occupancy percentage is, therefore, an expression of revenue-producing efficiency. The word "occupancy" is frequently used to denote the percentage of space occupied by tenants. As used in valuation, however, the word refers to effective gross incomes, not space. It is common practice to estimate the occupancy which will be equivalent to the average for the remaining economic life after the initial years for which specific occupancy predictions are made. This average is what is herein referred to as the "long-term average occupancy." It is used to embrace all the years subsequent to the initial ones for which specific estimates are made.

1510. The Valuator makes an estimate of the occupancy percentage for each early year. In the case of new construction he presumes a long-term average occupancy to be reached in early life, usually in the second year, sometimes in the third year following completion of construction. The occupancy during the first year may be estimated at a lower percentage or at the maximum, depending upon the probable experience indicated by current and prospective conditions in the rental market. A prediction of future occupancy requires that a study of pertinent data be made, embracing not only the immediate neighborhood but of the entire economic background area as well. The Valuator assumes ordinary competent management and considers the probability of attaining various occupancy percentages. The question of supply and demand is of paramount importance in the prediction. The economic background of the area, directions of city growth, space supply, rate of growth of population, and probable future supply data, properly arranged in time series, form the basis of the prediction. With such information as to both probable supply and demand, it is possible to forecast occupancy year by year until the selected standard of occupancy is reached. The factor relating to supply-demand relationships necessitates consideration of the rate at which additional units of a competitive character may be constructed in the community, and of the ability of the market to absorb these units into use. In no case is it proper to omit a deduction for vacancy and collection loss, for it is not sound procedure to assume that none will occur. In some instances, however, the Valuator may be warranted in assuming no losses on this account for a very short time subsequent to appraisal. This would be true in cases where it was well established that a shortage of accommodations existed. In these instances, however, the provision for vacancy and collection loss must be introduced into the calculations after the expiration of a short period during which it is certain no such allowance need be made. Vacancies, concessions, and collection losses are generally computed as a percentage of the rental value of the property, although sometimes it is estimated by assuming that the vacancy and collection loss allowance will equal the rent obtainable during a certain period such as a month per year. The amount to be chosen should be the Valuator's best judgment as to the most probable arithmetical average of yearly vacancy and collection losses. There are a number of factors which will influence and guide the Valuator's judgment such as the past actual experience of the property; the past experience of like properties in the same or similar locations; the desirability of the rental units under consideration; present and prospective relationships between the supply of rental units of competitive character, and of the present and prospective demand for such units. The desirability of the rental units under consideration obviously involves consideration of a great number of related elements, including all those dealt with in making feature ratings in the Property, Location, and Earning Expectancy categories.

1511. Calculation of Effective Gross Revenue. After arriving at plausible conclusions with respect to the occupancy percentages during early years, they are used to determine the estimates of effective gross revenue. A typical calculation of this kind follows:

	1st year	2nd year	3rd year
Total Revenue at 100% Occupancy	$3, 282	$3, 342	$3, 342
Predicted Occupancies	70%	80%	90%
Effective Gross Revenue	$2, 297	$2, 674	$3, 008

An estimate of the effective gross revenue differs from an estimate of the gross revenue at 100% occupancy in that it contemplates an expected reality. It represents the predicted actual collections. In the example, the Valuator has used two sets of predicted rental values. Usually one set at present market rates is used, inasmuch as the direct forecasting of specific changes in rates is difficult. On the other hand, if space is now under lease at rates which differ from market rental values, the two sets of rates would be used. It is also permissible and desirable if there is a sound basis for expecting the rental values to change within one or two years. In the example, the Valuator used three different occupancy predictions. Two usually reflect reality more accurately. In any case of new or old construction, however, the estimate placed in the right hand column (90% in example) is the expected performance which should characterize performance on the average throughout a number of years in the remaining life of the property. The figure does not, however, make any allowance for the general long time decline in gross earning capacity which will result from future deterioration and obsolescence. Allowance for this decline is provided for in the adoption of an income premise applicable to the net returns attributable to the building improvements and is described in paragraph 1528.

ESTIMATES OF OPERATING EXPENSES

1512. As used here, "Operating Expenses" denotes all actual outlays occasioned by the ownership and operation of the property. In this sense, operating expenses do not include vacancy allowances, collection losses, allowances for deterioration and obsolescence, or expenses connected with mortgage indebtedness. They include the expenses incurred for heat, light, service, repair, and maintenance of the premises. They include the expense for management. They embrace the premiums paid for fire and other hazard insurance. They contain taxes and amounts paid on account of special assessments. They also include amounts accumulated for the purpose of actual physical replacements of equipment and machinery. In making estimates of operating expenses, Valuators must assume ordinary competent management and must set the several estimates at levels where they parallel and justify the rental rates, occupancy estimates, and predictions of economic life. As a consequence, the actual operations of determining the effective gross revenues and the estimated operating expenses are accomplished simultaneously by the Valuator.

1513. In establishing estimates of operating expenses, Valuators use three processes to secure the final estimate of total operating expenses. These three processes include the following:

a. Making careful estimates of the probable average yearly amount of each detailed item. The first step is to make certain that the list of items is complete and embraces allowances for every type of actual expenditure for which outlays will have to be made during the economic life of the building improvements. Then an estimate is made of the amount of each item. The data are applied on a per square foot, per cubic foot, per room, or per dwelling unit basis, or on some other suitable basis. Some items are examined on several of the possible bases before the final estimate for the item is accepted, and greater weight is given for the results secured from one basis than from others, depending upon the appropriateness of the unit. The last step is to add the several estimates to secure the first estimate of the total operating expenses.

b. Determination of the second estimate of total operating expenses by assuming such expenses to be a percentage of the effective gross revenue at maximum or average occupancy. This percentage is defined as the expense ratio and is determined by examining data on the operations of similar properties.

c. Examination of the ratios of the four major classes of expenses, mentioned below, to the estimate of total operating expenses found by the first and second processes above, and the making of adjustments to determine the third estimate of total operating expenses.

1514. The Valuator then studies the three estimates he has made and arrives at his final conclusion with respect to total operating expenses. For illustration, the first process, the totaling of estimates of all the individual items, produces a figure of $1,528. The second process, the application of a typical expense ratio, say 45%, to the estimated effective gross revenue, say $3,008, produces a figure for total expenses of $1,354. The third process makes it appear that all major classes of expenses are in logical relation, except that the allowance for heating appears high. Then, the Valuator restudies the heating item. If it is presumed that he finds it $100 higher than he can now justify, he will probably establish his final estimate of total operating expenses at $1,400. If, in any case, the three processes give substantially like results, he accepts the result as an acceptable estimate. If the processes give dissimilar results, he studies the three detailed analyses until he can either (*a*) explain the differences, or (*b*) properly correct the results until they are in alignment. In the first case, the first process will usually be accepted as the final estimate. In the second case, adjustments are made in the directions indicated by the reexamination.

1515. The four major classes of expense, used in the third process above, are (*a*) renting and administrative expense, (*b*) regular operating expense, (*c*) repair, maintenance, and replacements, and (*d*) taxes and hazard insurance. These are used as major headings in the following paragraphs. Under each of these headings are listed the detailed items of expense on which the first process above is based.

1516. Renting and Administrative Expense. The detailed items included may embrace most of the following:

a. Advertising
b. Commissions
c. Alterations for tenants
d. Office salaries
e. Office expenses
f. Legal and auditing expenses
g. Telephone
h. Expense of collections
i. Management
j. Miscellaneous

1517. Small rental income dwellings are usually managed by their owners. Frequently, they reside in the property and personally manage it. No payments are made for wages or salaries for managerial services. Notwithstanding this fact, it is usually necessary to make a charge against income for the expense of management. The item is calculated on the basis of the usual expense of employing services of property management concerns. This charge is made even if there is no actual outlay of money, because the valuation is for the purpose of determining the value of mortgage security. Payment for management services will fall on the new owner after acquisition. The fact that the property offers the present owner a combination of amenity returns, money returns, and an opportunity to earn additional income motivates prospective owners to buy. These motives and their effect upon valuation are recognized in the selection of suitable capitalization rates.

1518. In some cases, the estimate of Renting and Administrative Expense does not include some of the above enumerated items such as advertising, commissions, office salaries, office expenses, and legal and auditing expenses. In these instances, a single charge is made under the heading of Management. Care should be exercised, however, to make certain that items not readily apparent are not omitted. Advertising includes newspaper advertising, circulars, signs, donations made for advertising purposes and similar items. Commissions include all payments actually to be made and commissions paid to tenants in the form of concessions. Under the item, alterations for tenants, the charge should be the average amount expected yearly for this purpose. Alterations for tenants do not include papering, painting, decorating, resurfacing floors, and routine maintenance. They include only the cost of changes such as moving partitions, changing cabinets, and similar items. Services rendered to tenants personally by the owners should be taken into account in order to determine a correct estimate of expenses.

1519. Regular Operating Expense. The detailed items included usually embrace most of the following:

a. Heating and ventilating expense
b. Janitor expense
c. Lighting expense
d. Refrigerating expense
e. Water expense
f. Gas
g. Garbage and rubbish removal
h. Protection

i. Grounds expense
j. Cleaning
k. Exterminating
l. Miscellaneous

The determination of expenses grouped under this heading can be accomplished easily by referring to the expenditures for such items in other properties of the same type as the building being appraised. When data on these items are taken from the actual expense experience in a sufficient number of properties, the Valuator resolves the various items into costs per unit. Costs are frequently expressed in units such as cubic feet, square feet, apartments and rooms. He then selects unit costs for the subject property by ascertaining the most frequent unit costs found in the data relating to properties most like the one being appraised. The amounts selected as final are not necessarily the average of all the amounts within the group of properties compared. The expense for heating and ventilating and the wages of workmen employed to operate the equipment are included under the heading of heating and ventilating expense. The item, janitor expense, should include not only wages and the expense for janitor supplies, but the rental value of any rooms occupied rent free by him, which could otherwise be rented. Lighting expense includes the cost of electricity, light bulbs, other electric supplies, fuses, and similar items. Whenever possible, the expense for electricity, gas, or other medium used for refrigeration should be set up separately, together with minor supplies used in refrigerator upkeep. If water and gas are supplied by the management, the respective expenses should be shown. In handling these data on the regular operating expense items, the expense units applied are based on areas, cubical contents, revenue, or other suitable bases. Thus, fuel may be based on cubical contents, lighting on areas, refrigerating, water, and gas on rentable units, and other items, such as exterminating, on number of rooms.

1520. Repairs, Maintenance, and Replacements. The detailed items included embrace most of the following:

a. Repairs to structure
b. Repairs to equipment and fixtures
c. Painting
d. Decorating
e. Structural replacements
f. Equipment replacements
g. Miscellaneous

Allowances for repairs, maintenance, and replacements should be included in amounts equivalent to the probable average yearly expenses for these items. Except insofar as it may indicate that the average is likely to be high or low or usual, the present physical condition of the building is not a factor. Neither is the fact that a buliding is new and will not have burdensome maintenance and replacement expenditures for a considerable period. These allowances must be sufficiently large to be adequate to cover the average expense throughout the remaining economic life of the building. For example, limited amounts must be spent each year for maintenance and repair items of more or less minor character. The exterior walls of frame structures must be maintained by painting them every two, three, or more years. Many types of roof covering must be replaced once or more during the useful life of the structures. Certain items of mechanical and plumbing equipment must be periodically replaced.

1521. The expense data on most properties exhibit wide fluctuations from year to year in the actual expenditures made for maintenance and replacements. For this reason the actual figures for any particular year cannot be used in the estimation of future expenses. The experience in a number of years of operation, however, may be illuminating. For illustration, it may indicate the presence of structural deficiencies that can be corrected, or the probability of relatively high maintenance costs in the future.

1522. The allowance for maintenance should represent the probable future average expense per year of maintaining the property in such physical condition as will sustain its attractiveness to tenants and prevent occurrence of physical deterioration at an excessive rate. Relatively small items of expense which occur frequently are considered as maintenance. Examples are painting, decorating, minor repairs to mechanical and electrical equipment, plastering repairs, and pointing of masonry.

1523. Generally, items having fairly long spans of useful life but less than the estimated economic life of building improvements and involving a substantial monetary outlay are considered as replacements. Examples of such items are roof covering, heating plant, plumbing fixtures, and electrical refrigerators and cooking stoves when classed as realty. Determination of the expense item to to used for replacements is accomplished in five steps as follows:

(*a*) An estimate is made of the replacement cost of each replaceable item.

(*b*) An estimate is made of the probable total span of useful life of the item.

(c) Determination is made of the number of times the item will probably have to be replaced during the remaining economic life of building improvements by dividing the estimated remaining economic life of the building improvements by the estimated total span of useful life of the item. If the result is a whole number, the number of times replacement must be provided for is one less than this number. If the result contains a fraction, then only the fraction is deducted to obtain the number of complete replacements. These deductions are made because replacement is not necessary at the end of economic life of building improvements.

(d) The amount of expense to be charged on account of each replacement item is determined by multiplying the result found in (a) by the result found in (c) and dividing by the estimated remaining economic life of building improvements.

(e) The total expense item on account of replacements is determined by adding the result found in (d) for each item.

The basis used in making the calculations relates to an item of the same quality as the one to be replaced. An example assuming a probable remaining economic life of building improvements illustrating the method of estimating allowances for maintenance and replacements follows:

Maintenance Items		
Exterior Painting:	Estimated cost $220. Required every 4 years. Average expense per year	$55
Interior Decorating:	Estimated cost 16 rooms at $12 per room $192. Required every 3 years. Average expense per year	$64
Miscellaneous Repairs and Minor Repairs:	Plumbing system $30, heating system $30, roof repair $20, refrigerator repairs $20, cooking stove repairs $10, miscellaneous $24. Average expense per year	$134
Replacement Items		
Roof Covering:	Estimated cost of replacement, $250. Estimated total span of useful life, 15 years. Number of times replacement required (35÷15=2.33) 2. Average expense per year ($250×2÷35)	$14
Floor Covering:	Linoleum in the kitchens and bath rooms. Cost of replacement, $150. Estimated total span of useful life, 8 years. Number of times replacement required (35÷8=4.38) 4. Average expense per year ($150×4÷35)	$17

Replacement Items

Window Shades:	Estimated cost of replacement, 60 @ \$1.00=\$60. Estimated total span of useful life, 5 years. Number of times replacement required (35÷5=7 −1=6) 6. Average expense per year (\$60×6÷35)	\$10
Electrical Refrigeration:	Estimated cost of replacement, \$360. Estimated total span of useful life, 10 years. Number of times replacement required (35÷10=3.50) 3. Average expense per year (\$360×3÷35)	\$31
Heating System:	Estimated cost of replacement, \$800. Estimated total span of useful life, 20 years. Number of times replacement required (35÷20=1.75) 1. Average expense per year (\$800×1÷35)	\$23
Plumbing Equipment:	Estimated cost of replacement, \$600. Estimated total span of useful life, 25 years. Number of times replacement required (35÷25=1.40) 1. Average expense per year (\$600×1÷35)	\$17
Electrical Cooking Stoves:	Estimated cost of replacement, \$400. Estimated total span of useful life, 15 years. Number of times replacement required (35÷15=2.33) 2. Average expense per year (\$400×2÷35)	\$23
Special Electrical Equipment:	Ventilating or exhaust fans \$120. Estimated total span of useful life, 10 years. Number of times replacement required (35÷10=3.50) 3. Average expense per year (\$120×3÷35)=\$10. Oilburner \$180. Estimated total span of useful life, 8 years. Number of times replacement required (35÷8=4.38) 4. Average expense per year (\$180×4÷35)=\$21	\$31
	Total Yearly Expense for Repairs, Maintenance, and Replacements	\$419

1524. Taxes and Hazard Insurance. Taxes and insurance are ordinarily referred to as fixed charges, because frequently the amounts are comparatively constant. As a rule, the allowance for taxes is equivalent to the taxes for the latest period. If it is possible to forecast with certainty an impending change in taxes, the expense item may be different from the amount actually devied upon the property for the last period. The amount should include all taxes on the property and recurring assessments, if any. A breakdown of the item should be made. Special assessments are not to be included as the existence of a special assessment lien is accounted for in a lump sum adjustment as directed in Section 13. In new construction cases, taxes include the estimated tax on the completed improved property.

1525. The allowance for insurance is the average annual cost of such types of insurance protection as are customarily carried in the locality where the property is situated, and for such total coverage as is customary, appropriate, and adequate. If, in a given case, it is concluded that the maximum recoverable loss from destruction by fire is $12,000, the item for fire insurance should be for the average annual cost of $12,000 coverage. If liability, windstorm, or other hazard insurance is customarily carried by property owners in the locality, then the premium expense for such insurance is used. If the yearly cost is cheaper when policies are bought for a period of years in advance, usually three or five, the item should be based upon the lower average yearly expense. It is important to determine that the amount recorded is the figure applicable to one year and not the total amount which would be needed to cover the entire term of the policy.

ESTIMATES OF NET EARNINGS

1526. The estimate of net earnings during early years is, of course, determined directly by deducting the estimated total expenses of operation from the estimate of effective gross revenue. A typical tabulation of the results appears below:

	1st year	2nd year	3rd year
Effective Gross Revenue	$2, 297	$2, 674	$3, 008
Estimated Total Expenses	1, 400	1, 400	1, 400
Estimated Net Earnings	$897	$1, 274	$1, 608

1527. Not only the probable amount of the net earning expectancy, but its qualitative characteristics must be determined. This is accomplished by analyzing the factors which indicate the certainty, stability, possible and probable fluctuation, and duration of the net income. This analysis is made by examining factors such as those listed as features in the risk rating category, Rating of Earning Expectancy. In fact, the Valuator should, at this stage of his work, actually complete the Rating of Earning Expectancy.

1528. The estimate of net earnings is not complete until it has been made to embrace the entire remaining economic life of the building improvements. The specific predictions made for the ensuing 12 months, and sometimes for one or two additional years, are presumed to be within the estimating powers of the competent Valuator, at least within the limits of plausible prediction. Beyond this, however, recourse is made to more general forecasting and the predicted probable net earnings are based on several assumptions, as follows:

a. That the net earnings produced by the property will decline, on the average, during the life of the buildings. This is equivalent to assuming that the property will gradually deteriorate and obsolesce in spite of periodic repairs and betterments.

b. That the decline in net earnings will result finally in a low earning capacity which will not justify purchase of the property at a price in excess of the value of the site. This is equivalent to assuming that the building improvements have a finite or limited economic life. An actual estimate of the remaining economic life is made in accordance with the instructions in Section 13, Methods of Dwelling Valuation.

c. That the net earnings are divisible into two portions: (*a*) the return on land which is assumed to continue, without substantial increase or decline, beyond the end of economic life of the buildings and indefinitely into the future, and (*b*) the return on the building improvements which is assumed to decrease gradually until it is nil at the end of their economic life.

d. That the downward trending earnings attributable to the building improvements will follow a plausible premise. In the prescribed procedure the building returns are assumed to decline in accordance with the following mathematical premise:

> That the building returns will be collected as annual installments of net income at the end of each year, continuing for the economic life of the building; that the annual installments will approach zero in the last year of economic life and will terminate with that year's installment; that the successive installments of building returns, after the first year of maximum or long-term average occupancy, will gradually decline, the annual amounts being proportional to the corresponding yearly values of a level annuity at 10% for a term equal to the remaining economic life of the building.

This premise does not ignore the fact that wide fluctuations in net earnings are to be expected. It is simply a standardized assumption representing a plausible equivalent of future conditions which are unpredictable in detail. As such, the premise presumes a future decline which takes account of the future accrual of deterioration and obsolescence.

1529. In the valuation of rental income dwellings, the Valuator's quantitative estimates and assumptions with respect to net earnings include:

a. Actual estimates of the net earnings for the ensuing twelve months or for several years

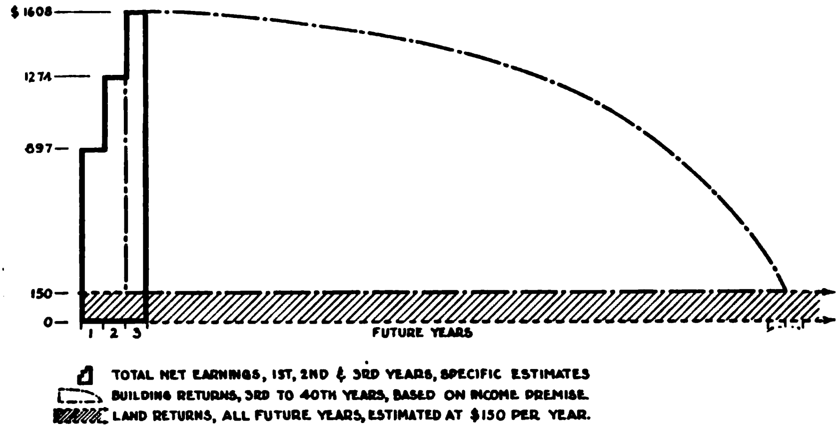
b. An estimate of the remaining economic life of the building improvements

c. An estimate of the returns on the land. This estimate is determined by multiplying an estimate of the value of the land by the selected land capitalization rate.

1530. With these three sets of estimates made, the quantitative estimate of net income is complete and ready for use in connection with the final process of capitalization to estimate the value of the property. If the estimates of net earnings in early years are as stated in Paragraph 1526, if the estimate of economic life of the building is forty years, and if the returns attributable to the land are estimated to be equivalent to $150 per year, then the future net earnings of the entire property are assumed, for purposes of valuation, to be equivalent to the amounts in the following tabulation, although they undoubtedly will fluctuate from year to year. It is *not* necessary to convert these estimates into the following form which is here presented solely to indicate, in figures, what the estimates and assumptions mean.

Year	Net Income	Year	Net Income	Year	Net Income
1	$897	16	1,510	31	1,070
2	1,274	17	1,496	32	1,013
3	1,608	18	1,481	33	949
4	1,604	19	1,464	34	879
5	1,600	20	1,446	35	802
6	1,595	21	1,425	36	718
7	1,589	22	1,403	37	625
8	1,584	23	1,379	38	523
9	1,577	24	1,352	39	410
10	1,570	25	1,322	40	286
11	1,562	26	1,289	41	150
12	1,554	27	1,254	42	150
13	1,544	28	1,214	43	150
14	1,534	29	1,171	Yearly thereafter	150
15	1,522	30	1,123		

1531. The following diagram illustrates the net earning expectancy used in the above example:



Having made the estimates of net earning expectancy, the next step in the valuation is the estimation of value by capitalization.

ESTIMATION OF VALUE BY CAPITALIZATION

1532. Capitalization is the mathematical process of estimating the value of the privilege of owning or of receiving a future net income. After an income has been predicted and a rate of capitalization selected, the income is capitalized by discounting it at compound interest at the selected rate to secure the value. The estimates of net earning expectancy take several forms and each is subjected to the appropriate mathematical treatment indicated in Paragraphs 1540 to 1547 on the Mathematics of Capitalization.

1533. Steps in Capitalization Process. After the Valuator has made the estimates of net earning expectancy, he takes the following steps to complete the valuation:

a. He estimates the value of the land by comparison in accordance with the instructions in Section 13, Methods of Dwelling Valuation.

b. He makes an estimate of the total replacement cost of the property in new condition in accordance with the instructions in Section 13.

c. He selects the land capitalization rate and the building capitalization rate in accordance with the principles presented in Paragraphs 1550 to 1555.

d. He determines the returns to land by multiplying his land valuation by the selected land capitalization rate.

e. He determines the building returns during the years from the date of appraisal to and including the first year in which he anticipates that the property will operate at long-term average occupancy. This is accomplished by deducting the yearly returns to land from the estimates of yearly net earnings during early years.

f. He determines the present value of the building returns ascribed for early years before reaching long-term average occupancy by discounting the estimates of building returns at the selected building capitalization rate. In this process he uses discount factors selected from Table I, shown in paragraph 1547. In cases where the estimate of net earnings indicates that the ensuing year is the year of long-term average occupancy, this step does not occur.

g. He determines the present value, at the selected building capitalization rate, of the building returns ascribed to all future years commencing with and including the first year at maximum or long-term average occupancy. The returns are presumed to commence with the building returns in the year of maximum occupancy, and decline in accordance with the Income Premise described in Paragraph 1528. This series of net building returns constitutes a declining annuity which reaches zero in the year following the termination of the economic life of the building. The value of the series, as of the beginning of the year of maximum occupancy, is found by multiplying the estimated building returns for the year of maximum occupancy by a factor selected from Table II, shown in Paragraph 1547. The value of the series, as of the appraisal date, is then found by discounting this figure (the value of the series as of the beginning of the year of maximum occupancy), at the selected building capitalization rate, by using a discount factor selected from Table I, shown in Paragraph 1547. If the estimate of net earnings indicates that the ensuing year is the year of maximum or long-term average occupancy, this last step does not occur, because the value of the series as of the year of maximum occupancy is actually the value of the series as of the date of appraisal.

h. The total valuation of the building is then found by adding the results obtained in (*f*) and (*g*).

i. The total valuation by capitalization of the entire property is estimated by adding the land valuation found in (*a*) to the building valuation found in (*h*).

j. The entire process already described is repeated a number of times using reasonable variations in assumptions and the figures are adjusted in accordance with the principles presented in Paragraphs 1537 to 1539 until the Valuator has formed his final conclusion with respect to the total valuation.

1534. The foregoing method of estimating value by capitalization is illustrated by two examples. The example given in Paragraph 1535 uses a net earning expectancy typical of some new construction cases where the appraisal is a valuation as of completion of construction. It uses the same income figures as those which were used as examples in the description of the estimate of net earnings. The example given in Paragraph 1536 uses an earning expectancy typical of existing and of those new construction cases where the net income for the ensuing 12 months is expected to be at the long-term average.

1535. In applying the method to cases where the prediction of net earnings embraces several early years, all the steps listed in Paragraph 1533 are utilized. In the following example, the steps are identified by letters to correspond to Paragraph 1533. The estimates of earnings are as follows:

	1st year	2nd year	3rd year
Estimated Net Earnings	$897	$1, 274	$1, 608

The third year is assumed to be the year of maximum or long-term average occupancy.

a. Estimated Value of Land by Comparison $2,500

b. Estimate of Total Replacement Cost of the Property in New Condition $19,300

c. Selected Land Capitalization Rate 6%
Selected Building Capitalization Rate 8%

d. Estimated Yearly Land Returns:
Land Valuation, $2,500 x Land Capitalization Rate, .06 .... $150

e. The building returns during the years from date of appraisal to the end of the year of maximum or long-term average occupancy are found as follows:

	1st year	2nd year	3rd year
Estimated Net Earnings	$897	$1, 274	$1, 608
Estimated Yearly Land Returns	150	150	150
Estimated Building Returns in Early Years	$747	$1, 124	$1, 458

f. The property is expected to operate *two* years *before* reaching maximum occupancy. The first year's building return of $747 is assumed to accrue at the end of the first year. The second year's building return of $1,124 is assumed to accrue at the end of the second year. Table I indicates that an amount of 1 deferred one year at 8% has a present value of .926 and that an amount of 1 deferred two years at 8% has a present value of .857. Hence the present value of the building returns ascribed for early years is found as follows:

	1st year	2nd year
Estimated Building Returns in Early Years	$747	$1, 124
Table I factors	. 926	. 857
Present Value of Building Returns	$692	$963

g. The building returns for the period embracing the third year to the end of the economic life of the building improvements are treated as an annuity commencing with $1,458 at the end of the third year and declining in accordance with the Income Premise. The estimate of total economic life is forty years. Hence, the declining annuity, which commences with the third year, runs for a period of 38 years. It is not necessary to make any calculation or table showing the amounts of the building returns for any year beyond the third year. The value of the annuity as of the beginning of the third year, that is, two years from the date of appraisal, is found by multiplying the building return which accrues at the end of the third year, $1,458, by the factor for 8%, 38 years, in Table II, namely 10.77. The result is $15,703. The value of the annuity, as of the date of appraisal, is found by discounting this result for two years. Table I indicates that an amount of 1 deferred *two* years at 8% has a present value of .857. Hence, the present value of the deferred annuity is found by multiplying $15,703 by .857. The following shows these calculations:

Building Returns, 3rd year	$1,458
Table II factor, at 8%, for the present value of an annuity for 38 years which declines, according to the Income Premise, to zero in the 39th year	10.77
Value of the annuity as of the beginning of the 3rd year, $1,458 x 10.77	$15,703
Table I factor, at 8%, for the present value of 1 deferred two years	0.857
Present Value of the Building Returns included in the annuity, as of date of appraisal, $15,703 x .857	$13,457

h. The total valuation of the building improvements is found by adding the present values of the building returns for the first year, the second year, and the remaining 38 years, thus:

Present Value of Building Returns for 1st year	$692
Present Value of Building Returns for 2nd year	963
Present Value of Building Returns for remaining 38 yrs	13,457
Total Valuation of Building Improvements	$15,112

i. The tentative total valuation of property is estimated by adding the land valuation found in (*a*) to the valuation of the building, thus:

Total Valuation of Land	$2,500
Total Valuation of Building Improvements	$15,112
Total Valuation of Property	$17,612

j. The same process is then repeated several times using other plausible estimates of earnings, land value, economic life, and capitalization rates until the Valuator is satisfied with the correctness of the final estimate. In all cases the final results for land, building, and total valuations are rounded off to the nearest $25, $50, or $100 depending on the price range and are reported as follows:

Total Valuation of Property		$17,600
Distribution of value estimate:		
Land	$2,500	
Main Building	15,100	
Garages	------	
Other Improvements	------	

If the distribution of the total valuation of the improvements is to show more than the one figure, the total is divided between the building, garage, or other items, approximately in proportion to the estimated costs of replacement of the several items. In this example the estimated replacement cost of the property is $19,300 and exceeds the total valuation. The adjustments to be made, when the valuation by capitalization gives a result in excess of the cost figure, are described in Paragraph 1538.

1536. In applying the method to cases where the specific prediction of net earnings embraces only the next 12 months (the typical existing construction case), all the steps listed in paragraph 1533 are utilized except (*f*) and the second calculation in (*g*). The result secured in (*g*) is the result required in (*h*). The estimate of net earnings during the year following the date of appraisal is $1,540 and is the estimated rate of earnings at long-term average occupancy.

a. Estimated Value of Land by Comparison	$2,500
b. Estimate of Total Replacement Cost of the Property in New Condition	$18,500
c. Selected Land Capitalization Rate	6½%
Selected Building Capitalization Rate	8½%
d. Estimated Yearly Land Returns:	
Land Valuation, $2,500 x Land Capitalization Rate, .065	$163
e. The building returns for the first year are found as follows:	
Estimated Net Earnings, 1st year	$1,540
Estimated Yearly Land Returns	163
Estimated Building Returns, 1st year	$1,377

(*g*) and (*h*). The building returns for the entire period from the date of appraisal to the end of the economic life of the building are treated as an annuity commencing with $1,377 at the end of the first year and declining in accordance with the Income Premise. The estimate of total *remaining* economic life is 35 years. The value of the annuity, as of the date of appraisal, is found by multiplying the building return which accrues at the end of the first year, $1,377, by the factor for 8½%, 35 years, in Table II, namely, 9.98. The following shows this calculation:

Building Returns, end of 1st year	$1,377
Table II factor, at 8½%, for the present value of an annuity for 35 years which declines according to the Income Premise	9.98
Total Valuation of Building Improvements, $1,377 x 9.98	$13,742
i. Total Valuation of Land	2,500
Tentative Total Value of Property	$16,242

j. The same process is then repeated several times until the Valuator is satisfied with the reasonableness of the final estimate.

1537. Value Adjustments. The essence of valuation by capitalization of prospective earnings is in the controls and adjustments to which the valuation is subjected. Therefore, Valuators make all calculations on work sheets, restudying both individual estimates and general relationships between estimates before accepting any figures as final. The control of results is accomplished by accepting, as final, that set of figures and conclusions which contains the greatest number of plausible detailed estimates and relationships in combination. Plausibility is indicated by substantial agreement with the accumulated data on similar properties. The data are used as the basis for the bracketing of estimates of items and of ratios between items.

1538. The examination of all the estimates, for the purpose of making the adjustments, follows a definite routine with a number of successive steps, as follows:

a. After the effective gross revenue estimates, operating expense estimates, and estimates of net earnings have been completed in their initial form, they are reviewed for correctness. Revenue reexaminations are accomplished by assuming various plausible modifications in rental rates and occupancy percentages in early years. Reexamination of operating expenses is handled similarly according to the three estimating devices described in Paragraph 1513. Finally, the Valuator calculates the net earnings in each of the early years under the various assumptions and modifications. This gives him a number of tentative estimates of net earning expectancy. There may be a fairly great difference between the highest and lowest of the tentative estimates, but ordinarily the majority of the estimates will cluster close to some intermediate level of earnings. The final estimates are then set up at approximately the point of cluster. This may be substantially higher or lower than the mid-point between the maximum and minimum of the several estimates. It is rarely the arithmetic average of all the estimates. The final estimate is selected on the basis of the frequency with which the tentative estimates come out at figures which are close to it.

b. After the estimate of value by capitalization has been completed in its initial form, the computations are reviewed for correctness. The reexamination is accomplished by assuming various plausible modifications in the estimates of remaining economic life, land valuation, and land and building capitalization rates. Different assumptions will result in a set of different tentative total valuations. There may be a fairly great difference between the highest and lowest of the tentative total valuations, but ordinarily the majority of the estimates will cluster close to some intermediate point which is accepted as the final estimate. Its selection as final is based on the frequency with which the tentative estimates come out at figures which are close to it. In making this adjustment of the initial estimate, it is desirable to calculate the so-called over-all rate of return and to make certain that it comes out at a plausible level. The over-all rate is determined by dividing the estimate of net earnings in the year of maximum occupancy by the total valuation. In typical cases, the over-all rate will be higher than both the land and building capitalization rates. In all cases, to be plausible, the over-all rate will not be less than a figure which is ¼ of 1% lower than the building capitalization rate.

c. After determining the final estimate of value by capitalization, the estimate is compared with the estimate of replacement cost of the property and of available market price. Almost invariably the three estimates will differ. If the difference is slight, say within 3%, no further adjustments are necessary and the lowest of the three estimates is adopted as the final total valuation of the property. If the difference is somewhat greater but still small, say up to 5%, and the building improvements are new or almost new the Valuator makes a somewhat cursory reexamination of the three estimates, and changes them if there are reasonable grounds for doing so. In such cases, reasonable grounds consist of finding small adjustments which are well within the limits of the bracketing used in arriving at items in the estimates in the first place. If no such grounds for adjustment are readily found without straining of figures, the lowest of the three estimates is adopted as the final total valuation of the property. If the difference is substantial, in excess of 5%, the Valuator proceeds as follows:

1. In cases where (*a*) the estimate of cost of replacement of the property exceeds the estimate of value by capitalization, and (*b*) the building is in mid-life, the Valuator accepts the estimate of value by capitalization as his final valuation unless it exceeds his estimate of available market price, in which event review and adjustment of the capitalization estimate or market price estimate, or both, are made until the former does not exceed the latter. The capitalization estimate is then reported as the value estimate. However, in temporarily depressed markets the capitalization estimate may exceed the available market price estimate and be selected as the final estimate of value. The difference between the capitalization and replacement cost estimates is the amount of accrued depreciation as of the date of appraisal.

2. In cases where (*a*) the estimate of cost of replacement of the property exceeds the estimate of value by capitalization by more than about 5%, and (*b*) the building is new construction or in early life, the cost estimate and the capitalization estimate are carefully rechecked and adjustments are made, if judgment indicates they should be. The Valuator then accepts the lower of the two estimates as his final valuation unless it exceeds his estimate of available market price, in which event review and adjustment of the capitalization estimate, or market price estimate, or both, are made until the former does not exceed the latter. The capitalization estimate is then reported as the value estimate. However, in temporarily depressed markets, the capitalization estimate may exceed the available market price estimate and be selected as the final estimate of value. The difference between the replacement cost and capitalization estimates is defined as accrued depreciation. In the case of new buildings it is a measure of overimprovement or underimprovement.

3. In cases where the estimate of value by capitalization exceeds the estimate of cost of replacement of the property, whether new construction or existing construction in early or mid-life, the Valuator knows that the capitalization estimate would be an overvaluation. If his income estimates are correct, in the sense that the rental rates are immediately available in the current rental market, it is also certain that the divergence between the capitalization estimate and cost estimate will invite competitive construction which will drive rental rates to lower levels. He may conclude that he has not properly estimated the risks surrounding the case, and that his capitalization estimate therefore needs revision until it is not in excess of the estimated replacement cost of property. The cost estimate is also rechecked for possible justified increases. The final estimate of value may then be equal to the replacement cost estimate.

1539. Completion of Forms. The following indicates the correct method of filling out FHA Form No. 2015a. It will be noticed that, aside from the adjustments described in Paragraphs 1537 and 1538, no absolute reconciliation need be made between the the estimate of value by capitalization, the estimate of replacement cost of property in new condition, and the estimate of available market price. The lower figure is reported as the valuation, but when this figure is equal to the cost estimate rather than the value found by capitalization, the figures supporting the latter estimate are reported as determined, and are not modified arbitrarily downward to give the appearance of automatic agreement with the cost estimate or reported available market price.

MATHEMATICS OF CAPITALIZATION

1540. In valuation by the capitalization process, Valuators utilize compound interest calculations to compute values of predetermined income expectancies. These computations are made by selecting the proper factors from interest tables and multiplying the income expectancies by the factors. The tables are based on the assumption that invested capital earns interest at a stipulated rate and that such interest accrues in the form of a lump-sum addition at the end of each year. It is also assumed, for convenience, that the income for any given year accrues and is collected in a lump sum at the end of the year. Interest is converted into capital yearly; hence, there is a compounding of interest on a yearly basis when the incomes extend over more than one year.

1541. There are three such types of calculations used in valuation by capitalization:

a. Present Value of an Amount: Single amounts of future income are discounted at compound interest by the use of Table I, described below.

b. Present Value of a Declining Annuity: A declining annuity is a series of periodic payments in which successive payments are less and less. As applied to valuation, a declining annuity is a series of yearly net incomes, accruing at the end of each year, in which the successive yearly in-

FHA Form No. 2015a

Rental Income Dwelling

FEDERAL HOUSING ADMINISTRATION

SUPPLEMENTARY REPORT OF VALUATOR

00-001-03245
(Serial number)

Property address 1655 N. Westerly Avenue City Wright City State Columbia

ESTIMATES OF GROSS REVENUE

Rental value of units

Rental units	Monthly rental values: During 1st year	During 2d year	During 3d year
A-1	$65.00	$65.00	$60.00
A-2	67.50	67.50	62.50
B-1	70.00	70.00	65.00
B-2	72.50	72.50	67.50
Subtotals	$275	$275	$255

Effective gross revenue

Total Yearly Rental Value	$3300	$3300	$3060
Miscellaneous Revenues			
Total Revenue at 100% Occupancy	$3300	$3300	$3060
Predicted Occupancies	95%	90%	90%
Effective Gross Revenue	$3135	$2970	$2754

ESTIMATES OF OPERATING EXPENSES

Renting and Administrative Expense:	
Advertising expense	$
Commissions	
Alterations for tenants	
Office salaries	
Office expense	
Legal and auditing expense	
Telephone	
Expense of collections	
Management	137
Miscellaneous	
Total Renting and Administrative Expense	$137
Regular Operating Expense:	
Heating and ventilating expense	$310
Janitor	90
Lighting expense	12
Refrigerating expense	
Water	15
Gas	
Garbage and rubbish removal	
Protection	
Grounds expense	
Cleaning expense	
Exterminating expense	
Miscellaneous	
Total Regular Operating Expense	$427
Repairs, Maintenance, and Replacements:	
Repairs to structure	$35
Repairs to equipment and fixtures	81
Painting expense	50
Decorating expense	80
Structural replacements	20
Equipment replacements	71
Miscellaneous	
Total Repairs, Maintenance, and Replacements	$337
Taxes and Hazard Insurance:	
Taxes	$421
Insurance	38
Total Taxes and Hazard Insurance	$459

Notes on revenue and expense items:

Units A-1 and B-1 on north side of building and get very little sunshine.
Units B-1 and B-2 on upper floor.
Rental demand very strong and decline in rental value in third year and in occupancy ratio in second year anticipated due to expected rate of competitive building.
Tenants pay for light, cooking fuel, and power for electric refrigerators.

2015a—Supplementary Report of Valuator

2015 a—Supplementary Report of Valuator

Expense Summary

Total Renting and Administrative Expense....	$ 137	10 %
Total Regular Operating Expenses	427	31 %
Total Repairs, Maintenance and Replacements.	337	25 %
Total Taxes and Hazard Insurance	459	34 %
Total Operating Expenses	$ 1360	100%

Effective Gross Revenue: ☐ 1st; ☐ 2d; ☒ 3d year. $ 2754

(Insert figure for last year specifically estimated)

Expense Ratio .... 49 %

Rating of Earning Expectancy

FEATURE	REJECT	1	2	3	4	5	RATING
Rentability of Units		3	6	9	12 X	15	12
Occupancy Percentage in Competitive Buildings		1	2	3	4 X	5	4
Likelihood of Serious Competitive Construction		2	4	6 X	8	10	6
Reliability of Rental Market Data		2	4	6	8 X	10	8
Reliability of Expense Prediction		2	4	6	8 X	10	8
Rating of Property		3	6	9	12	15 X	15
Rating of Location		3	6	9	12	15 X	15
Expense Ratio		4	8	12 X	16	20	12
TOTAL RATING OF EARNING EXPECTANCY							80

		1st year	2d year	3d year
Estimates of Net Earnings:				
Effective gross revenue		$ 3135	$ 2970	$ 2754
Total operating expenses		1360	1360	1360
Estimated net earnings		1775	1610	1394
Estimation of Value by Capitalization:				
Valuation of land by comparison	$ 2,750			
Land capitalization rate	6 %			
Estimated yearly land returns		$ 165	$ 165	$ 165
Estimated building returns		1610	1445	1229
Building capitalization rate	8 %			
Table II factor at building capitalization rate for 38 years		———	———	10.77
Value of annuity at beginning of ☐ 1st; ☐ 2d; ☐ 3d year		$	or $	or $ 10,236
Table I factors at building capitalization rate		.926	.857	.857
Present values of building returns		$ 1491	$ 1238	$ 11,343
Total valuation of building improvements	$ 14,072			

Estimate of Total Value by Capitalization .... $ 16,822

Estimate of Total Replacement Cost of Property .... $ 18,546

Estimate of Available Market Price .... $ 17,500

ESTIMATE OF VALUE.—In my opinion the value of the property described above, assuming the contemplated improvements or new construction described in exhibits, if any, accompanying FHA Form No. 2004 a, or assuming the repairs or alterations or additions, if any, listed under item (15) on FHA Form No. 2015 have been completed, is ...... $ 16,800

Distribution of value estimate:	Land	$ 2,750	@ $ 50 per ☐ lot, ☒ fr. ft., ☐ sq. ft.
	Main Building	13,050	
	Garage	750	
	Other Improvements	250	

NOTE.—It is not necessary to transcribe estimates in this report to items 20 to 28, inclusive, and to Estimate of Value appearing on FHA Form No. 2015.

REMARKS:

CERTIFICATION.—I, the undersigned, have read section 512(a) of the National Housing Act and do hereby certify that I have carefully inspected this property; that to the best of my knowledge and belief the statements made in this report are correct; that I have no personal interest, present or prospective, in the property, applicant, or proceeds of the mortgage; that in my opinion the decisions set forth herein are justified; and that I have never inspected this property before .... (When and for whom)

DATE January 3, 1938 (Signed) John Doe

Valuator. ☒ Staff. ☐ Fee. ☐ Per Diem.

REMARKS: ☒ Approved as submitted. ☐ Approved as modified by me. ☐ Disapproved.

CERTIFICATION.—I, the undersigned, do hereby certify that I have no personal interest, present or prospective, in the property, applicant, or proceeds of the mortgage.

(Signed) Henry Roe

Chief Valuator.

DATE January 4, 1938

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stallments decline in accordance with the Income Premise described in Paragraph 1528. The building returns commencing with the year of maximum long-term average occupancy and running to the end of the economic life of the building are presumed to approximate, on the average, such a declining annuity. The initial values of such annuities are ascertained by discounting them at compound interest by the use of Table II, described below.

c. *Perpetuities:* A perpetuity is an income which is expected to continue indefinitely into the future. In valuation, land returns are assumed to be a series of equal yearly net incomes, accruing at the end of each year, and continuing perpetually. In reality, land returns will increase or decrease. The assumption of level returns is adopted as the most plausible probable expectancy. Tables are not required to determine the present values of perpetuities.

1542. Present Value of an Amount. The present value of an amount due at some given future time may be considered as being the sum which, if invested today at the selected interest rate, will accumulate at compound interest to the amount at the future date. The table giving the present values of 1 due at future dates is in the following form:

Years deferred	7%	8%	9%
1	0.935	0.926	0.917
2	.873	.857	.842
3	.816	.794	.772
4	.763	.735	.708
5	.713	.681	.650

To determine the present value of an item of income of $1,000 due two years from now, at 8%, the amount, $1,000, is multiplied by the factor .857 and the result is $857.

1543. Present Value of a Declining Annuity. The present value of a declining annuity, of the type which follows the Income Premise described in Paragraph 1528, may be considered as the sum of the present values of all the installments of income of which it is composed. Or it may be considered as the sum which, if invested today at the selected rate, will accumulate in such a manner that the income installments in the series may be paid when due, the last installment exactly exhausting the remaining portion of the investment and accumulation. The table giving the present values of declining annuities, commencing one year from now with an income of 1, is in the following form:

Length of Annuity in years	7%	8%	9%
1	0.94	0.93	0.92
2	1.39	1.38	1.36
3	1.84	1.81	1.79
5	2.72	2.66	2.61
10	4.77	4.60	4.44
48	12.91	11.58	10.47
49	12.99	11.64	10.52
50	13.06	11.69	10.56

To determine the present value, at 9%, of a declining annuity which commences one year from today with an income item of $1,000 and runs for a period of 50 years, the first year's income, $1,000, is multiplied by the factor 10.56 and the result is $10,560. To determine the present value, at 8%, of a declining annuity which commences one year from today with an income item of $2,000 and runs for 10 years, the first year's income is multiplied by 4.60 and the result is $9,200.

1544. In cases where the declining annuity commences at a date later than one year from the present time, its present value is less than the figure secured by the above process. In such instances, the initial value of the declining annuity is determined as described in Paragraph 1543. Then the initial value is treated as a single item of income due at the beginning of the first year of the annuity and its present value is determined by the process described in Paragraph 1542. For example, assume that the declining annuity commences in the third year with a payment of $2,000 at the end of that year and runs for 48 years. The initial value of the annuity, at 8%, is 11.58 x $2,000, or $23,160. This is the value of the annunity at the beginning of the first year of the annuity, that is, the beginning of the third year. This date is two years from the present time. Thus, for all practical purposes the $23,160 may be considered as a single item of income due two years from now. The present value of the deferred annuity is therefore determined by multiplying $23,160 by .857, the factor at 8% giving the present value of an amount of 1 deferred two years. The result is $19,848. These calculations may be summarized as follows:

Building Return for 3rd year	$2,000
Table II factor for present value of declining annuity, at 8%, running for 48 years	11.58
Initial Value of building returns of 3rd to 50th year, both inclusive, as of end of 2nd year, 11.58 x $2,000	$23,160
Table I factor for present value, at 8%, of 1 deferred two years	.857
Present value of the deferred annuity, .857 x $23,160	$19,848

1545. Perpetuities. The present value of a perpetuity, such as land returns are assumed to be, may be considered as being the sum which, if invested today at the selected interest rate, will earn interest in such a manner that the income installments in the series may be paid when due without impairment or increase of the principal amount. Tables are not used. The present value of a perpetuity is found by dividing the amount of the yearly income by the capitalization rate. To determine the present value, at 6%, of a perpetuity of $120 per year, in which the first $120 is due one year from now, $120 is divided by .06 and the result is $2,000.

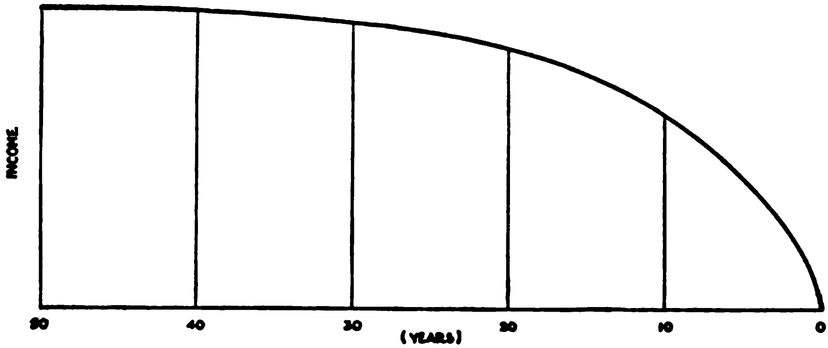
1546. Inasmuch as the valuation process prescribed for rental income dwellings requires the establishment of land value by a process of comparison rather than by capitalizing estimated land returns, the foregoing operation, namely, the direct capitalization of a perpetuity, is not used. Instead, the Valuator first determines the land value, and then computes the amount of yearly income attributable to the land, that is, what perpetuity is required to support the land value. In other words, he starts with the $2,000 valuation of the land by comparison, and determines the land returns by multiplying the $2,000 by the land capitalization rate, 6%, and secures the figure of $120 per year. This is to determine what amount must be deducted from the estimate of total net earnings to arrive at the amount of the building returns. Having made the deduction, he is justified in using the land valuation in the total valuation.

1547. Interest Tables. Tables of compound interest functions are used for the above purposes. Table I gives the present values of the amount 1 deferred for from 1 to 10 years, at various rates from 7% to 12%. Table II gives the present values of declining annuities which run from 10 to 60 years, at various rates from 7% to 12%.

Table I.—THE PRESENT VALUE OF ONE

Yrs.	7%	7½%	8%	8½%	9%	10%	12%
1	0.935	0.930	0.926	0.922	0.917	0.909	0.893
2	.873	.865	.857	.850	.842	.827	.797
3	.816	.805	.794	.783	.772	.751	.712
4	.763	.749	.735	.722	.708	.683	.636
5	.713	.697	.681	.665	.650	.621	.567
6	.666	.648	.630	.613	.596	.565	.507
7	.623	.603	.584	.565	.547	.513	.452
8	.582	.561	.540	.521	.502	.467	.404
9	.544	.522	.500	.480	.460	.424	.361
10	.508	.485	.463	.442	.422	.386	.322

Table II.—THE PRESENT VALUES OF DECLINING ANNUITIES



Yrs.	7%	7½%	8%	8½%	9%	10%	12%
1	0.94	0.93	0.93	0.92	0.92	0.91	0.89
2	1.39	1.38	1.38	1.37	1.36	1.34	1.31
3	1.84	1.83	1.81	1.80	1.79	1.96	1.71
4	2.29	2.27	2.24	2.22	2.20	2.17	2.09
5	2.72	2.69	2.66	2.64	2.61	2.56	2.45
6	3.15	3.11	3.07	3.04	3.00	2.93	2.80
7	3.57	3.52	3.47	3.42	3.38	3.29	3.13
8	3.98	3.92	3.86	3.80	3.75	3.64	3.44
9	4.38	4.31	4.24	4.17	4.10	3.98	3.74
10	4.77	4.68	4.60	4.52	4.44	4.30	4.02
11	5.15	5.05	4.96	4.86	4.77	4.60	4.29
12	5.52	5.41	5.30	5.20	5.09	4.90	4.54
13	5.89	5.76	5.63	5.51	5.40	5.18	4.79
14	6.24	6.10	5.96	5.82	5.69	5.45	5.01
15	6.58	6.42	6.27	6.12	5.98	5.71	5.23
16	6.92	6.74	6.57	6.40	6.25	5.95	5.43
17	7.24	7.04	6.86	6.68	6.51	6.19	5.62
18	7.55	7.34	7.14	6.94	6.76	6.41	5.80
19	7.85	7.62	7.40	7.20	7.00	6.62	5.97
20	8.15	7.90	7.66	7.44	7.22	6.83	6.13
21	8.43	8.16	7.91	7.67	7.44	7.02	6.28
22	8.70	8.42	8.15	7.89	7.65	7.20	6.42
23	8.96	8.66	8.37	8.10	7.85	7.37	6.56
24	9.22	8.90	8.59	8.31	8.03	7.54	6.68
25	9.46	9.12	8.80	8.50	8.21	7.69	6.80
26	9.70	9.34	9.00	8.68	8.38	7.84	6.91
27	9.92	9.55	9.19	8.86	8.55	7.97	7.01
28	10.14	9.74	9.37	9.03	8.70	8.10	7.10
29	10.35	9.93	9.55	9.18	8.84	8.23	7.19
30	10.55	10.11	9.71	9.34	8.98	8.34	7.28

Table II.—THE PRESENT VALUES OF DECLINING ANNUITIES—Con.

Years	7%	7½%	8%	8½%	9%	10%	12%
31	10. 74	10. 30	9. 87	9. 48	9. 11	8. 45	7. 35
32	10. 92	10. 45	10. 02	9. 61	9. 24	8. 55	7. 43
33	11. 09	10. 61	10. 16	9. 74	9. 35	8. 65	7. 49
34	11. 26	10. 76	10. 30	9. 96	9. 46	8. 74	7. 56
35	11. 42	10. 90	10. 42	9. 98	9. 57	8. 83	7. 61
36	11. 57	11. 04	10. 55	10. 09	9. 67	8. 91	7. 67
37	11. 72	11. 17	10. 69	10. 19	9. 76	8. 98	7. 72
38	11. 85	11. 29	10. 77	10. 29	9. 84	9. 05	7. 77
39	11. 99	11. 41	10. 87	10. 38	9. 93	9. 12	7. 81
40	12. 11	11. 52	10. 97	10. 47	10. 00	9. 18	7. 85
41	12. 23	11. 62	11. 06	10. 55	10. 08	9. 24	7. 98
42	12. 34	11. 72	11. 15	10. 63	10. 14	9. 29	7. 92
43	12. 45	11. 81	11. 23	10. 70	10. 21	9. 34	7. 95
44	12. 55	11. 90	11. 31	10. 77	10. 27	9. 39	7. 98
45	12. 71	11. 99	11. 38	10. 83	10. 33	9. 43	8. 01
46	12. 74	12. 07	11. 45	10. 89	10. 38	9. 47	8. 04
47	12. 83	12. 14	11. 52	10. 95	10. 43	9. 51	8. 06
48	12. 91	12. 21	11. 58	11. 00	10. 47	9. 55	8. 08
49	12. 99	12. 28	11. 64	11. 05	10. 52	9. 58	8. 21
50	13. 06	12. 35	11. 69	11. 10	10. 56	9. 61	8. 10
51	13. 13	12. 41	11. 74	11. 14	10. 60	9. 64	------
52	13. 20	12. 46	11. 79	11. 19	10. 63	9. 66	------
53	13. 26	12. 52	11. 84	11. 22	10. 67	9. 69	------
54	13. 32	12. 56	11. 88	11. 26	10. 73	9. 71	------
55	13. 38	12. 61	11. 92	11. 29	10. 75	9. 73	------
56	13. 43	12. 66	11. 96	11. 33	10. 78	9. 75	------
57	13. 48	12. 70	11. 99	11. 36	10. 80	9. 77	------
58	13. 53	12. 74	12. 03	11. 38	10. 82	9. 79	------
59	13. 58	12. 78	12. 06	11. 41	10. 84	9. 81	------
60	13. 62	12. 81	12. 09	11. 43	10. 86	9. 82	------

1548. Provision for Future Depreciation. It is evident that whatever value is ascribed to the building improvements must be considered as depreciable over the remaining economic life of the building. The building returns must therefore provide not only for the interest return on the value of the building, but also for the return of the capital investment in building presumed to be made by a purchaser who buys the property at a price equal to the valuation. Future depreciation is not included in the estimates of expense. Under the prescribed valuation procedure the value of the building is set at the figure representing the capital investment on which the predetermined building returns can pay interest at the building rate and return the total investment in installments over the economic life of the building.

1549. This result is obtained automatically by the use of the declining annuity process. The building returns, under the Income Premise, are just sufficient to provide for the interest return and for the return of the value of the building. This is illustrated by the following tabulation in which the remaining economic life is 10 years. The predicted building returns at the end of the first year are $1,500, the building capitalization rate is 8½%.

End of Year	Building Returns	Interest at 8½%	Capital Returned	Unreturned Balance
Building Valuation				$6, 780. 00
1	$1, 500. 00	$576. 30	$923. 70	5, 856. 30
2	1, 404. 39	497. 79	906. 60	4, 949. 70
3	1, 302. 55	420. 72	881. 83	4, 067. 87
4	1, 189. 44	345. 77	843. 67	3, 224. 20
5	1, 060. 60	274. 06	786. 54	2, 437. 66
6	923. 36	207. 20	716. 16	1, 721. 50
7	775. 45	146. 33	629. 12	1, 092. 38
8	606. 88	92. 85	514. 03	578. 35
9	422. 16	49. 16	373. 00	205. 35
10	223. 22	17. 46	205. 76	

In the above calculations, the Valuator has estimated the building returns in the first year to be $1500. Next he determines the valuation of the building by multiplying the $1500 by the Table II factor for 8½%, 10 years. This factor is 4.52, and the resulting valuation is $6,780.00. In practical valuation he stops at this point. The above tabulation is made only to demonstrate that the future building returns do provide for both the interest return and the complete return of the value ascribed to the building. The computation commences by determining the interest return in the first year. In that year there is $6,780.00 invested. It must earn 8½%, or $576.30. The remainder of the building return during the first year, $1500.00 minus $576.30, or $923.70, is available as a return of capital. It is therefore deducted from the original valuation of $6,780.00, leaving $5,856.30 invested during the second year. This amount must earn at the rate of 8½%, or $497.79, during the second year. Under the Income Premise the building return in the second year is $1,404.39 and there remains $906.60 to reduce the outstanding amount of the investment. This operation continues through the years until, in the last year, the final installment toward the reduction of investment is just sufficient to retire the then remaining balance. During the 10 year period the building returns have been just sufficient to pay an interest return of 8½% per year on the principal amounts which remained invested and, in addition, to return the entire initial investment, or building valuation, in installments over the remaining economic life of the building.

DETERMINATION OF CAPITALIZATION RATES

1550. General Level of Capitalization Rates. Capitalization rates are the percentages of return used to convert predetermined income expectancies into estimates of value. The determination of proper capitalization rates requires the utmost care and is one of the most important steps in the capitalization process because of the great difference in result produced by seemingly slight variation in the rate used. A proper capitalization rate is one which is sufficiently high to attract investment of capital and is appropriate to balance the advantages and hazards of the risk. The determination and selection of capitalization rates is based primarily on probability. A high rate of capitalization is proper when uncertainty characterizes the quality of predictions or when the hazards and risks are great. Low rates apply where the probabilities indicate relative certainty and safety. The definiteness with which the characteristics of the earning expectancies can be forecast is a factor in the selection of proper capitalization rates. Thus, the reliability of the data is, itself, a factor which greatly affects the rate.

1551. The rates of capitalization applicable to real estate investments in rental income dwellings arise from the position of real estate in general and rental income dwelling properties in particular in the general list of investments available to persons with investment funds. The availability of different types of investments to the particular group of purchasers interested in the type and size of properties for which the capitalization rate is sought will necessarily control the general level of correct applicable rates. It is not proper to compare the merits of investments not related by size, amount of capital required, marketability, popularity, safety, and other characteristics. Inasmuch as the rate applicable to a given risk is a market phenomenon, an analysis of the various hazards, as interpreted by average investors, is necessary. It is necessary to select specific kinds of typical, staple, real estate investments to ascertain the general level of applicable rates. A limited number of instances of sales does not suffice to establish proper capitalization rates. The proper level of rates is indicated only by the general average acceptable rate of return sought by a large number of investors.

1552. An individual capitalization rate should be considered to represent an average of a number of different degrees of investment risk. Thus, investment in the first earned portion of the net income would be safer than in the last earned portion. Therefore, markets demand higher rates of return on investments in equities than in mortgages. As a consequence, over-all rates of capitalization applicable to real estate valuation lie between acceptable rates of return on mortgage investments and acceptable rates of return on equity investments. Furthermore, the accepted rate of return on investments in land is lower than the accepted rate of return on investments in buildings because the land returns are more certain and of indefinite duration, i. e., perpetuities, whereas the returns imputable to buildings are subject to uncertainty and to total disappearance. In this sense it may be said that the land returns are considered to be the first earned portion of the total net income. This is clearly seen in cases involving ground leases and leasehold valuations. Further justification for ascribing lower capitalization rates to land than to buildings is found in the recognition that land has, in general, greater variety of possible uses and is, therefore, a safer investment, and may have speculative potentialities as well.

1553. The current rate of return is defined as the net earnings in any year divided by the value of the property as of that year. In rental income dwelling properties, the over-all rate of return is expected to lie between 8% and 15%. Usually, it is from 8% to 10% if no unusual conditions prevail. The land capitalization rate is usually close to 6%; the building capitalization rate is usually 8% to 9%. These specified rates of capitalization are averages which have been applicable in most parts of the Unitel States for a number of years and are here presented solely to describe the approximate investment position of this class of real estate and to provide Valuators with a criterion for the selection of the general level of capitalization rates applicable to valuation of rental income dwellings.

1554. Selection of Rates. The actual selection of the land capitalization rate and the building capitalization rate consists of considering the factors in the particular case to determine modifications of the general criteria set up in the foregoing paragraph. These factors embrace every element which increases or reduces the uncertainty or risk which attaches to investment in the property as compared with investment in the most typical classes of rental income residential properties. The following list of factors suggests the nature of the considerations required in the selection of rates:

a. Regional modifications: The suggested basic rates of 6% for land and 8% for building are subject to modification to take regional differences into account. In general, the more recently settled portions of the country, and the more rapidly growing sections, require the use of higher rates than in older and more stable regions, especially when accompanied by excessive real estate speculation.

b. Modifications for Economic Background Areas: Location of a property in a large population center usually justifies the use of lower rates than may be properly applied in less populous centers. Higher rates are applicable in areas where wide variations in rental values and occupancies occur in different seasons of the year than in areas where comparative stability exists through all seasons.

c. Quality Modifications: The suggested basic rates are also subject to modification to take account of the differences in the qualities of different kinds and grades of properties and locations. Differences in structural quality, age, and utility of buildings and differences in the advantages of locations require modifications.

d. Modifications for Income Factors: Differences in the probable stability of future net incomes require modifications of the basic rates suggested. High expense ratios indicate the desirability of higher capitalization rates and low expense ratios permit lower rates. Poorer quality, greater age, when combined with shorter economic life, lack of adaptability to different uses, and poorer locations require use of higher rates.

e. Modifications for Differences in the Reliability of Data: Uncertainty in the making of forecasts, from any source, requires the use of higher capitalization rates. Where data, of suitable character to justify confidence in the predictions based on them are unavailable, the uncertainty introduced is felt by the market as well as the Valuator and higher rates are applicable.

1555. The Chief Valuator should study the area under his jurisdiction and determine the general level of rates applicable. That is, he should determine the regional modification of the basic rates herein suggested. The other four types of modifications are made, from case to case, by the Valuators and include the elements which are reflected directly in the Rating of Earning Expectancy. The Valuator should establish the Rating of Earning Expectancy in accordance with the instructions given in Section 12 and use the rating as a partial basis for the selection of land and building capitalization rates. If the Rating of Earning Expectancy is low, capitalization rates should be higher than the modified basic rates determined by the Chief Valuator. If the rating is high, capitalization rates should be lower than the modified basic rates. When the Rating of Earning Expectancy is at an intermediate point, the modified basic rates will usually apply without further modification.

FURNISHED APARTMENTS

1556. In some localities it is customary to rent some multi-family units on a furnished basis. In instances where this is true, Valuators may find it necessary to adapt the procedure described in the preceding portion of this Section.

1557. Where it is common practice to rent apartment units on a furnished basis, the Valuator may find it feasible to utilize any of three basic assumptions, namely:

a. He may make his revenue and expense and capitalization estimates on the usual basis of operation as an unfurnished property, as already described in this Section. This is to be done whenever it is possible to use this basis.

b. He may make the estimates on the basis of the rental obtainable by the owner from a lessee of the entire property who would furnish it and operate it as a furnished apartment property. This is to be done, if possible, where the first basis cannot be used.

c. He may make the estimates on the basis of the rentals obtainable for the apartment units after they have been furnished properly, assuming management and operation by a competent owner. This is to be done only when neither the first nor the second basis can be utilized.

1558. If the basic assumption contemplates lessee operation of the property, the procedure is identical with that followed in cases where the basic assumption is that the owner, or a manager in his employ, operates the property. The revenue and expense estimates will differ under the two assumptions. The occupancy ratio will be higher on the basis of lessee operation, and the expense estimate lower as there will be fewer items due to the fact the lessee must pay most of the various expenses of operating and maintaining the property. Conditions assumed in the hypothetical lease would largely govern the estimate. The capitalization rates applicable in case of lessee-operation should also be a little lower than in cases where owner operation is the basic assumption.

1559. If the property is to be valued on the basis of owner operation and as a furnished property, additional considerations enter into the Valuator's calculations. Revenue and expense estimates are somewhat different. Certain items in the estimates for unfurnished properties must be increased if the operation is changed to a furnished basis. These would include taxes, insurance, repairs, replacements, labor charges, management costs, and administrative expense. Some additional items would be introduced. They are dealt with below. It must also be recognized that operation of the property is in the nature of a business enterprise in which the owner-operator assumes an additional risk over and above that which he would experience as an operator of an unfurnished property or as a lessor to a lessee who would assume the burdens and expense of operation. The estimates of expense involved in operation must provide for the following items in addition to those already discussed in paragraphs in this Section:

a. An adequate return upon the value of the furnishings and on the operating capital.

b. Recovery of the amount ascribed as value of the furnishings, to be effected out of yearly revenues and fully accomplished during the estimated remaining useful life of the furnishings.

From this it is apparent that the Valuator must take the following steps:

a. Ascribe a value to the furnishings.

b. Estimate the probable total and probable remaining useful life of the furnishings.

c. Estimate the annual amount required to keep the furnishings in good repair and to make necessary replacements.

d. Estimate the salvage value of the furnishings as of the end of their useful life.

e. Determine the annual amount to be charged against income in order to recover the value ascribed to the furnishings during their estimated remaining useful life.

f. Determine what is an adequate return upon the value of the furnishings and operating capital in view of risk, and management burdens assumed in the enterprise.

1560. *Furniture Valuations.* Usually, a value equal to cost is ascribed to suitable furnishings which must be put into a vacant apartment building in order to make it productive of revenue. This is logical because the furnishings will not be installed unless an adequate return on their cost can be obtained. If no such return can be obtained, the furnishings can be withdrawn and placed in service elsewhere. Furnishings already in use are valued by (1) estimating the cost of new furnishings of the same kind and quality; (2) estimating the probable total and probable remaining useful life of the furnishings in use; (3) ascribing a value to the furnishings equal to the amount derived by multiplying the cost of new furnishings of the same kind and quality by the ratio of probable remaining to probable total useful life. For example, assume that each of a number of different articles of furniture is ascribed a total useful life of 10 years, that each of the articles will have a remaining useful life of 7 years, that the total cost of new articles of the same kind and quality is $9,400. These assumptions indicate that all the articles have been found upon inspection to be in equally good state of repair. The value ascribed to the entire group would be calculated thus:

a. Cost of new furnishings of same kind and quality	$9,400
b. Ratio of remaining useful life to total useful life (7÷10)	.7
c. Estimated value of furnishings	$6,580

It is to be noted that the value ascribed is a "value in use" and not the amount obtainable in a sale of the furnishings as second hand or used goods. In ascribing values, articles having the same estimated total and estimated remaining useful lives are treated in groups and the results added to obtain a grand total for the furnishings involved.

1561. *Useful Life Estimate.* Estimates of the probable total and probable remaining useful life of furnishings must be based upon experience data relating to articles of the specific kind and quality under appraisal. The character of the use which the articles will probably experience in the specific property where they are installed also influences the estimates, as well as the actual physical condition of the articles. Relatively short total useful lives characterize all furnishings used in rental properties because they are generally subjected to rather severe wear. Obsolescence also plays an important part because furnishings must be in currently favored styles if rentals are to be maintained at profitable levels.

1562. *Furniture Repairs and Replacements.* During their useful life, furnishings must be kept in repair. Adequate amounts to offset such costs must be provided in the expense estimates. Replacements must also be made of articles which get broken or stolen and allowance must be made accordingly for these contingencies.

1563. *Recovery of Furniture Investment.* Furnishings are wasting assets. Therefore, the investment in them or the value ascribed to them must be recovered. This necessitates an appropriate charge against income. To determine the charge the Valuator takes the following steps:

a. He estimates the amount probably receivable in a sale of the furnishings at the end of their useful life in the property under consideration. This is their salvage value as of that time.

b. He deducts this salvage value from the value in use ascribed at the time of appraisal.

c. He divides the remainder thus obtained by the estimated remaining useful life, thereby obtaining the annual charge which must be made against income to enable full recovery of the value ascribed at the time of appraisal.

These steps are illustrated in the following:

Value in use of furnishings at date of appraisal	$6,580
Estimated salvage value as of end of useful life	$ 600
Remainder	$5,980
Annual charge against income, assuming 7 years of remaining useful life ($5,980÷7)	$ 854

In making calculations, articles assigned the same remaining useful lives are treated in groups and the results of the computations relating to each group are added together to get the final figure. Thus, there might be groups of items each having estimated remaining useful lives of 5, 6, 7, or more years and separate calculations would be made for each group.

1564. *Adequate Return on Value of Furnishings.* The furnishings represent most of the capital necessary to the establishment of the operating furnished apartment enterprise. The operator of the enterprise must take the risk of having some of his furnishings stolen or destroyed by irresponsible tenants from whom no recovery or damages is feasible. He must deal with tenants whose tenure is generally for only relatively short periods. He must assume the risk of rapid dissipation of his invested capital through the occurrence of obsolescence through a change of public favor as to furniture styles, or the refurnishing with new articles of other apartment properties which compete with his enterprise. He must assume a burden of management which is greater than in the case of operating on an unfurnished basis. Furthermore, he must pay all expenses and charges common to the operation of an unfurnished property before he can credit any returns to himself for his managerial services and for his capital invested in furnishings. Under this combination of circumstances, it is plain that the rate of return on the value of or investment in furnishings should be substantially higher than that applicable to the real estate investment. A return of from 9% to 12% is not unreasonable or unusual. The Valuator calculates the return as follows:

Value ascribed to furnishings	$6,580
Return on $6,580 at 10% ($6580 x .10)	$ 658

1565. *Return on Operating Capital.* Some capital may have to be available in the form of cash at all times to enable continuous operation and meeting of current bills. Since this capital is in the form of cash and can be easily conserved or withdrawn from the enterprise, a relatively low rate of return is applicable, say 4% or 5%. Thus, if $2,000 of operating capital is necessary, the charge against income at 5% would amount to $100. This deduction from income is made only in those cases where the required operating capital is substantial in amount.

1566. To illustrate the additional steps necessarily introduced when the valuation relates to a real estate property which must be treated as an operating furnished apartment enterprise, the following calculations are shown:

Revenue at 100% occupancy		$22,150
Assumed long-term average occupancy		88%
Estimated effective gross revenue		$19,492
Estimated expense of operation:		
Repairs, maintenance, and replacements of furnishings	$250	
All other items of expense	9,610	
		9,860
Estimated net earnings of operating furnished property		$9,632
Capital charges on account of furnishings and operating capital:		
Annual amortization charge to effect recovery of value ascribed to furnishings during their remaining useful life	$854	
Annual return on value ascribed to furnishings at 10% ($6,580 x .10)	658	
Annual return on operating capital at 5% ($750 x .05)	38	
Total		$1,550

Estimated net earnings of real estate	$8,082
Returns on land valuation at 6% ($15,000 x .06)	900
Returns of building improvements	$7,182
Valuation of building returns at 8½%, 40 year remaining economic life, as per income premise ($7,182 x 10.47)	$75,196
Land Valuation	$15,000
Estimate of value of real estate by capitalization	$90,196

The estimate of value by capitalization of the operating furnished apartment house enterprise would be the sum of the values ascribed to the real estate and the furnishings and the operating capital or $97,526. The Valuator would report the value of the real estate, not of the operating furnished apartment house enterprise.

PART IV

SECTION 16

METHODS OF DWELLING COST ESTIMATION

CONTENTS

Effective February 1938
Federal Housing Administration

PART IV

SECTION 16

METHODS OF DWELLING COST ESTIMATION

PURPOSE OF COST ESTIMATION

1601. The Valuator is required to make an estimate of the total cost of replacement of property in accordance with the instructions given in Section 13, Methods of Dwelling Valuation. This estimate constitutes the approximate upper limit of possible valuation. The total cost of replacement of property is distinguished from the estimate of the cost of replacement of building improvements. The former includes the latter. Therefore, the estimate of the costs required to replace building improvements in new condition serves to control, in part, the estimate of value.

1602. This section and Section 17, Application of Cost Estimation Methods, prescribe the methods to be employed in determining the estimate of cost required to replace building improvements. In these sections, the words "Cost Estimate" refer to the estimate of Cost Required to Replace Building Improvements in New Condition, not to the estimate of the total cost of replacement of property.

BASIS OF THE COST ESTIMATE

1603. Estimates of the cost required to replace building improvements in new condition shall be made by either Architectural Inspectors or Valuators for use in connection with the valuation of the real estate pledged as security for mortgages submitted for insurance. Estimates of replacement cost shall be made on the basis of fair costs which would have to be met by an individual lot owner who would secure suitable drawings and specifications, obtain competitive bids, and contract with a responsible builder for the construction of one dwelling only.

1604. The estimate shall be based upon replacement of the physical improvements in new condition. In a case where alterations or additions to the improvements are to be made, the cost estimate shall be based on replacement of the improvements in new condition as they would exist with the proposed alterations or additions incorporated. However, in the event the buildings include excessive or wasteful use of materials or details, excessive ceiling heights or room sizes, attention shall be called to this fact under Estimate of Cost Required to Replace Building Improvements in New Condition on FHA Forms No. 2014 or 2015.

1605. The required cost estimates differ in few particulars from those ordinarily made by contractors bidding for work. The differences result solely from differences in the purposes for which the estimates are made. Contractors' cost estimates are usually made by determining the quantities of materials, equipment, labor, and superintendence required, and then pricing these quantities at predetermined current prices modified for anticipated changes in conditions. The cost estimates made for the purposes of the Federal Housing Administration are similar in this respect, except that the proficiency of the contractor, subcontractors, and workmen is assumed to be only ordinary and equivalent to the typical degree of competency available in the community. Contractors ordinarily make allowances for such items as overhead, insurance, and profit. They consider available supplies of material and labor as well as the location of the project. The quantities are usually grouped by trades in the order in which the work will be done in constructing the building. The cost estimate made for the Federal Housing Administration is similar except that normal conditions are assumed to apply and the quantities are measured in combinations which permit a reasonably accurate estimate to be made without particular regard to the sequence followed by the various trades in the construction operation. Contractors take probable weather conditions into consideration in their estimates. The Administration makes no particular modification of estimates because of probable weather conditions.

1606. The items included in contractors' estimates differ somewhat from the items included in the Federal Housing Administration's estimates. Contractors' bids embrace only the cost of the work the contractor proposes to undertake. His estimate represents the amount which he is willing to accept in payment for the construction of the building at the time and place indicated, and under the conditions specified. The amount which he is willing to accept depends, in part, upon his eagerness to secure work. This amount usually does not include architectural service and frequently does not include walks and drives, special equipment, and various other items. The cost estimate used by the Federal Housing Administration must include those items necessary to complete the physical improvements as indicated in paragraphs 1608 to 1612.

1607. The estimate is invariably predicated upon the ability and experience of the estimator and is not entirely the result of a mathematical computation. Cost estimates are usually based upon past building operations under conditions which may differ greatly from those under which the subject building will be constructed. It follows that the estimator must call upon his experience in practical building operations to recognize the probable variations which will occur between one job and another.

1608. Items Included. The estimate shall include the cost of all materials, labor, sub-contracts, builder's overhead and profit, permits, inspection fees, and architectural service entering into the cost of construction of the following:

a. Main building, including porches, built-in garages and attached terraces supported on foundation walls
b. Garage, attached or detached, and other accessory buildings
c. Walks, drives, and terraces not supported on foundation walls
d. Private sewage disposal, water supply, and electric generating plants

The allowance for builder's overhead and profit is the customary local and current charge for the type and class of building under consideration. Suitable allowances shall be made for workmen's compensation, social security, and liability insurance where these items are a part of the cost of the building construction. The allowance for architectural service shall be calculated on the basis of the percentage customarily charged in the locality for this type of work at the time the estimate is made. If the building is of the type for which plans are ordinarily purchased outright, no more than the purchase price ordinarily charged for such plans shall be included.

1609. The estimate shall not include the following:

a. Savings due to quantity production of buildings or unusual efficiency of builder or workmen
b. Deductions for accrued deterioration, obsolescence, and depreciation
c. Carrying charges during construction and cost of financing
d. Structures of temporary character or structures not permanently affixed to the ground
e. Landscaping, including shrubs, trees, grass, retaining walls, and finish grading of site
f. Chattels, that is, equipment and accessories which are not, legally, part of the realty

In interpreting the meaning of *a* above, when the main building is one of a number of row houses separated only by party walls, the proportionate cost attributable to the subject building as a part of an operation embracing several houses is used as the basis of estimation. Items listed under *e* above, while not included in the Estimated Replacement Cost of Building Improvements, are considered in the Cost of Replacement of Property as described in Section 13.

1610. Equipment and Accessories. Some dwellings contain great amounts of mechanical equipment and accessories which are provided by the builder to create sales appeal. Determination as to whether certain equipment or accessories are chattels or parts of the realty depends on local custom and state laws. To assist the Chief Architectural Supervisors who must make this decision, the Underwriting Division, Washington, D. C., has supplied Underwriting staffs with opinions from the Legal Division concerning the items to be construed as parts of the realty or as chattels in the different jurisdictions.

1611. Items Subject to Rapid Deterioration and Obsolesence. Certain items of equipment and accessories may be subject to rapid deterioration and obsolescence as a result of the wearing out of moving parts, changes in design, and anticipated reductions in initial and operating costs. Therefore, such items, although included in the total estimate at full cost, are separately listed on FHA Form No. 2014, to indicate to the Valuator that special treatment of the amounts may be necessary in establishing the estimate of value. If possible, the probable rate of future depreciation should be indicated under "Remarks."

1612. Items of Unreasonable or Excessive Cost. Occasionally properties incorporating unusual features, but of conventional construction, will be offered for consideration. These properties reflect the individual desires, hobbies, and idiosyncrasies of the owner to such an extent that the living utility provided may not be proportionate to the replacement cost. The estimated cost of these features shall be included as individual items in the replacement cost estimate and expressed as a separate lump-sum item and indicated on FHA Form No. 2014 under the heading, Other Improvements. Typical examples are as follows:

a. Objects of art and museum pieces incorporated in the building construction

b. Excessive development of service features in proportion to habitable area of house

c. Excessive provision for hobbies, such as laboratories, conservatories, private art galleries, and swimming pools

d. Construction materials of unusual or unjustifiable permanence and excessive cost, obviously inconsistent with the size and character of the dwelling

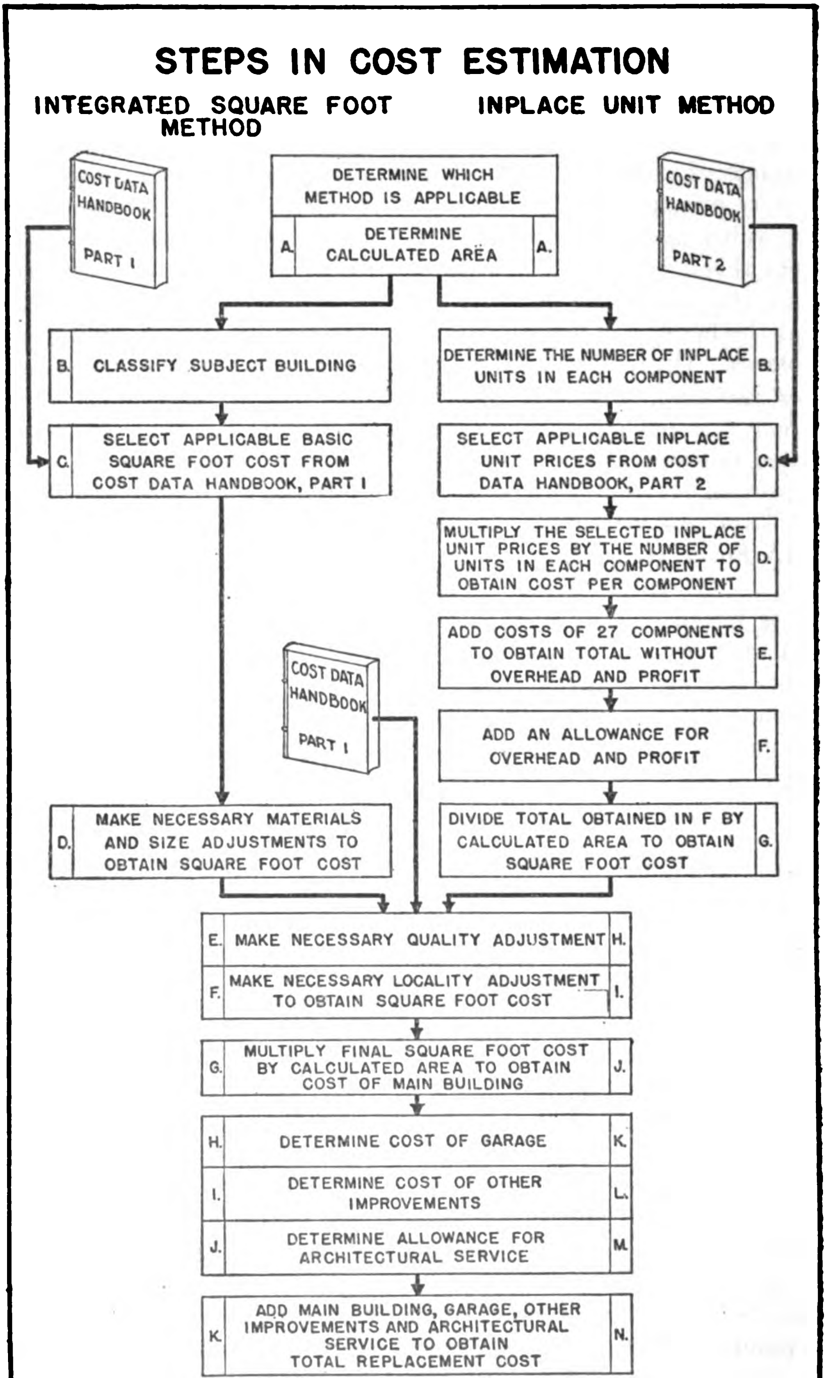
1613. New Materials and Methods of Construction. New materials and methods of construction which have not been generally used in dwellings may be subject to wide fluctuations in cost over comparatively short periods of time. To meet this condition the cost of the subject building shall be estimated according to the drawings and specifications, except that conventional materials and methods of construction shall be assumed for the new materials and methods of construction. The substituted conventional materials and methods of construction shall offer the same structural soundness, relative resistance to fire, to use, and to the elements, the same insulation value, and maintenance costs as the units they replace. In the event this substitution increases the thickness of the walls or partitions, the size of the building shall be correspondingly increased so that the house will contain the same finished area as the building it replaces. This cost establishes the Maximum Allowable Estimate of Cost Required to Replace Building Improvements in New Condition. Where it is obvious that the cost of the actual, existing, or contemplated improvements will exceed this estimate, the cost of the actual improvements need not be determined. The words "Maximum Allowable" are inserted before "Estimate of Cost Required----------," on FHA Form No. 2014.

1614. Some new construction methods may permit economies which will result in contract prices lower than the Estimate of Maximum Allowable Cost Required to Replace Building Improvements in New Condition as described above. In these cases the final estimate shall be governed by the probable actual costs and not by the cost of conventional types of construction of equivalent character.

PRESCRIBED METHODS OF COST ESTIMATION

1615. Selection of Method. The cost estimate shall be obtained by one of the two prescribed methods. A majority of the cases presented for consideration are handled by the Integrated Square Foot Method. The remaining cases are handled by the Inplace Unit Method. The basis for selection of method is the complexity of the problem presented. Typical properties for which suitable cost data have been compiled are estimated by the Integrated Square Foot Method. If this method cannot be applied for any reason, recourse is had to the Inplace Unit Method.

1616. The prescribed Integrated Square Foot or Inplace Unit methods are considered to be best adaptable for the purpose of obtaining uniformity throughout all the Federal Housing Administration offices, and for statistical purposes. No methods except the prescribed Integrated Square Foot and Inplace Unit Methods shall be used without the written permission of the Underwriting Division, Washington, D. C. Such permission will be granted only if circumstances and conditions of an unusual character indicate


STEPS IN COST ESTIMATION
INTEGRATED SQUARE FOOT METHOD
INPLACE UNIT METHOD
COST DATA HANDBOOK PART 1
DETERMINE WHICH METHOD IS APPLICABLE
A. DETERMINE CALCULATED AREA A.
COST DATA HANDBOOK PART 2
B. CLASSIFY SUBJECT BUILDING
DETERMINE THE NUMBER OF INPLACE UNITS IN EACH COMPONENT B.
C. SELECT APPLICABLE BASIC SQUARE FOOT COST FROM COST DATA HANDBOOK, PART 1
SELECT APPLICABLE INPLACE UNIT PRICES FROM COST DATA HANDBOOK, PART 2 C.
MULTIPLY THE SELECTED INPLACE UNIT PRICES BY THE NUMBER OF UNITS IN EACH COMPONENT TO OBTAIN COST PER COMPONENT D.
ADD COSTS OF 27 COMPONENTS TO OBTAIN TOTAL WITHOUT OVERHEAD AND PROFIT E.
COST DATA HANDBOOK PART 1
ADD AN ALLOWANCE FOR OVERHEAD AND PROFIT F.
D. MAKE NECESSARY MATERIALS AND SIZE ADJUSTMENTS TO OBTAIN SQUARE FOOT COST
DIVIDE TOTAL OBTAINED IN F BY CALCULATED AREA TO OBTAIN SQUARE FOOT COST G.
E. MAKE NECESSARY QUALITY ADJUSTMENT H.
F. MAKE NECESSARY LOCALITY ADJUSTMENT TO OBTAIN SQUARE FOOT COST I.
G. MULTIPLY FINAL SQUARE FOOT COST BY CALCULATED AREA TO OBTAIN COST OF MAIN BUILDING J.
H. DETERMINE COST OF GARAGE K.
I. DETERMINE COST OF OTHER IMPROVEMENTS L.
J. DETERMINE ALLOWANCE FOR ARCHITECTURAL SERVICE M.
K. ADD MAIN BUILDING, GARAGE, OTHER IMPROVEMENTS AND ARCHITECTURAL SERVICE TO OBTAIN TOTAL REPLACEMENT COST N.

the necessity or strong desirability of the use of a method other than those prescribed.

1617. Steps in Integrated Square Foot Method. This method of estimation proceeds in the order of the following listed steps:

a. The *calculated area* of the main building is determined in accordance with the instructions in paragraphs 1622 to 1623

b. The building to be estimated is compared with the *classification of buildings* and is identified according to classification criteria as falling in one of the established classifications. The classification of buildings and the classification criteria are described in Paragraphs 1625 to 1628. If the building fails to classify because no basic square foot costs have been supplied for the type, the Integrated Square Foot Method is not used and the estimate is made by the Inplace Unit Method. If it comes under the established classifications, the Integrated Square Foot Method is applied

c. The *basic square foot cost* applicable to the subject building is selected from Part 1 of the Cost Data Handbook. Instructions covering the compilation of cost data and its recordation in cost data handbooks are given in Section 19, Construction Cost Data. The method of selecting the applicable Basic Square Foot Cost from the handbook is described in paragraph 1629

d. The Basic Square Foot Cost is then adjusted, if necessary, by making *materials and size adjustments* in accordance with the instructions given in paragraphs 1630 to 1638. These adjustments comprise additions to and deductions from the Basic Square Foot Cost to take account of differences in materials, size, and shape of the subject building as compared with the basic specifications used in the Classification of Buildings. After the Materials and Size Adjustments, if necessary, have been made, the resulting figure is the *square foot cost*

e. The Square Foot Cost is then modified to take account of the differences in cost, due to the quality variations between the subject building and the basic specifications which are used in the Classification of Buildings. This process is called the *quality adjustment*, and is made by applying a Quality Adjustment Percentage to the Square Foot Cost *f*. The next step is to make a further modification to take into account the differences in cost of erecting buildings in different localities. This process is called the *locality adjustment* and is accomplished by applying a Locality Adjustment Percentage to the Square Foot Cost already adjusted for quality.

g. After the Quality Adjustment and the Locality Adjustment have been made, the resulting figure is the *final square foot cost* applicable to the subject building. The Final Square Foot Cost is multiplied by the number of square feet in the Calculated Area to secure the cost of *main building*

h. The cost of replacement of *garage* is then determined

i. The next step is to determine the cost of *other improvements* such as walks, driveways, accessory buildings, and items of special equipment not reflected in the Final Square Foot Cost

j. The sum of the costs obtained in *g*, *h*, and *i* ordinarily constitutes the basis on which architectural service, if any, is computed. Therefore the next step is to determine the allowance for *architectural service*

k. The estimated costs of Main Building, Garage, Other Improvements, and Architectural Service are then totalled to obtain the *estimate of cost required to replace building improvements in new condition*. This figure is the total cost estimate used for Federal Housing Administration purposes, and correct entries are made on FHA Form No. 2014 or FHA Form No. 2015

1618. In some cases involving existing construction, it will be found that the replacement cost of building improvements is considerably higher than that portion of the valuation ascribed to the building improvements. This occurs most frequently in cases involving building improvements, the value of which has been greatly affected by deterioration or obsolescence, or both. When such cases are encountered, the Valuator will not be required to prepare FHA Form No. 2052, Cost Estimate—Integrated Square Foot Method, but may use the selected basic square foot cost as the Final Square Foot Cost without adjustment or modification. When this procedure is employed, the Valuator is required to make an appropriate statement on FHA Form No. 2015, Report of Valuator, explaining the absence of FHA Form No. 2052.

1619. Steps in Inplace Unit Method. This method proceeds in the order of the following listed steps:

a. The *calculated area* of the main building is determined in accordance with the instructions in paragraph 1622 to 1623

b. The number of inplace units in each component part of the building is measured or estimated. Components are those integral assembled parts of a building which are susceptible to separate examination with respect to costs, such as excavation, exterior walls, or plumbing. An inplace unit is used as a basis of measurement and refers to the completed and finished aspect of a component or element of a component. As a consequence, many inplace units embrace assemblies of diverse things

c. *Inplace unit prices* applicable to the components of the subject building are selected from Part 2 of the Cost Data Handbook

d. The Inplace Unit Prices are multiplied by the corresponding number of units of each component to obtain the costs of the individual components.

e. The costs of components are added to obtain the *total cost of components*, not including overhead or profit.

f. An allowance for overhead and profit is added to the above estimate to obtain a *total*

g. This total obtained in *f* is then divided by the number of square feet in the Calculated Area to obtain the *square foot cost*

h. The Square Foot Cost is then modified to take account of the differences in cost due to quality variations between the subject building and the quality assumed in establishing the inplace unit prices. This process is called the *quality adjustment* and is made by applying a Quality Adjustment Percentage to the Square Foot Cost. Cost Data Handbook, Part 1, is used

i. The next step is to make a further modification to take into account the differences in cost of erecting buildings in different localities. This process is called the *locality adjustment* and is accomplished by applying a Locality Adjustment Percentage to the Square Foot Cost already adjusted for quality. Cost Data Handbook, Part 1, is used

j. After both the Quality Adjustment and Locality Adjustment have been made, the resulting figure is the *final square foot cost* applicable to the subject building. The

Final Square Foot Cost is multiplied by the number of square feet in the Calculated Area to secure the *cost of main building*

k. The cost of replacement of *garage* is then determined

l. The next step is to determine the cost of *other improvements*, such as walks, driveways, accessory buildings, and items of special equipment not reflected in the Final Square Foot Cost

m. The sum of the costs obtained in *j*, *k*, and *l* ordinarily constitutes the basis on which architectural service, if any, is computed. Therefore the next step is to determine the allowance for *architectural service*

n. The estimated costs of Main Building, Garage, Other Improvements, and Architectural Service are then added to secure the *estimate of cost required to replace building improvements in new condition.* This figure is the total cost estimate used for Federal Housing Administration purposes and correct entries are made on FHA Form No. 2014

COMPONENTS OF THE BUILDING

1620. Both the Integrated Square Foot Method and the Inplace Unit Method of cost estimation consider a building to be comprised of a number of component parts. Components are those integral assembled parts of a building which are susceptible to separate examination with respect to costs. These components comprise the parts of the building which are separately subject to variations in cost according to the character, sizes, and quality of materials specified for a particular building.

1621. In cost estimation the components of a building are used in accordance with the established grouping given below. In order to secure uniformity and accuracy, the indentifying reference numbers set before the components of the building in this paragraph shall be maintained throughout the cost estimating procedure in all offices. As a further step toward uniformity, each component shall include all incidental elements properly associated with it, as indicated under each component. The 27 components include all elements of cost of the building except certain items which are included separately in the estimate summary as described in paragraphs 1649 and 1650. No deviation from this division of the estimate, numbering of the components or inclusion of associated elements is permitted, because uniformity in procedure is essential to accuracy and to the utilization of cost data. The components, each with its associated elements, are as follows:

1. Excavation:

Basement
Trench walls
Pier
Grading of unexcavated portions under first floor construction

2. Foundations:

a. With Basement:

Wall footings, basement walls, including dampproofing
Basement floor
Basement stairs, windows, doors, columns or piers including footings, girders, areas, tile drains, coal bin partition and coal chute

b. Without Basement:

Wall footings, trench walls, curtain walls, piers including footings, and girders

3. Chimney:

Single flue with required enclosing masonry and foundation

4. Fireplace:

Fireplace including complete foundation, masonry, flue, hearth, lining, damper, facing, and mantel

5. Exterior Walls:

All items of construction and exterior finish of the exterior walls including interior dampproofing or furring where used, but not including plaster base or plaster or other interior wall finish materials

6. Floor Framing:

Structural floor framing, but not including subflooring, finish flooring, or plaster base and plaster or other ceiling finish. Concrete slabs, self-supporting, supported on joist framing, or those laid on the ground in structures without basements are included in this component. Monolithic cement finish is considered part of the slab

7. Subflooring:

Subflooring, but not including finish flooring. Sleepers and floor fill over floor construction are included in this component

8. **Finish Flooring:**
Building paper, wood flooring, sanding, scraping, and finishing

9. **Partition Framing:**
Structural framing including furring or nailing strips, but not including plaster base and plaster or wall finish materials

10. **Ceiling Framing:**
Structural ceiling framing including furring or nailing strips, but not including plaster base and plaster or other ceiling finish materials

11. **Roof Framing:**
Structural roof framing including roof sheathing or shingle lath

12. **Roofing:**
Roof covering materials, together with felt, if any, including all flashings, valleys, hip and ridge coverings

13. **Gutters and Downspouts:**
Gutters and downspouts, including shoes, splash blocks, dry wells, or connections to drains

14. **Plaster Base and Plaster:**
Lath and plaster, wallboard or other wall and ceiling materials, but not including decorations or coverings

15. **Decorating:**
Finish or coverings applied to wall and ceiling surfaces, but not including finish on doors, windows, trim, floors, or cabinets

16. **Interior Doors and Trim:**
Interior doors including trim, hardware, and finish
Trim for cased openings including finish
Running trim, base, floor mould, and picture mould, including finish
Closet shelves and hook strips

17. **Windows:**
Frames, sash, glass, hardware, interior trim, and finish

18. **Entrance and Exterior Detail:**
Main entrance door with side and transom lights, and all other exterior doors including glass, hardware and finish. All added exterior architectural treatment, includ-

ing additional entrance steps, exceptional chimney, half-timbering, unusual cornice and porch detail, louvers, and shutters

19. Cabinets and Interior Detail:

Kitchen cabinets, medicine cabinets, bookcases, china closets, wardrobes, and other special cabinet work, including glass, hardware, and finish

20. Stairs:

All stairs except basement or exterior stairs, including balustrades and finish

21. Special Floors and Wainscot:

Special flooring and wainscoting such as used in kitchen, bathrooms, and lavatories

22. Plumbing:

Plumbing fixtures complete with fittings, piping for water, soil, waste and vent lines, gas piping, hot water equipment, water softeners, sewer and water supply connections up to public utilities or to private equipment; but not including private sewage disposal or water supply plants

23. Heating:

Typical complete heating plant and appurtenances, but not including unusual fuel burners or conditioning equipment of the character referred to in paragraph 1611

24. Electric Wiring:

Items such as service connection, wiring, outlets and switches, but not including private electric generating plant

25. Lighting Fixtures:

All lighting fixtures

26. Insulation:

Any insulation which is additional to sheathing or plaster base

27. Miscellaneous:

Items not otherwise readily classified under other components, such as screens, storm-sash, caulking, weather-stripping, basement garage, finished rooms in basement, finished rooms in attic, termite shields, wood preservation, and special basement waterproofing

DETERMINATION OF CALCULATED AREA

1622. Both the Integrated Square Foot Method and the Inplace Unit Method of cost estimation require the determination of the Calculated Area of the building. Calculated Area is the number of square feet in a building measured in accordance with a standard set of rules and used as a basis for comparing the costs of constructing buildings. The prescribed rules for the determination of Calculated Area are as follows:

a. To be Included and Calculated in Full:

The square foot area of finished floors above the basement, including bays, oriels, dormers, light shafts and stair-wells, utility rooms, vestibules, enclosed porches, open porches within the main wall line, and built-in garages. In computing these areas, measurements shall be taken to the outside surfaces of exterior walls or partitions enclosing the areas and no deductions shall be made for stair-wells or light shafts. In structures without basements, the area included is that above foundations.

b. To be Included and Calculated in Part:

1. Open porches outside of main wall line, at one-half of actual area

2. Attached masonry terraces supported on foundation walls, at one-quarter of actual area

c. Not to be Included in Calculated Area:

1. Finished rooms in basement
2. Finished rooms in attic
3. Basement garages
4. Attached or detached garages
5. Masonry terraces without foundation walls

1623. While the five items listed above under *c* are excluded from the calculated area, they are not omitted from the cost estimate. The following definitions apply to the interpretation of the above rules:

a. Attached garage is one having one or more walls common to the walls of the main dwelling, but without living quarters above. However, where one story dwellings predominate and the garage is of construction comparable in quality with the main house, and forms an integral part of the architectural design, the garage may be considered as "built-in"

b. *Built-in garage* is one located above the basement level within the main walls of a house, and which has living quarters above, except as provided in *a* above
c. *Basement garage* is one located in a basement

MEASUREMENT OF COMPONENTS

1624. Quantity measurements in terms of Inplace Units are taken from drawings or from the building itself, in the case of existing construction. Overall *outside* dimensions are used to determine areas. In computing areas of walls, partitions, floors or roofs, no deductions are made for openings occasioned by doors, windows, cased and uncased openings, stair wells, shafts, louvers, vents, or chimneys. The cost of quantities not deducted compensates for the cost of forming the openings. Likewise, the cost of excess quantities, included by using outside dimensions for exterior walls and by measuring partitions through intersections to outside of exterior walls or intersecting partitions, compensates for the cost of forming the corners and intersections. Excess quantity due to measuring basement floor to outside of basement wall compensates for the cost of excavation beyond walls, back-filling and footing excavation. The cost of excess quantities, obtained by measuring half-story ceilings to outside of enclosing partitions and partitions under sloping portion of roof at full ceiling height, compensates for the cost of waste in cutting and the additional labor required in forming the intersections. Measurements are taken for each of the components or elements as follows:

1. Excavation:

a. *Basement:* Measured in cubic yards, equals the product of the area within outside surfaces of basement walls and the average depth from natural grade to underside of basement floor.

b. *Trench Wall:* Measured in cubic yards, equals the product of the wall thickness plus one foot and the depth from grade to underside of footing, by the total of the exterior dimensions of the trench wall. This element includes excavation for curtain walls where they occur.

c. *Pier:* Measured in cubic yards, equals the total of the products of each pier footing area and the depth from grade to underside of footing.

d. *Grading of Unexcavated Portions:* Measured in cubic yards, equals the product of the unexcavated area and the average depth below natural grade.

2. Foundations:

a. Footings: Measured in lineal feet, equals the total of the exterior dimensions of the walls or piers having footings.

b. Basement Walls: Measured in square feet, equals the area of the outside surface of the walls from the top of the footings to the underside of first floor construction. This element includes bench walls but does not include non-bearing partitions. Non-bearing partitions are included under Component No. 27.

c. Trench Walls: Measured in square feet, equals the area of the outside surface of the walls, from the top of the footing to the underside of first floor construction. This element includes curtain walls and piers where they occur.

d. Basement Floor: Measured in square feet to the outside surfaces of basement walls.

e. Basement Essentials: Estimated as a lump sum amount to include basement stair, basement sash and doors, floor girders, lally columns or piers, coal bins or similar items not otherwise listed.

3. Chimney:

Measured in lineal feet from underside of footing to top of chimney. No deduction is made for any portion common to foundation or exterior walls.

4. Fireplace:

Estimated as a lump sum amount to include complete foundation, masonry, flue, hearth, lining, damper, facing, and mantel.

5. Exterior Walls:

Measured in square feet, equals the area of the outside surface of the walls, from underside of first floor construction to the intersection with roof surfaces. Walls of gables and dormers are included. Party walls are measured in square feet, to include both party walls and listed separately from the exposed exterior walls. The unit cost for the party wall is halved in estimating, so as to include only that cost applicable to the subject structure.

6. Floor Framing:

Measured in square feet with dimensions taken to outside of exterior walls or to outside edges where walls do not occur.

7. Subflooring:

Measured in square feet with dimensions taken to outside of exterior walls or partitions enclosing the areas.

8. Finish Flooring:

Measured in square feet, with dimensions taken to outside of exterior walls or partitions enclosing the areas. Where no wall or partition occurs the measurement is taken to outside edge.

9. Partition Framing:

Measured in square feet, with a height from the finish floor to the finish ceiling and a total length measured through all intersecting partitions to the outside of exterior walls or cross partitions. No reduction in height is made for enclosing partitions under sloping portions of roof.

10. Ceiling Framing:

Measured in square feet to the outside of exterior walls or enclosing partitions under sloping roof. No deduction is made for sloping portions under rafters. Where no wall or partition occurs the measurement is taken to outside edge.

11. Roof Framing:

Measured in square feet of roof area to include the overhang at eaves and gable ends. Areas of dormer roofs and the triangular parts of connecting roofs are not added, nor are the openings occasioned by the dormers deducted.

12. Roofing:

Measured in square feet, equals the total area of the roof framing. When more than one type of roof covering occurs, each type is measured separately in the same manner as described for roof framing. Flashings and counter-flashings, valleys, saddles and ridge caps are not measured separately, as their cost is included in the unit cost of the roofing.

13. Gutters and Downspouts:

Measured in lineal feet, each separate run being measured to the nearest foot. Shoes, splash blocks, dry wells, or connections to drains are estimated as individual items and expressed as a lump sum amount.

14. Plaster Base and Plaster:

Measured in square feet as the sum of the following items: (*a*) total area of the exterior walls and party walls, between floor and ceiling levels of each finished story and half-story; (*b*) twice the area of the partition framing where finished on both sides; (*c*) area of the enclosing partition framing under sloping portions of roof; and (*d*) area of all ceilings.

15. Decorating:

Measured in square feet, equals the decorated area of walls and ceilings.

16. Interior Doors and Trim:

a. Interior Doors: Measured as a number of units complete with standing trim, hardware and finish. Units are based on average size and type.

b. Cased Openings: Measured as a number of units of standing trim with finish.

c. Running Trim: This item includes base and picture mould complete with finish and is measured in lineal feet, equals the sum of: (*1*) perimeters of all finished stories, (*2*) twice the lineal feet of partitions finished on both sides, (*3*) lineal feet of partitions finished on one side. From the total obtained a deduction is made for door openings.

d. Closet Shelving: Estimated as a lump-sum amount including hook strips.

17. Windows:

Measured as a number of units complete with frame, sash, glass, hardware, interior trim and finish.

18. Entrance and Exterior Detail:

a. Entrances: Estimated as individual items and expressed as a lump sum amount, to include all exterior doors, frames, glass, added architectural features, finish and hardware.

b. Exterior Detail: Estimated as individual items and expressed as a lump sum amount, to include such items as entrance steps, added architectural features, exceptional chimney, half-timbering, unusual cornice and porch detail, louvers and shutters.

19. Cabinets and Interior Detail:

Estimated as individual items and expressed as a lump sum amount to include such items as kitchen cabinets, medicine cabinets, bookcases, china closets, wardrobes and other special cabinet work, including glass, hardware and finish.

20. Stairs:

Estimated as a lump sum amount including all stairs above first floor, complete with balustrades and finish.

21. Special Floors and Wainscot:

Estimated as individual items and expressed as separate lump sum amounts equal to the difference between the cost of the special materials and the cost of the finish flooring or wall material that is replaced. This applies to various special materials used for flooring and wainscoting for kitchens, bathrooms, lavatories, shower stalls and other spaces.

22. Plumbing:

Estimated as individual items and expressed as lump sum amounts for:

a. Fixtures for one bath, kitchen and laundry complete with all piping for water, soil, waste and vent lines, gas piping, hot water equipment, sewer and water-supply connections up to public utilities or to private equipment. Private sewage disposal or water supply plants are not included in this element.

b. Fixtures for additional bathroom including tub, lavatory and water closet with connections carried to the basic plumbing.

c. Stall shower complete with all fixtures, accessories and connections to the basic plumbing.

d. Lavatory, including lavatory fixture and water closet, with connections to the basic plumbing.

e. Other plumbing fixtures complete with connections to the basic plumbing.

23. Heating:

Estimated as a lump sum amount for complete heating equipment of customary type. This sum includes appurtenances, but shall not include the cost of unusual fuel burner or cooling equipment of the character referred to in paragraph 1611.

24. Electric Wiring:

Measured as a number of outlets for lighting fixtures, switches and convenience receptacles. Service panel, power outlets and bell wiring are estimated as separate lump sum amounts.

25. Lighting Fixtures:

Estimated as a lump sum amount.

26. Insulation:

Measured in square feet, separately for walls and ceilings where insulation is additional to sheathing or plaster base.

27. Miscellaneous:

Estimated as separate lump sum amounts for items such as screens, storm sash, caulking, weatherstripping, basement garage, finished rooms in basement, finished rooms in attic, termite shields, wood preservation and special basement waterproofing.

DETERMINATION OF SQUARE FOOT COST IN THE INTEGRATED SQUARE FOOT METHOD

1625. After the Calculated Area has been determined, the building to be estimated is compared with the Classification of Buildings and is identified according to classification criteria as falling in one of the established classifications. This makes it possible to select a Basic Square Foot Cost from the Cost Data Handbook, Part 1. The selected Basic Square Foot Cost is then adjusted, if necessary, in accordance with the instructions in Paragraphs 1630 to 1638. Where no deviations from basic specifications occur, no adjustments are necessary.

1626. Classification of Building. The classification of buildings is used to identify a structure for which an estimate is to be made and to select the applicable cost data from the handbook. The first step in classifying a building is to ascertain whether it is sufficiently typical to be comparable to a reasonably large number of similar buildings, and, as a consequence, to be capable of estimation by the Integrated Square Foot Method. The use of the Integrated Square Foot Method is feasible only when the cost data have been derived from buildings of the same classification as the building to be estimated.

1627. In order to secure accuracy in estimation and to provide a basis for cost comparison, buildings are classified on a uniform basis according to the following criteria:

a. Type: detached, semi-detached, row house, end row house
b. Number of family units
c. Number of stories
d. Calculated area

In general, no further subdivision of classifications is necessary as to the number of rooms, shape of the house, extent of porches or the materials specified. However, additional classification criteria may be advantageously set up for buildings having like characteristics, if they occur frequently enough. Roof design is usually characteristic of each particular classification of building and consequently does not, in general, make further subdivision of classifications necessary. Customary practice in a locality likewise determines the presence or absence of basements in typical buildings.

1628. A precise understanding of classification criteria is essential to insure a proper application of the compiled cost data. Therefore, certain of the classification criteria require careful definition. The definitions used apply to cost estimation only and should not be confused with other definitions of the same items used for purposes of local interpretation. The following definitions apply to the classification of buildings:

a. *Full story* is one in which the finish floor extends to the exterior walls and the ceiling is of required height but does not drop below the heads of full height windows.

b. *Half-story* is one in which the rooms are located partly under the slope of the main roof and the finish floor does not extend to the exterior walls because of insufficient headroom beyond the enclosing partitions. This definition is conditioned on the fullest use of the area for finished rooms. If less area is utilized, the space becomes an attic with finished rooms. The presence or absence of plumbing or heating equipment in the space does not affect this definition.

c. *Attic* is the unfinished space immediately beneath the roof which is not utilized or is only partially utilized for finished rooms.

d. *Basement* is usually an enclosed usable space having full headroom below the main floor level of the building. This definition is not altered by the presence of one or more finished rooms.

e. *Family unit*, as defined for cost estimation purposes, is that portion of a dwelling designed primarily for the use of one family, provided with independent sanitary and cooking facilities and an entrance which is not through the living quarters of another unit.

f. *Detached building* is a building in which no exterior walls are common to any other building.

g. Semi-detached building is one of two adjoining buildings standing independently of others and having a common party wall.

h. A *row house* is one of four or more buildings in which two walls are common to adjoining buildings.

i. An *end row house* is one which is located at the end of a group of four or more row houses and may differ in plan, window arrangement, and extent of exterior walls, from the other houses in the group by virtue of its location. Where only three houses occur in a row, separate classifications are set up for the end houses and for the center house.

1629. Selection of Basic Square Foot Cost.—After the subject building has been classified, an applicable Basic Square Foot Cost is selected from Part 1 of the Cost Data Handbook. Basic square foot costs of typical buildings, derived according to basic specifications, are tabulated in Part 1 of the Cost Data Handbook under various classifications and for usual exterior wall constructions in each classification. The applicable Basic Square Foot Cost is selected from these tabulations under the proper classification and in the column indicated by the calculated area of the subject building. The figure thus selected is the Basic Square Foot Cost to be used for the subject building. The basic square foot cost of a building is the integrated cost, per square foot of livable floor area, of all components of the main building but not including porches or attached terraces. Inasmuch as the character of porches and terraces ordinarily corresponds with the character of the main building, it is assumed that their costs per square foot are in the same ratios to the selected basic square foot cost as the fractional parts at which their actual areas are included in the Calculated Area. Porches and terraces are not considered in Basic Specifications or in the Classification of Buildings. Therefore, peculiarities of these items do not necessitate making adjustments to basic square foot costs.

1630. Materials and Size Adjustments.—When the subject building does not substantially conform to the selected typical building and its basic specifications, it is necessary to make adjustments to the Basic Square Foot Cost to account for deviations in the character, sizes, or grades of materials and in the shape or size of the structure. These adjustments comprise additions to and deductions from the Basic Square Foot Cost and are jointly described as Materials and Size Adjustments.

1631. Ordinarily a subject building deviates from the selected typical building in only a few items, but those deviations which do occur may relate to any of the 27 components of the building and may occur in any of the following items:

a. Alternate materials and equipment
b. Alternate grades of materials and equipment
c. Added exterior and interior detail
d. Added miscellaneous items
e. Added mechanical and electrical equipment
f. Basement garage and finished rooms in basement or attic
g. Insulation
h. Addition or omission of basement
i. Depth of excavation
j. Height of exterior walls
k. Perimeter of building

In general, the adjustments for the last three items will be used only in unusual cases. If such adjustments occur frequently enough, separate classifications are developed. Such exceptional cases will frequently warrant estimation by the architectural section.

1632. Adjustments of Basic Square Foot Cost to compensate for deviations of a subject building from the selected typical building and its basic specifications are computed according to prescribed rules and are made by using one or more of the following:

a. Component Unit Adjustments, as described in Paragraphs 1633 and 1634
b. Lump Sum Adjustments, as described in Paragraph 1635
c. Perimeter Adjustments, as described in Paragraph 1636
d. Exterior Wall Height Adjustments, as described in Paragraph 1637

The first two types of adjustment are most frequently used. The adjustments listed under *c* and *d* are used only occasionally in cases where substantial deviations from the selected typical building occur in connection with the height of exterior walls and perimeter of building.

1633. Component Unit Adjustment is defined as the difference in cost, per square foot of calculated area, due to a deviation from the basic specifications for a component part of the building. These adjustments, which are for commonly encountered deviations, are available in conjunction with Basic Square Foot Costs in Part 1 of the Cost Data Handbook. These adjustments are tabulated separately for each increment of area on each classification sheet. Component Unit Adjustments are used to compensate for deviations in the following items: (*a*) alternate materials, (*b*) alternate grades of materials and equipment, (*c*) addition or omission of basement, and (*d*) insulation. When an alternate material is encountered for only

a part of a component or element, the adjustment is computed as a fractional part of the Component Unit Adjustment for the alternate material as tabulated in Part 1 of the handbook.
The fraction used is equal to the measurement of the alternate material divided by the total measurement of the component.

1634. When a Component Unit Adjustment is not available in the handbook for a particular deviation from basic specifications, the adjustment is estimated as a lump-sum amount equal to the difference between the estimated costs of the alternate and the basic items. This applies to deviations that affect a component as a whole or in part.

1635. Lump sum adjustment is defined as the difference in cost, expressed in dollars, between a subject component and the corresponding basic component. For commonly encountered deviations, these adjustments are available in Part 1 of the Cost Data Handbook, and are tabulated under each classification of typical buildings in conjunction with Basic Square Foot Costs. For less commonly encountered deviations Miscellaneous Unit and Lump-sum Costs are tabulated separately in Part 1 of the handbook. For certain items which are variable in extent according to each subject specification, Lump Sum Adjustments may not be available in the Cost Data Handbook, and therefore they are to be computed as lump sum amounts equal to the difference in cost of such items above or below any allowances included in the Basic Square Foot Cost according to basic specifications. Lump-sum Adjustments are used to compensate for deviations in items such as the following: (*a*) added exterior and interior detail, (*b*) alternate equipment or grades of equipment, (*c*) added mechanical or electrical equipment, (*d*) basement garage and finished rooms in basement or attic, and (*e*) added miscellaneous items designated as elements of Component No. 27. The lump sum adjustments are totalled and the amount so obtained is converted into a cost adjustment per square foot of Calculated Area.

1636. Perimeter adjustment is necessary when the perimeter of the subject building is, because of irregularities in plan, substantially different from the perimeter of the basic building. The perimeter adjustment is computed as a lump-sum amount equal to the product of the deviation in perimeter, measured in lineal feet, and the cost per lineal foot of exterior wall construction. The cost per lineal foot of exterior wall construction is tabulated separately for each type of exterior wall construction on each classification sheet in Part 1 of the handbook. The basic perimeter is tabulated for each classification of building under the applicable floor area column of Basic Square Foot Cost.

1637. Wall height adjustment is necessary where the height of the exterior walls of the subject building is substantially in excess of the exterior wall height of basic building. This adjustment is computed as a lump-sum amount equal to the product of excess surface of wall, measured in square feet, and a unit cost of the particular exterior wall construction. The excess wall surface is equal to the excess height multiplied by the subject perimeter.

1638. When the Materials and Size Adjustments described above have been made, the resulting figure is the Square Foot Cost used to determine the Final Square Foot Cost.

DETERMINATION OF SQUARE FOOT COST IN THE INPLACE UNIT METHOD

1639. The Inplace Unit Method, an adaptation of the quantity survey method, is designed to reduce the number of computations. This is accomplished by considering each component part of the building as an integral assembly of associated elements erected in place. In general, components are measured in units of surface or length. Certain components and elements not conveniently reduced to such units are measured in units of assembled items. Inplace unit prices applicable to the units used in measuring the components are multiplied by the corresponding number of units in each component to obtain the assembled cost of the individual components. This requires the actual measurement of the components in the subject building. Inplace unit prices include the cost of materials with allowances for waste and the cost of erection, but do not include an allowance for overhead and profit.

1640. After the numbers of inplace units in each component part of the building are measured, inplace unit prices applicable to the components of the subject building are selected from Part 2 of the Cost Data Handbook. Then the inplace unit prices are multiplied by the number of units in each component. These computations result in the costs of components. The costs of all components are then totalled.

1641. An allowance for overhead and profit is then determined. Overhead and profit allowances are determined on the basis of percentages ordinarily included in contract bids in the territory. Included in overhead and profit are allowances for fire, tornado, public liability and workmen's compensation insurance, and social security only where these items are customarily included by the contractors in the territory. The allowance for overhead and profit is added to the Total Cost of Components to obtain a total which is then divided by the number of square feet of Calculated Area in order to convert this amount into a Square Foot Cost. The

Square Foot Cost in the Inplace Method is directly comparable to the Square Foot Cost obtained in the Integrated Square Foot method and is used in exactly the same manner to determine the Final Square Foot Cost.

DETERMINATION OF FINAL SQUARE FOOT COST

1642. After the Square Foot Cost has been determined in either the Integrated Square Foot Method or in the Inplace Unit Method, the next step is to determine the Final Square Foot Cost by making the Quality and Locality Adjustments.

1643. Quality Adjustment. — Quality Adjustment, where necessary, is made by applying a percentage described as the Quality Adjustment Percentage to the Square Foot Cost. Recommend limits are tabulated in Part 1 of the Cost Data Handbook.

1644. The quality adjustment percentage represents the difference in the quality of construction in the subject building as compared with the quality of construction to which the Basic Square Foot Costs are applicable. The quality adjustment recognizes varying degrees of workmanship under identical specifications and that careful workmanship may cost more than inferior but acceptable workmanship.

1645. The quality adjustment percentage is determined by comparing the quality of the subject construction with the quality of construction to which the Basic Square Foot Costs are applicable and selecting a percentage to make the adjustment.

1646. Locality Adjustment.—All Inplace Unit Prices and Basic Square Foot Costs are based upon prices and costs in a city selected as the base at the time the basic cost data are established and compiled in the cost data handbooks. Final Square Foot Costs for other cities or economic background areas are obtained by the application of Locality Adjustment Percentages to the Square Foot Costs already adjusted for quality. Locality Adjustment Percentages for all important localities in the territory are tabulated in Part 1 of the Cost Data Handbook.

1647. The locality adjustment percentage expresses the relationship between the cost of a building constructed in the selected base city and the cost of an identical building constructed in another city within the cost data territory. The use of the locality adjustment percentages obviates the necessity for providing complete independent basic cost data for each city or economic background area within the territory. Detailed instructions for determination of these percentages are contained in Section 19.

1648. Major changes in cost level are provided for by revisions of basic cost data. Minor changes are provided for by revisions of the locality adjustment percentages. Temporary or seasonal fluctuations are disregarded.

DETERMINATION OF TOTAL REPLACEMENT COST

1649. After both the Quality Adjustment and Locality Adjustment have been applied to the Square Foot Cost obtained either in the Integrated Square Foot Method or in the Inplace Unit Method, the resulting figure is the Final Square Foot Cost applicable to the subject building. The Final Square Foot Cost is multiplied by the number of square feet in the Calculated Area to obtain the cost of main building. Then estimates are made of the separate costs required to replace improvements other than the main building, such as garage, accessory buildings, walks, and driveways. An allowance is determined for special equipment such as described in paragraph 1611 which is not reflected in the Final Square Foot Cost. An allowance is also determined for items of unreasonable or excessive cost such as described in paragraph 1612 which are not reflected in the Final Square Foot Cost.

1650. The total of the costs of main building, garage, accessory buildings, walks, driveways, and the items described in paragraphs 1611 and 1612, ordinarily constitutes the basis on which architectural service, if any, is computed. The allowance for architectural service when determined as described in paragraph 1608 is added to the foregoing total. The resulting figure is the Estimate of Cost Required to Replace Building Improvements in New Condition. This resulting amount is the total cost estimate used for Federal Housing Administration purposes and correct entries are made on FHA Form No. 2014 or FHA Form No. 2015.

PART IV

SECTION 17

APPLICATION OF COST ESTIMATION METHODS

CONTENTS

PART IV

SECTION 17

APPLICATION OF COST ESTIMATION METHODS

DESCRIPTION OF EXAMPLES

1701. This section of the Manual illustrates in detail the process of making estimates of replacement costs, in accordance with the instructions contained in Section 16. For this purpose, illustrative drawings and specifications are used. The material and erection costs used in the examples throughout this section are assumed, and are not actual costs. These examples are more complicated than cases ordinarily presented for mortgage insurance.

1702. The building which is used as an example in this section may be considered as either a proposed or an existing structure. In the case of an existing building, the dimensions shown on the drawings would be obtained by actual measurement at the site. Likewise, the materials and equipment described in these specifications would be noted from actual observation. Therefore, the following examples apply equally to drawings and specifications for a proposed building and to an existing structure. The examples and text which follow make reference only to the drawings and specifications.

1703. Before undertaking an estimate, it is necessary to determine which method is applicable and best suited to the subject building. This is accomplished by an inspection of the subject drawings or existing structure to determine whether the Basic Square Foot Costs are applicable. If so, the Integrated Square Foot Method is used, and the estimate is made on FHA Form No. 2052. If not, the Inplace Unit Method is used, and the estimate is made on FHA Form No. 2053.

DESCRIPTION AND USE OF ESTIMATE FORMS

1704. Two forms are provided for making cost estimates, FHA Form No. 2052, Cost Estimate—Integrated Square Foot Method, and FHA Form 2053, Cost Estimate—Inplace Unit Method.

FHA Form No. 2052
(Revised February [illegible])

FEDERAL HOUSING ADMINISTRATION

______________ (Serial number)

COST ESTIMATE—INTEGRATED SQUARE FOOT METHOD

(Property address) (City) (State)

COMPUTATION OF CALCULATED AREA

Item	Dimensions	Area (Square feet)	Fraction	Total
			Calculated Area	

MODIFICATION OF SQUARE-FOOT COST

Square foot cost .... $ ______
Quality adjustment .... ______ % ______
Locality adjustment .... ______ % ______
Final Square Foot Cost .... $ ______

______ (Contractor's name, if known)

Type		Family Units		Number of Stories	
Detached		1		1	
Semi-detached		2		1½	
Row		3		2	
End row		4			

Calculated Area ______ Sq. ft.

SUMMARY OF REPLACEMENT COST

Main building .... ______ Sq. ft. @ ______ $ ______
Garage .... ______ Sq. ft. @ ______ $ ______
Other improvements:
Accessory buildings .... ______ Sq. ft. @ ______ $ ______
Walks .... ______ Sq. ft. @ ______ $ ______
Driveways .... ______ Sq. ft. @ ______ $ ______
Additional mechanical equipment ______
______
______ $ ______
Items of excessive cost .... $ ______
Sewage disposal .... $ ______
Water supply .... $ ______
______ $ ______
Subtotal $ ______
Architectural service .... $ ______
Estimate of Cost Required to Replace Building Improvements in New Condition $ ______

Date ______ Estimated by ______

2052—Cost Estimate—Integrated Square Foot Method

2053—Cost Estimate—Integrated Square Foot Method

Calculated Area ________ Sq. ft.

Type of exterior wall ________				Basic Square Foot Cost	
Adjustments		Lump Sum	Per Square Foot		
Component	Explanation		Add (+)	Ded. (−)	
1. Excavation					
2. Foundations					
3. Chimney					
4. Fireplace					
5. Exterior walls					
Height adjustment					
Perimeter adjustment					
6. Floor framing					
7. Subflooring					
8. Finish flooring					
9. Partition framing					
10. Ceiling framing					
11. Roof framing					
12. Roofing					
13. Gutters and downspouts					
14. Plaster base and plaster					
15. Decorating					
16. Interior doors and trim					
17. Windows					
18. Entrance and exterior detail					
19. Cabinets and interior detail					
20. Stairs					
21. Special floors and wainscot					
Bath floor					
Bath wainscot					
Kitchen					
22. Plumbing					
Additional bathroom					
Stall shower					
Lavatory					
Toilet					
23. Heating					
24. Electric wiring					
25. Lighting fixtures					
26. Insulation					
Walls					
Ceiling					
27. Miscellaneous					
	Total Lump Sum Items				
	Total Additions and Deductions				
	Net Addition or Deduction		Add (+)	Ded. (−)	
			Square Foot Cost		

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FHA Form No. [illegible]
(Revised February [illegible])

FEDERAL HOUSING ADMINISTRATION

______ (Serial number)

COST ESTIMATE—INPLACE UNIT METHOD

(Property address) (City) (State)

COMPUTATION OF CALCULATED AREA

Item	Dimensions	Area (Square feet)	Fraction	Total
			Calculated Area	

MODIFICATION OF SQUARE-FOOT COST

Square foot cost .... $ ______
Quality adjustment .... ______ % ______
Locality adjustment .... ______ % ______
Final Square Foot Cost .... $ ☐

______ (Contractor's name, if known)

Type		Family Units		Number of Stories	
Detached		1		1	
Semi-detached		2		1½	
Row		3		2	
End row		4			

Calculated Area ______ Sq. ft.

SUMMARY OF REPLACEMENT COST

Main building .... ______ Sq. ft. @ ______ $
Garage .... ______ Sq. ft. @ ______ $
Other improvements:
Accessory buildings .... ______ Sq. ft. @ ______ $ ______
Walks .... ______ Sq. ft. @ ______ $ ______
Driveways .... ______ Sq. ft. @ ______ $ ______
Additional mechanical equipment ______
______ $ ______
Items of excessive cost .... $ ______
Sewage disposal .... $ ______
Water supply .... $ ______
______ $ ______
Subtotal $
Architectural service .... $
Estimate of Cost Required to Replace Building Improvements in New Condition $ ☐

Date ______ Estimated by ______

2052—Cost Estimate—Inplace Unit Method

2653—Cost Estimate—Inplace Unit Method

Calculated Area ________ Sq. ft.

Component	Explanation	Quantity	Unit	Unit Price	Cost of Component
1. Excavation					
2. Foundations:					
Footings					
Walls					
Basement floor					
Basement essentials					
3. Chimney					
4. Fireplace					
5. Exterior walls					
6. Floor framing					
7. Subflooring					
8. Finish flooring					
9. Partition framing					
10. Ceiling framing					
11. Roof framing					
Sheathing					
12. Roofing					
13. Gutters					
Downspouts					
14. Plaster base and plaster					
15. Decorating					
16. Interior doors					
Running trim					
17. Windows					
18. Entrance					
Exterior detail					
19. Cabinets					
Interior detail					
20. Stairs					
21. Special floors					
Special wainscot					
22. Plumbing:					
Extra bathroom					
Stall shower					
Lavatory					
Toilet					
23. Heating					
24. Electric wiring					
Service panel					
25. Lighting fixtures					
26. Insulation:					
Wall					
Ceiling					
27. Miscellaneous					
				Total Cost of Components	
				Contractor's Overhead and Profit	
				Total	
				Square Foot Cost	

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The face sides of these forms are arranged identically for entries of certain case data, and for determining the Estimate of Cost Required to Replace Building Improvements in New Condition. FHA Form No. 2052 is used in the Integrated Square Foot Method, as shown and described in paragraphs 1710 to 1724, and the reverse side is ruled especially for the adjustment of a selected Basic Square Foot Cost. FHA Form No. 2053 is used in the Inplace Unit Method, as shown and described in paragraphs 1725 to 1732. The reverse side is ruled especially for the computation of Component Costs and to obtain the Square Foot Cost. Space is provided on the face side of both forms for applying Quality and Locality Adjustments. Space is provided also on the face side of both forms for computing the costs of Main Building, Garage, Other Improvements and Architectural Service, and to obtain the Estimate of Cost Required to Replace Building Improvements in New Condition.

1705. Inasmuch as both estimate forms are arranged identically on the face side, the entries and computations on the face side are treated in the same manner for both methods of cost estimation. Nevertheless, it is necessary first to select the proper form according to the method to be used.

1706. Space is provided on the face side of the forms for the following entries: (*a*) serial number, (*b*) property address, (*c*) diagram or rough sketch, (*d*) computation of calculated area, (*e*) classification of building, (*f*) quality and locality adjustments, (*g*) name of contractor, (*h*) summary of replacement cost, (*i*) date of estimate, and (*j*) signature.

1707. An illustration of the computation of Calculated Area follows:

COMPUTATION OF CALCULATED AREA

Item	Dimensions	Area (Square feet)	Fraction	Total
FIRST FLOOR	24'-9" X 30'-6"			755
BAY	3'-0" X 6'-6"			20
PORCH	8'-6" 12'-0"	102	.5	51
STOOPS	(4'-0"X6'-0")+(3'-0"X4'-0")	36	.25	9
SECOND FLOOR	16'-6" X 30'-6"			503
REAR DORMER	3'-3" X 26'-0"			85
FRONT DORMERS	3'-3" X 3'-0"	10	2	20
			Calculated Area	1443

MODIFICATION OF SQUARE-FOOT COST	Type	Family Units	Number of Stories

The above computation of the Calculated Area of the subject building is made in accordance with the instructions contained in Section 16. The fractions, expressed in decimal form and entered in the "Fraction" column, apply to those areas which are included in the calculated area *in part*. The areas of the two front dormers are equal, and this is indicated by entering "2" in the fraction column.

1708. The reverse side of FHA Form No. 2052 is used for making adjustments to a selected Basic Square Foot Cost. The reverse side of FHA Form No. 2053 is used for entering the measurements of components, applicable inplace unit prices, the resulting costs of components, and for obtaining a Square Foot Cost.

1709. The Square Foot Cost, after having been determined on the reverse side of the appropriate form, is transferred to the face side and then adjusted for quality and for locality to obtain the Final Square Foot Cost. Computations are then made to determine the estimated costs of the main building, garage, other improvements and architectural service. Appropriate entries are made in the Summary of Replacement Cost on the face side of the form.

APPLICATION OF INTEGRATED SQUARE FOOT METHOD

1710. Classification of Subject Building. The subject building is identified with one of the classifications listed in Part 1 of the handbook. This identification reveals that the subject building is classified as detached, one-family, 1½ story, 1,400 to 1,500 square feet. This classification enables correct selection of the applicable Basic Square Foot Cost and the Component Unit Adjustments.

1711. Cost Data Handbook. Part 1 of the handbook contains cost information necessary for the estimation of a building by the Integrated Square Foot Method. This data is tabulated for ready reference under the following headings:

Basic Specifications
Basic Square Foot Costs
Component Unit Adjustments
Miscellaneous Costs
Quality Adjustment Percentages
Locality Adjustment Percentages

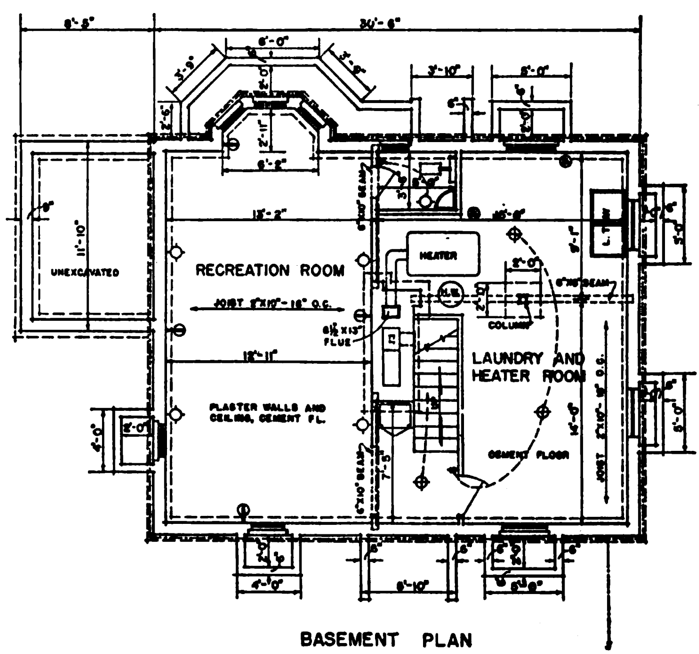
1712. *Basic Specifications* comprise an outline of the materials with descriptions of character and grades customarily used in typical buildings. Separate basic specifications are provided for each of the basic types of buildings: detached, semi-detached, row and end-row. The materials are described by their character, sizes and grades, or by the lump-sum amounts normally allowed for them. The specifications are arranged in the same order as the numbered components of a building, and the descriptions of customary materials are grouped under the components to which they refer.

1713. *Basic Square Foot Costs* are tabulated separately, to two decimal places, under each classification for usual exterior wall constructions. They are also tabulated according to the various calculated areas which are typical for each classification. In gen-

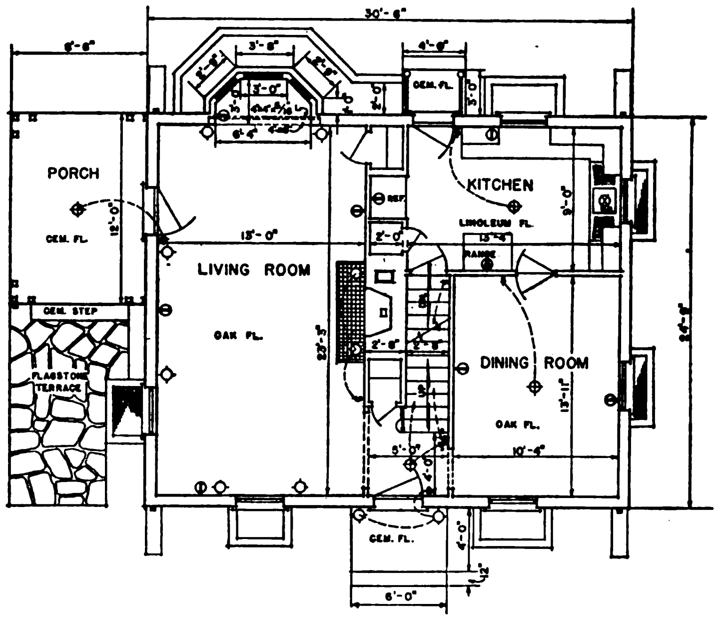
SUBJECT SPECIFICATIONS

Footings. Concrete.
Footing Drain. 4" agricultural tile.
Foundation walls. 10" poured concrete.
Columns. 4" diameter steel pipe with cap and base.
Girders.
Basement floor. 3" concrete with monolithic finish.
Exterior brick veneer. Face brick.
Chimneys. Brick chimneys, flue lining, cement cap, refractory brick fireplace lining, cast iron damper, throat, ash-dump and cleanout doors.
Rough lumber. Joists, studs, plates, rafters of No. 1 common Y. P., sheathing, sub-flooring, and roof boards of No. 2 common Y. P.
Exterior trim & millwork. No. 2 white pine, 1¾" thick doors.
Interior trim. Stock trim, 1⅜" thick doors, white pine.
Windows. D. H. stock white pine.
Basement sash. Standard quality steel.
Floors. Clear white oak throughout except kitchen to be linoleum over yellow pine or fir.
Tile. Tile floor and wainscot in bathroom.
Linoleum finished floor in kitchen.
Stairs. Pine treads and risers to basement.
Oak treads and pine risers to second floor.
Roofing. 210# asphalt composition shingles, rear dormer 40# tin.
Sheet metal. Copper valleys, gutters, flashing, and downspouts.
Lath. 2.3#, paper-backed metal lath.
Plaster. 2 coat work.
Exterior paint. *a.* Wood—priming coat and 2 regular coats.
b. Sheet metal—1 coat lead and oil and 2 regular coats.
Interior paint. *a.* Walls and ceilings—1 coat size, 2 coats semi-flat.
b. Woodwork—1 coat flat, 2 coats enamel.
c. Floors—stain and fill, 2 coats varnish or equivalent finish.
Finish hardware. Medium grade.
Electrical. BX wiring—Fixture allowance $50.00.
Plumbing. Copper water piping, cast-iron soil pipe, medium grade fixtures and fittings. Enamel iron sink, vitreous china lavatories and enameled iron double shell tub, syphon action closets, cement laundry trays—30 gallon automatic hot water heater.
Heating. Automatic, forced warm-air furnace, oil burner.
Accessories. Medicine cabinet in bathroom.
Parcel receiver.
Kitchen ventilating fan.
Cabinet in basement hall.
Kitchen cabinets.
Refrigerator, electric or gas.
Weatherstrip. All exterior doors and D. H. wood windows.
Insulation. Rock wool batts on uppermost ceiling and exterior walls.
Recreation room. Ceiling plastered on metal lath, exterior walls plastered over waterproof bond coat, 2" gypsum block partitions, painted walls, ceilings and floor.

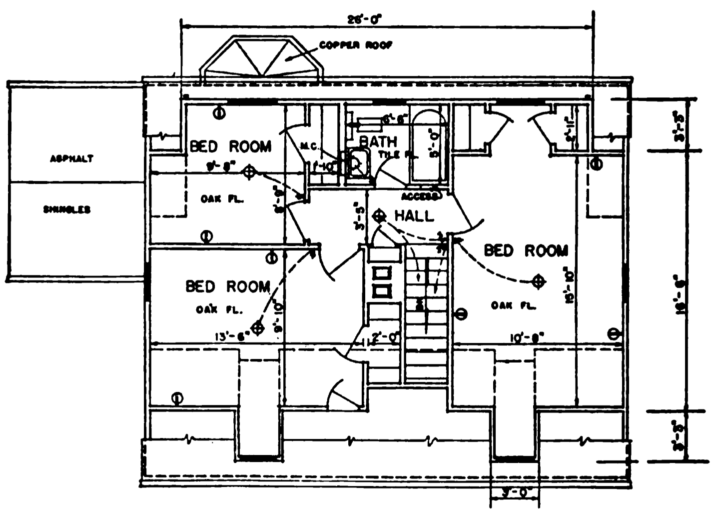
FRONT ELEVATION



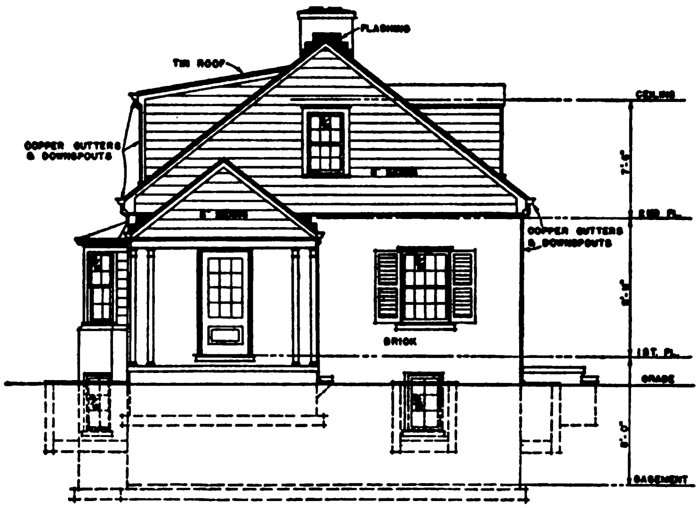
BASEMENT PLAN



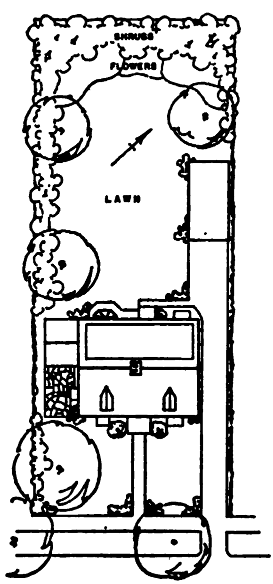
FIRST FLOOR PLAN



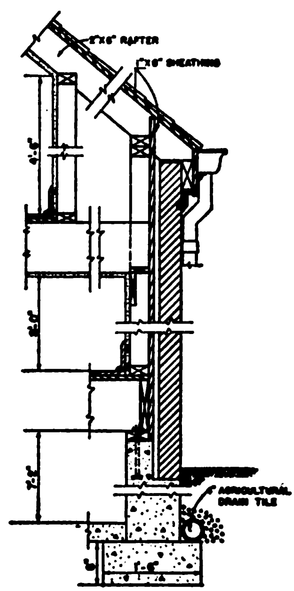
SECOND FLOOR PLAN



SIDE ELEVATION



PLOT PLAN
LOT 50'X 135'



WALL SECTION

eral, two or more sheets are required for each classification to provide for the usual areas in increments of 100 square feet. Eight columns appear on each sheet, each column being captioned by the area to which the Basic Square Foot Costs are applicable. The tabulations also indicate the basic perimeters established for each area increment and the cost per lineal foot of each type of exterior wall. The basic wall height established for each classification is shown at the top of each sheet and it is applicable to all areas tabulated on the sheet.

1714. *Component Unit Adjustments* are tabulated, to two decimal places, in conjunction with Basic Square Foot Costs under each classification. These adjustments are arranged in columns for the respective area increment. Some adjustments are indicated as lump sum amounts, if lump sums are more readily applicable.

1715. *Miscellaneous Costs* are available for those elements for which cost data has not been otherwise tabulated. These miscellaneous costs include contractors' overhead and profit, and are either lump sum amounts or unit costs of the elements erected in place, complete.

1716. *Quality Adjustment Percentages* are confined within the limits tabulated as the recommended upper and lower limits of Quality Adjustment Percentage. These limits are established for various important cities and localities in the territory.

1717. *Locality Adjustment Percentages* are tabulated for the base city and all other important cities and localities in the territory. If necessary, these percentages are tabulated separately for more than one type of exterior wall construction.

1718. **Selection of Basic Square Foot Cost.** The accompanying illustration shows the tabulation of Basic Square Foot Costs for detached, one-family, 1½ story buildings. The column headed 1,400 to 1,500 is chosen because it corresponds to the calculated area of the subject building, which is 1,443 square feet. In this column, opposite "Face Brick Veneer", is found the Basic Square Foot Cost, $3.64, applicable to the subject building. This basic square foot cost is then entered at the top of the right hand column on the reverse side of FHA Form No. 2052. An entry, "Face Brick Veneer", is made on the blank line opposite Type of Exterior Wall. Necessary adjustments to the basic square foot cost are next made according to instructions in the following paragraphs.

1719. **Materials and Size Adjustments.** As the next step, the subject drawings and specifications are compared with the applicable Basic Specifications to determine deviations from the established typical building and basic specifications. *Although few adjustments are ordinarily necessary, a subject building has been* *selected to include a variety of deviations from basic specifications for the purpose of illustration.* In order to obviate possible oversight, the necessary Materials and Size Adjustments are made in a sequence corresponding to the numbering of the components of a building.

FEDERAL HOUSING ADMINISTRATION

Metropolitan City Insuring Office

CLASSIFICATION
Type Detached
Family 1
Stories 1½

Exterior Wall Construction		900 1000	1000 1100	1100 1200	1200 1300	1300 1400	1400 1500	1500 1600	1600 1700
		Basic Square Foot Costs							
Frame Shingled or Sided	*5.37	3.46	3.42	3.38	3.35	3.32	3.29	3.26	3.23
Frame Stucco on Metal Lath	*6.33	3.53	3.49	3.45	3.43	3.39	3.35	3.32	3.29
Common Brick Veneer	*7.47	3.65	3.62	3.58	3.55	3.49	3.49	3.46	3.43
Common Brick 8" Wall	*8.17	3.67	3.64	3.60	3.37	3.51	3.51	3.48	3.45
Face Brick Veneer	*7.75	3.80	3.77	3.73	3.70	3.67	3.64	3.61	3.58
Face Brick 12" Wall									
*Cost per lineal foot of exterior wall including foundation									
Basic Perimeter		95	98	100	103	107	110	114	118
Basic Wall Height 10'4"									
Component Unit Adjustments									
25% Basement	-	.19	.20	.21	.22	.22	.23	.23	.24
50% Basement	-	.15	.16	.17	.17	.18	.18	.19	.19
2 - Foundation - 12" Brick	+	.34	.31	.30	.28	.27	.26	.25	.23
Foundation - 10" Concrete	+	.06	.06	.05	.05	.04	.04	.03	.03
4 - Fireplace	+	$90.	$100	$100.	$110.	$120.	$140.	$150.	$160.
8 - Clear White Oak Floor	+	.02	.02	.02	.02	.02	.02	.02	.02
13 - Gutters-D'nspouts-Copper	+	.07	.06	.06	.05	.04	.04	.03	.03
14 - Metal Lath	+	.12	.12	.11	.10	.09	.09	.08	.08
22 - Extra Bath-Complete	+	.26	.24	.26	.24	.22	.24	.30	.30
23 - Hot Water Heat	+	.15	.14	.13	.12	.12	.12	.12	.12
26 - Insulation - 4" RW-Walls	+	.13	.12	.12	.11	.11	.10	.10	.10
Ceilings	+	.03	.03	.03	.03	.03	.03	.03	.03

Miscellaneous Costs

4" Footing Drain-Lineal Foot	.065	Copper Screens - per window	3.00
Sewer Connection - Lineal Foot	.90	Copper Screens - per door	8.00
Shingles		Galvanized Screens - per door	5.00
210# Asphalt - Square Foot	.11	Galvanized Screens - per window	2.00
Clear Red Cedar - Square Foot	.07	Linen Cabinets - square foot	1.00
Heavy Asphalt - Square Foot	.15		
Standard Slate - Square Foot	.20	Garages	
Shutters - per pair	5.50	1 car Frame - Detached	250.00
Kitchen Cabinet - Wall Sq. Ft.	1.20	2 car Frame - Detached	325.00
Kitchen Cabinet - Floor Sq. Ft.	1.55	1 car B. V. - Detached	300.00
Tile Floor	1.00	2 car B. V. - Detached	400.00
Tile Wainscot	1.20	1 car Frame - Attached	160.00
Extra Lavatory	32.00	1 car B. V. - Attached	200.00
Extra Closet Combination	40.00	4" concrete walks - square foot	.18
Copper piping - per fixture	2.00	5" concrete drive - square foot	.22
Laundry Trays	20.00		
Weatherstripping - per door	6.00	Kitchen fan	22.00
Weatherstripping - per window	2.75		
Standard Linoleum on Pine Floor	.11		
40# Tin Roofing - Square Foot	.28		

BASIC SPECIFICATIONS

2. **Foundations.** Frame Construction—8″ concrete block wall. Brick Veneer—10″ concrete block wall.
3. **Chimney.** Complete with flue lining.
4. **Fireplace.** Single flue complete with flue lining, hearth, damper, stock mantle.
5. **Exterior Walls.** Refer to Exterior Wall Construction on basic square foot cost sheet.
6. **Floor Framing.** No. 2 Y. P. 2 x 8 and 2 x 10—16″ O. C., depending on floor area.
7. **Sub-Flooring.** No. 2 Y. P. 1 x 6, laid diagonally.
8. **Finish Flooring.** $^{13}/_{16}$ x 2¼ select Red or White Oak. Paper—Sand—Fill—2 coats shellac—wax.
11. **Roof Framing.** No. 2 Y. P. 2 x 6 and 2 x 8, depending on span.
12. **Roof Covering.** 16″ Clear Red Cedar Shingles. Edge Grain.
13. **Gutters and Downspouts.** 26 gauge G. I.
14. **Plaster Base and Plaster.** Wood or gypsum lath; standard two coat work.
15. **Decorating.** Walls and ceilings painted.
16. **Interior Doors and Trim.** Stock white pine, doors 1⅜″.
17. **Windows.** Stock D. H.—Wood.
19. **Cabinets and Interior Detail.** Kitchen cabinets—Wall type—32 feet; floor type—25 feet. Medicine cabinets.
21. **Special Floor and Wainscot.** Standard ceramic tile floor and wainscot in bathroom.
22. **Plumbing.** Double shell recess tub, pedestal lavatory, closet combination. D. D. B. Apron front sink, laundry trays, range boiler—gas fired. Iron Piping.
23. **Heating.** Gravity warm-air furnace, hand fired.
24. **Electric Wiring.** BX Cable; Average number of outlets.
25. **Lighting Fixtures.** $35.00 to $80.00 allowance, depending on floor area.
26. **Insulation.** None.

The methods of making the adjustments are described in the same sequence, as follows:

1. Excavation. No adjustment is necessary.

2. Foundations.

a. Subject specifications call for 10″ poured concrete basement walls, and the applicable basic specifications indicate 12″ concrete block walls. The handbook shows the Component Unit Adjustment for 10″ poured concrete walls as: $0.04. This adjustment being additional is entered in the "plus" column opposite Component #2, and a notation is entered under "Explanation."

b. Subject specifications call for a tile drain, around the foundations, connected to the sewer. This element is not included in the applicable basic specification as it is additional. The handbook designates the basic perimeter as equal to 110 lineal feet, and the handbook shows a cost of $0.065 per lineal foot for 4″ tile drain installed complete with crushed stone. The plot plan indicates that the distance from the house to the sewer is 40 feet, and the handbook shows a cost of $0.90 per lineal foot for a 4″ cemented glazed tile drain connection to sewer, including excavation and backfilling of trench. The adjustment is computed as follows:

Tile drain:	110 lin. ft.	@	$0.065	=	$7.15
Sewer conn:	40 "	@	0.90	=	36.00
Total					$43.15

The result of this computation, to the nearest dollar, is entered in the "lump-sum" column on the line opposite Component #2 and a description of the tile drain is noted under "Explanation."

c. Subject specifications for other elements of the basement are substantially the same as basic specifications, and no further adjustments are necessary for Component #2. The extra cost of the stairs attributable to the finished room in basement is included under Component #27.

3. Chimney. No adjustment is necessary.

4. Fireplace. Since basic specifications do not include a fireplace, this component is additional. The handbook shows a component unit adjustment of $140 for a fireplace as described. This adjustment is entered in the "Lump-sum" column.

5. *Exterior Walls.*

a. The Basic Square Foot Cost was selected for "Face Brick Veneer" as called for in subject specifications. An inspection of the subject drawings reveals that the gable and dormer walls are of wood siding and not face brick veneer. The areas of wood siding and brick veneer are estimated as follows:

	Length		Height			
Gables	24′ 9″	×	6′ 0″ × 2	=	297	sq. ft.
Rear dormer	35′ 6″	×	5′ 6″	=	195	"
Front dormers	9′ 0″	×	4′ 6″ × 2	=	81	"
Bay	11′ 0″	×	5′ 6″	=	61	"
Area of wood siding					634	sq. ft.

Front	30′ 6″	×	11′ 4″	=	346	sq. ft.
Rear	22′ 8″	×	11′ 4″	=	257	"
Ends	24′ 9″	×	10′ 4″ × 2	=	512	"
Bay	11′ 3″	×	3′ 0″	=	34	"
Area of face brick veneer					1,149	sq. ft.

The gable wall of porch is disregarded in this calculation as it is not included in the basic square foot cost.

Total area of exterior walls: 1,149 + 634 = 1,783 sq. ft.

The handbook designates the following Basic Square Foot Costs for exterior walls: Face Brick Veneer, $3.64, Frame and Siding, $3.29. The difference, $3.64−$3.29=$0.35, is equal to the difference between the costs of the two types of wall. The adjustment is computed thus:

$$\$0.35 \times \frac{634}{1{,}783} = \$0.12$$

The fraction used is the area of alternate exterior wall divided by the total area of exterior wall. The computed adjustment, being a deduction, is entered in the "minus" column opposite Component #5, and a notation is made under "Explanation."

b. The subject building shows a height of exterior wall as 11′4″, and the handbook designates the basic wall height applicable to the classification as 10′4″. The height of exterior wall is measured from the underside of first floor construction to the intersection of the outside surface of the wall with the roof surface.

The excess height is 1′0″. The excess wall surface is equal to 1′0″ × 110′6″ = 111 sq. ft., the dimension 110′6″ being the perimeter of the wall. The handbook shows a cost per square foot for exterior walls of "Face Brick Veneer" as $0.59 and the adjustment is computed as follows:

$0.59 × 111 = $65.49

The computed adjustment, being additional, is entered in the lump sum column and a notation is made under "Explanation."

o. Inasmuch as the subject building is rectangular in shape and is of usual outline, its perimeter is not in excess of the basic perimeter and no adjustment is necessary.

6. *Floor Framing.* No adjustment is necessary.
7. *Subflooring.* No adjustment is necessary.
8. *Finish Flooring.* Subject specifications call for clear white oak flooring except in kitchen and bathroom, and basic specifications provide for select red oak throughout except in bathroom. The handbook shows the component unit adjustment for clear white oak flooring as $0.02. The adjustment, being additional, is entered in the "plus" column, with a notation made under "Explanation." The adjustment for linoleum and yellow pine floor in kitchen is made under Component #21.
9. *Partition Framing.* No adjustment is necessary.
10. *Ceiling Framing.* No adjustment is necessary.
11. *Roof Framing.* No adjustment is necessary.
12. *Roofing.* The subject building shows 210 lb. asphalt shingles on sloping roofs, and tin over flat dormer roof. Basic specifications call for edge grain red cedar shingles throughout. The handbook designates the following costs per square foot for roofing: 210 lb. asphalt shingles, $0.11; edge grain cedar shingles, $0.07; and tin, $0.28. The adjustments are computed as follows:

Front..........	16′ 6″ × 31′ 0″	=	512 sq. ft.
Rear...........	16′ 6″ × 2′ 6″ × 2	=	83 "
Rear...........	2′ 9″ × 26′ 0″	=	72 "
Rear...........	1′ 6″ × 26′ 0″	=	39 "
			706 sq. ft.—shingles
Rear Dormer...	9′ 9″ × 26′ 6″	=	258 sq. ft.—tin

The area of roof over bay is not significant and is therefore disregarded. The additional cost of 210 lb. asphalt shingles over wood shingles is: $0.11−$0.07=$0.04. The additional cost of tin over wood shingles is: $0.28−$0.07=$0.21. The adjustments are computed as follows:

Asphalt shingles	$0.04×706=$28.24
Tin	0.21×258= 54.18

These computed adjustments, being additional, are entered as lump sum amounts opposite Component #12, and notations are made under "Explanation."

13. *Gutters and Downspouts.* Copper is specified for sheet metal work, whereas galvanized iron is called for in the basic specifications. The handbook designates a Component Unit Adjustment of $0.04 per square foot of calculated area, in the "add" column, for copper gutters and downspouts. The adjustment is entered in the "plus" column of the estimate form, with a notation entered under "Explanation." No further adjustment is necessary inasmuch as both subject drawings and basic specifications call for splash blocks.
14. *Plaster Base and Plaster.* Subject specifications call for 2.3 lb. paper backed metal lath, and basic specifications designate 3/8″ gypsum lath as a plaster base. The handbook shows a Component Unit Adjustment of $0.09. The adjustment is entered in the "plus" column, and a notation is made under "Explanation."
15. *Decorating.* No adjustment is necessary inasmuch as both the subject and basic specifications call for the same treatment of all interior walls and ceilings. Finishes specified for woodwork and floors, and exterior painting are not considered under this component.
16. *Interior Doors and Trim.* No adjustment is necessary inasmuch as only minor deviations from the basic specifications are indicated for the trim, hardware, and finish.
17. *Windows.* No adjustment is necessary.
18. *Entrance and Exterior Detail.*—The subject building indicates shutters on the front and side windows of the first story. This element is additional to the requirements of the basic specifications for this classification. The cost of this additional item is computed as follows:

Shutters	5 pairs @ $5.50=$27.50

The unit cost is selected from the handbook and the result of the computation, taken to the nearest dollar, is entered in the "lump sum" column. A descriptive notation is made under "Explanation."

19. *Cabinets and Interior Detail.*

a. The subject drawings show a greater quantity of cabinets in the kitchen than is called for by the basic specifications. The number of surface square feet of cabinets of each type shown in the kitchen of the subject building is determined, and the numbers of surface square feet designated in basic specifications for each type is deducted to obtain the net additional area of each type on which the adjustment is computed. The computation for this adjustment follows:

	Width Heigth		
Wall type, 12″ deep:	3′ 6″ × 11′ 6″	=	40 sq. ft.
	Basic Area	=	32 "
	Additional Area	=	8 sq. ft.
Floor type, 20″ deep:	2′ 6″ × 12′ 0″	=	30 sq. ft.
	Basic Area	=	25 "
	Additional Area	=	5 sq. ft.

The handbook shows the following costs per surface square foot of kitchen cabinets installed complete with glass, finish and hardware: Wall type 12″ deep, \$1.20 and floor type 20″ deep, \$1.55. These unit costs are applied to the additional areas, thus:

8 sq. ft. @ \$1.20 =	\$9.60
5 " @ \$1.55 =	7.75
Total....	\$17.35

The result is taken to the nearest dollar, \$17.00, and entered in the "lump sum" column. Appropriate notation is made under "Explanation." The amount of this adjustment may be estimated directly on the basis of experience and in such event, the computations may not be necessary.

b. The subject specifications call for a cabinet in the basement which is additional to basic specifications. The cost of the cabinet, \$35.00, is selected from the handbook and entered in the "lump sum" column. A description is noted under "Explanation."

20. Stairs. No adjustment is necessary.

21. Special Floors and Wainscot.

a. No adjustment is necessary for the bath floor or bath wainscot, inasmuch as both the subject and basic specification call for tile.

b. Linoleum over pine flooring is specified for the kitchen and this item is additional to the basic specifications. The area covered by linoleum is computed as 9′0″×13′4″ plus 2′6″×5′0″, which equals 133 sq. ft. The handbook designates the additional cost of linoleum and pine flooring, of a quality assumed in the absence of exact description, as $0.11 per sq. ft. The adjustment is computed, thus: 133 sq. ft. @ $0.11=$14.63. This amount is entered in the "lump sum" column as $15.00, with an appropriate notation under "Explanation."

22. Plumbing. The subject drawings indicate a lavatory in the basement and the subject specifications call for copper water piping, both of which are additional to the basic specifications. The additional costs of these items are computed as follows:

1 Vitreous china tank and closet combination	$40.00
1 Enameled iron apron front, corner lavatory	32.00
Cost of lavatory complete	$72.00
Copper water piping for 7 fixtures @ $2.00	$14.00

The unit costs are selected from the handbook. The additional cost of copper piping, $14.00, is entered in the "lump sum" column opposite Component #22. The additional cost of lavatory plumbing is entered in the "lump sum" column opposite "Lavatory." Descriptions of both items are noted under "Explanation."

23. Heating. The subject building indicates an automatic, forced circulation, warm air heating system with an oil burner. In the absence of detailed specifications, a unit cost corresponding to the type of heating equipment assumed is selected from the handbook. The unit cost of the customary type of heating equipment is also selected from the handbook. The difference between the two costs is the cost of additional mechanical equipment which is computed as follows:

a. Automatic, forced circulation, warm air, oil burning unit, including 275 gallon fuel tank, and supply and return ducts	$835.00

b. **Gravity warm air, hand-fired, coal burning unit, including supply and return ducts** ______ $283.00

c. Cost of additional heating equipment ______ $552.00

The cost of the specified heating equipment, as assumed in (*a*) above, is the total cost of the equipment called for, but no entry for this amount is made. The cost of usual heating equipment, $283.00, in (*b*) above, is already reflected in the basic square foot cost, and no adjustment is made on the reverse side of the form. However, the cost of additional heating equipment, $552.00, in (*c*) above, is entered directly in the Summary of Replacement Cost on the face side of FHA Form No. 2052 on the line opposite "Additional mechanical equipment."

24. *Electric Wiring.* The subject drawings indicate power outlets for the range, oil-burner, and laundry machines. These are additional to the basic specifications. Unit costs are selected from the handbook and the adjustment is computed thus: 3 outlets @ $10.50=$31.50. This amount taken to the nearest dollar, is entered in the "lump sum" column opposite Component #24 with a notation under "Explanation."

25. *Lighting Fixtures.* The subject specifications call for an allowance of $50.00 for lighting fixtures and the allowance provided for in the basic specifications is $40.00. The adjustment is computed as the difference between the two allowances, thus: $50.00−$40.00=$10.00. This amount is entered in the "lump sum" column and a notation is made under "Explanation."

26. *Insulation.* Subject specifications call for the insulation of walls and ceiling, which is additional to the basic specifications. The handbook designates the following Component Unit Adjustments for insulation: Walls, $0.10 and Ceiling, $0.03. These adjustments are entered in the "plus" column on the lines opposite "Walls" and "Ceiling" under Component #26, and descriptions of the types of insulation are entered under "Explanation."

27. *Miscellaneous.* Inasmuch as the adjustments necessary under this component include those required for elements "not otherwise readily classified under other components", the subject drawings and specifications are carefully reviewed for necessary adjustments not previously made. Observation reveals the following items which are additional to the basic specifications; parcel receiver, kitchen

ventilating fan, mechanical refrigerator, weatherstrips for all window and door openings above the basement, and a recreation room in the basement. These miscellaneous items are handled in the following manner:

a. The cost of parcel receiver, designated in the handbook as $8.00, is entered in the "lump sum" column under Component #27, with an explanatory notation.

b. The cost of the kitchen ventilating fan is selected from the handbook, and is entered directly in the Summary of Replacement Cost on the face side of FHA Form No. 2052, on the line opposite "Additional mechanical equipment." The cost of the mechanical refrigerator is not included in *this* estimate, inasmuch as it is assumed here to be a chattel.

c. The cost of weatherstripping is computed from the number of openings so equipped as shown on the drawings, and the unit costs designated in the handbook, as follows:

16 windows	@ $2.75	=	$44.00
3 doors	@ 6.00	=	18.00
Total			$62.00

The computed cost of this element, $62.00, is entered in the "lump sum" column under Component #27, with a descriptive notation.

d. The additional cost of the recreation room is estimated as the total of the costs of individual elements. Individual costs are computed as separate products of measured quantities of the elements and unit costs selected from the handbook. The total additional cost is computed as follows:

Metal lath and plaster on ceiling:				
13′ 0″ × 23′ 0″ =	299 sq. ft.			
3′ 0″ × 5′ 0″ =	15 "			
5′ 6″ × 7′ 6″ =	41 "			
3′ 6″ × 5′ 0″ =	18 "			
	373 sq. ft. @	$.078	=	$29.09
Plaster and waterproof bond coat on exterior walls:				
63′ 6″ × 7′ 3″ =	460 sq. ft. @	$.053	=	24.38
Plaster on gypsum block partitions:				
66′ 0″ × 7′ 3″ =	479 sq. ft. @	$.046	=	22.03
2″ gypsum block partitions:				
41′ 0″ × 7′ 3″ =	297 sq. ft. @	$.062	=	18.41
Carried forward				93.91

Brought forward				$93.91
Decorating, 1 coat size and 2 coats flat paint:				
13′ 0″ × 23′ 0″ =	299 sq. ft.			
3′ 0″ × 5′ 0″ =	15 "			
5′ 6″ × 7′ 6″ =	41 "			
129′ 6″ × 7′ 3″ =	939 "			
3′ 6″ × 5′ 0″ =	18 "			
	1,312 sq. ft.	@	$.038 =	49.86
Floor painting, 2 coats:				
13′ 0″ × 23′ 0″ =	299 sq. ft.			
3′ 0″ × 5′ 0″ =	15 "			
5′ 6″ × 7′ 6″ =	41 "			
3′ 6″ × 5′ 0″ =	18 "			
	373 sq. ft.	@	$.04 =	14.92
Interior doors:	2	@	$17.50 =	35.00
Floor base:	130 lin. ft.	@	$.16 =	20.80
Electric outlets, additional:	17	@	$1.75 =	29.75
Additional cost of closed stairs over customary basement stairs:	13 risers	@	($3.50—$1.40) =	27.30
Additional cost of basement windows;	$107.50—$42.00		=	65.50
Basement areaways:	(Estimated)		=	80.00
Iron gratings over areas:	14 sq. ft.	@	$1.00 =	14.00
Additional cost of recreation room				$431.04

The additional cost, $431.00, is entered in the "lump sum" column on a line under Component #27, and a notation is made under "Explanation." After several detailed estimates of costs of finished rooms in basements have been made, it will be possible to estimate such costs directly as lump sum amounts.

1720. Determination of Square Foot Cost. After all necessary adjustments have been computed and entered on the reverse side of FHA Form No. 2052, they are combined into a single square foot cost adjustment as follows:

a. All amounts in the "lump sum" column are totalled, taking into account any deductions that are indicated. The calculated area computed on the face side of the estimate form is entered in the space provided in the upper right hand corner of the reverse side. The total of the lump sum items is divided by the number of square feet of calculated area, to convert the total into a square foot cost adjustment which is entered in the "plus" column.

2052—Cost Estimate—Integrated Square Foot Method

Calculated Area 1443 Sq. ft.

Type of exterior wall FACE BRICK VENEER		Basic Square Foot Cost			3.64
Adjustments		Lump Sum	Per Square Foot		
Component	Explanation		Add (+)	Ded. (−)	
1. Excavation					
2. Foundations	10" POURED CONCRETE		.04		
	4" FOOTING DRAIN	43.00			
3. Chimney					
4. Fireplace		140.00			
5. Exterior walls	WOOD SIDING - 2 ND STORY			.12	
Height adjustment	1'-0" ADDITIONAL	65.00			
Perimeter adjustment					
6. Floor framing					
7. Subflooring					
8. Finish flooring	CLEAR WHITE OAK		.02		
9. Partition framing					
10. Ceiling framing					
11. Roof framing					
12. Roofing	210# ASPHALT SHINGLE	28.00			
	TIN, REAR DORMER	54.00			
13. Gutters and downspouts	COPPER		.04		
14. Plaster base and plaster	METAL LATH		.09		
15. Decorating					
16. Interior doors and trim					
17. Windows					
18. Entrance and exterior detail	SHUTTERS	28.00			
19. Cabinets and interior detail	EXTRA KITCHEN CABINETS	17.00			
	BASEMENT CABINETS	35.00			
20. Stairs					
21. Special floors and wainscot					
Bath floor					
Bath wainscot					
Kitchen	LINOLEUM - PINE FLOOR	15.00			
22. Plumbing	COPPER WATER PIPING	14.00			
Additional bathroom					
Stall shower					
Lavatory					
Toilet	BASEMENT	72.00			
23. Heating					
24. Electric wiring	3 POWER OUTLETS	32.00			
25. Lighting fixtures	ALLOWANCE $ 50.00	10.00			
26. Insulation					
Walls	MINERAL WOOL BATS		.10		
Ceiling	" " "		.03		
27. Miscellaneous	PARCEL RECEIVER	8.00			
WEATHERSTRIPPING	16 WINDOWS, 3 DOORS	62.00			
RECREATION ROOM	IN BASEMENT	431.00			
	Total Lump Sum Items	1054.00	.73		
	Total Additions and Deductions		1.05	.12	
	Net Addition or Deduction		Add (+)	~~Ded. (−)~~	.93
			Square Foot Cost		4.57

The computation is made as follows:

$$\frac{\$1,054.00}{1,443}=\$0.73$$

b. All adjustments in the "plus" column, including the converted total of the lump sum adjustments in (*a*) above, are added together to obtain the Total Additions, $1.05. Likewise, all adjustments in the "minus" column are added together to obtain the Total Deductions, $0.12.

c. The difference between the total additions and the total deductions, $0.93, is the net square foot cost adjustment and is entered in the right hand column on the line opposite "Net Addition or Deduction". The word, "Deduct", on the same line, is crossed out to indicate that the net adjustment is added.

d. The net addition, $0.93, is now combined with the selected Basic Square Foot Cost and the result is the Square Foot Cost. This result, $4.57, is transferred to the space provided for "Modification of Square Foot Cost" on the face side of FHA Form No. 2052.

1721. Determination of Final Square Foot Cost. The character and grades of materials specified for the subject building are reflected in the Square Foot Cost. However, for the purpose of this example, it is assumed that the quality of construction found or likely to be found in the completed structure would represent a saving of 2% in cost, due to less costly construction than was assumed in the development of the Basic Square Foot Cost. Therefore, 98% is selected as the applicable Quality Adjustment Percentage, it being within the recommended limits designated in the handbook. The selected percentage is entered in the space provided for "Modification of Square Foot Cost" on the face side of FHA Form No. 2052, and the Square Foot Cost is modified accordingly. The result is entered in the space opposite the Quality Adjustment Percentage.

CALCULATED AREA

MODIFICATION OF SQUARE-ROOT COST

Square foot cost		$ 4.57
Quality adjustment	98 %	4.48
Locality adjustment	97 %	
FINAL SQUARE FOOT COST		$ 4.35

(Contractor's name, if known)

TYPE		FAMILY UNITS		NUMBER OF STORIES	
Detached	X	1	X	1	
Semi-detached		2		1½	X
Row		3		2	
End row		4			

CALCULATED AREA 1443 Sq. ft.

SUMMARY OF REPLACEMENT COST

1722. After the quality adjustment has been made, the resulting square foot cost is next adjusted for locality. Locality Adjustment Percentages are available in the handbook where they are tabulated for all important cities and localities in the territory. Where necessary, they are tabulated separately for different types of exterior walls. This tabulation reveals the Locality Adjustment Percentages applicable to the city in which the subject building is to be erected, as 95% for frame structures and 97% for brick veneer structures. Inasmuch as the subject building is predominantly brick veneer, 97% is selected as the Locality Adjustment Percentage. The selected percentage is entered in the space provided for "Modification of Square Foot Cost" on the face side of FHA Form No. 2052. The square foot cost already adjusted for quality is then modified by the locality adjustment percentage. The result is the Final Square Foot Cost which is entered in the space provided.

1723. Determination of Total Replacement Cost. Items included in the Summary of Replacement Cost on the face side of FHA Form No. 2052 are arranged in the following order:

a. Main building
b. Garage, other than built-in
c. Other improvements, including accessory buildings, walks and terraces laid on the ground, driveways, additional mechanical equipment, items of excessive cost, private water-supply, sewage disposal and electric generating plants, and other elements not reflected in the Final Square Foot Cost
d. Architectural Service

(Contractor's name, if known) | Calculated Area 1443 Sq. ft.

SUMMARY OF REPLACEMENT COST

Main building	1443 Sq. ft. @	4.35			$ 6277.00
Garage 10 X 20	200 Sq. ft. @	1.25			$ 250.00
Other improvements:					
~~Accessory buildings~~ TERRACE	78 Sq. ft. @	.25	$	20.00	
Walks (3'X21') + (2'X13')	89 Sq. ft. @	.18	$	16.00	
Driveways (7'X62') + (10'X18')	614 Sq. ft. @	.22	$	135.00	
Additional mechanical equipment KITCHEN FAN ($22.00) AUTOMATIC FORCED WARM AIR AND OIL BURNER ($552.00)			$	574.00	
Items of excessive cost			$		
Sewage disposal			$		
Water supply			$		
			$		
				Subtotal	$ 7450.00
Architectural service LIMITED SERVICE					$ 150.00
Estimate of Cost Required to Replace Building Improvements in New Condition					$ 7422.00

Date ____________ Estimated by ____________

2052—Cost Estimate—Integrated Square Foot Method

1724. In order to complete the estimate of total replacement cost, it is necessary to make the following computations and entries:

a. The cost of main building is obtained by multiplying the Final Square Foot Cost by the number of square feet in the Calculated Area, and entries are made in the spaces provided.

b. The cost of garage is computed from the estimated area and a unit cost obtained from the handbook.

c. Costs of accessory-buildings, walks, terraces, and driveways are computed separately from estimated areas and unit costs obtained from the handbook.

d. The costs of additional mechanical equipment which have been entered directly in the summary of replacement cost are only the additional amounts for items specified for the subject building, in excess of allowances included in the Basic Square Foot Cost. The additional amounts have been computed as described in paragraph 1719 under Components #23 and #27, and their combined total has been entered in the total column.

e. The allowance for Architectural service is determined according to the instructions contained in Section 16. It is assumed for this example that limited architectural service is usually obtained for similar houses in the particular locality, and that the customary charge for such service in the locality is $150. This amount is entered in the "Total" column on the line opposite "Architectural service", and a qualifying notation is made.

f. The total of all costs included in the summary of replacement cost is the Estimate of Cost Required to Replace Building Improvements in New Condition.

APPLICATION OF INPLACE UNIT METHOD

1725. For the purpose of illustrating the application of the Inplace Unit Method, it is assumed that tabulated Basic Square Foot Costs are not applicable to the subject building and therefore the Integrated Square Foot Method cannot be used. The following example of the application of the Inplace Unit Method employs the same drawings and specifications for the subject building which were used above to illustrate the application of the Integrated Square Foot Method.

1726. Measurement of Inplace Units. In order to assure the inclusion of all elements shown on the drawings or specifications, the measurements of the number of Inplace Units are made in a sequence corresponding to the numbering of components of a building. The reverse side of FHA Form No. 2053, Cost Estimate—Inplace Unit Method, is used to record the measurements of Inplace Units. In general, measurements for length and height are taken to the nearest 3 inches, and areas are taken to the nearest square foot. An example of making the measurements in accordance with instructions contained in Section 16, Methods of Dwelling Cost Estimation, is described as follows:

1. Excavation.

a. Basement:

	Width		Length		Depth			
Main	24′ 9″	×	30′ 6″	×	6′ 6″		=	4,908 cu. ft.
Bay	3′ 0″	×	6′ 6″	×	6′ 6″		=	127 "
Areas	1′ 6″	×	5′ 0″	×	2′ 6″	× 2	=	38 "
"	2′ 6″	×	5′ 0″	×	2′ 6″	× 2	=	63 "
"	2′ 6″	×	4′ 0″	×	4′ 3″	× 2	=	85 "
	2′ 6″	×	19′ 6″	×	4′ 3″		=	207 "
Total								5,428 cu. ft.

5,428 cu. ft. × 1/27 = 201 cu. yds.

b. Trench Wall:

	Width		Length		Depth			
Porch	1′ 9″	×	28′ 8″	×	2′ 6″		=	125 cu. ft.
Rear Stoop	1′ 6″	×	3′ 0″	×	2′ 6″		=	11 "
Front Stoop	1′ 6″	×	4′ 0″	×	2′ 6″	× 2	=	30 "
Total								166 cu. ft.

166 cu. ft. × 1/27 = 6 cu. yds.

The computed yardages are entered separately on lines under Component #1, and descriptions of the classes of excavation, as basement and trench, are entered under "Explanation".

2. Foundations.

a. Footings:

Front	30′ 6″	=	31 lin. ft.
Sides	24′ 9″ × 2	=	50 "
Rear	19′ 6″ + 3′ 6″	=	23 "
Bay	(1′ 0″) × 2 + (2′ 9″) × 2 + 3′ 8″	=	11 "
Porch	8′ 6″ + 12′ 0″ + 8′ 6″	=	29 "
Total			144 lin. ft.

This measurement is entered in the "Quantity" column opposite "Footings", and a descriptive notation is made under "Explanation". No measurement is made for the chimney footings as they are part of Component #3, or for column footings which are part of (*e*), Basement Essentials, of this component.

b. Basement Walls:

Length		Height		
114′ 0″	×	7′ 3″	=	827 sq. ft.

The length used above is the total of the measurements used in computing footings under (*a*), excluding the length of porch footings. The measurement for basement walls is entered in the "Quantity" column opposite "Walls", and a description is noted under "Explanation". No measurements are made at this time of the chimney, which is part of Component #3, or for interior partitions, which are part of Component #9.

c. Trench Walls:

6″ thick walls:

	Length	Height	
Areas	(1′ 6″ + 5′ 0″ + 1′ 6″)	× 2′ 6″ × 2 =	40 sq. ft.
"	(2′ 6″ + 5′ 0″ + 2′ 6″)	× 2′ 6″ × 2 =	50 "
"	(2′ 6″ + 4′ 0″ + 2′ 6″)	× 4′ 3″ × 2 =	77 "
"	(2′ 6″ + 3′ 9″ + 6′ 0″ + 3′ 9″ + 3′ 6″ + 3′ 0″)	× 4′ 3″ =	96 "
Stoop	4′ 0″	× 3′ 6″ × 2 =	28 "
"	3′ 0″	× 3′ 6″ =	11 "
	3′ 0″	× 5′ 3″ =	16 "
			318 sq. ft.

9″ thick walls:

Porch (8′ 6″ + 12′ 0″ + 8′ 6″) × 3′ 0″ = 87 sq. ft.

The measurements for 6″ thick and 9″ thick trench walls are entered separately in the "Quantity" column opposite "Walls", and descriptions are noted under "Explanation".

d. Basement Floor:

24′ 9″ × 30′ 6″ = 755 sq. ft.
3′ 0″ × 6′ 6″ = 20 "

Total.... 775 sq. ft.

This measurement is entered in the "Quantity" column opposite "Basement Floor", and a description is noted under "Explanation".

e. Basement Essentials:

This element is measured as a lump-sum amount equal to the total of the separate costs of the individual items. The cost of each item is computed as the product of a measured quantity and an inplace unit price selected from Part 2 of the Cost Data Handbook, as follows:

Closed stair, pine treads & risers	13 risers	@	$3.25 =	$42.25
Steel sash—3 light	5 units	@	6.40 =	32.00
" " —6 "	5 "	@	13.15 =	65.75
6″ × 10″ girder	20 lin. ft.	@	.28 =	5.60
6″ × 8″ "	14 "	@	.23 =	3.22
Lally column & footing	1 unit	@	4.90 =	4.90
Tile drain	110 lin. ft.	@	.06 =	6.60
Drain conn. to sewer	40 "	@	.80 =	32.00
Area gratings (1′ 0″ × 4′ 0″) × 2 + (2′ 0″ × 3′ 0″)	14 sq. ft.	@	.90 =	12.60
Total				$204.92

This amount is entered as $205.00, in the column headed "Cost" opposite Basement Essentials, and a brief description of the element is noted under "Explanation".

3. Chimney:

Measurement is taken from the underside of footings to top of chimney. For the subject building, the measurement is 31′ 1″. This measurement, taken to the nearest foot, is entered in the "Quantity" column. No description is necessary under "Explanation", because this component includes only the chimney construction necessary for the heating plant.

4. Fireplace:

This component is estimated as a lump sum amount for the fireplace, including complete foundation, masonry, flue, hearth, lining, damper, facing, and mantel. Regardless of the fact that the subject drawings call for a combined, two flue chimney, the cost of this component is calculated on the basis of a separate chimney for fireplace only. The cost of the fireplace, amounting to $125.00 is selected from the handbook and is entered in the "Cost" column.

5. Exterior Walls:

a. Brick Veneer:

	Length	Height		
Front	30′ 6″ ×	11′ 4″	=	346 sq. ft.
Rear	22′ 8″ ×	11′ 4″	=	257 "
Ends	24′ 9″ ×	10′ 4″ × 2	=	512 "
Bay	11′ 3″ ×	3′ 0″	=	34 "
Total				1,149 sq. ft.

b. Wood siding:

	Length		Height				
Gables	24′ 9″	×	6′ 0″	× 2	=	297	sq. ft.
Rear dormer	35′ 6″	×	5′ 6″		=	195	"
Front dormer	9′ 0″	×	4′ 6″	× 2	=	81	"
Bay	11′ 3″	×	5′ 6″		=	61	"
Porch Gable	12′ 0″	×	5′ 0″	× ½	=	30	"
Total						664	sq. ft.

The measurements for brick veneer, 1149 sq. ft. and for wood siding, 664 sq. ft. are entered separately in the "Quantity" column, and descriptive notations are made under "Explanation". No deduction is made for that portion of exterior wall covered by porch roof construction.

6. *Floor Framing:*

a. Wood joist construction:

24′ 9″ × 30′ 6″ × 2 = 1,510 sq. ft.
3′ 0″ × 6′ 6″ = 20 "

Total ---------- 1,530 sq. ft.

No deductions are made for stairwell or chimney openings.

b. Concrete slabs:

Porch	8′ 6″	×	12′ 0″	=	102	sq. ft.
Front stoop	4′ 0″	×	6′ 0″	=	24	"
Rear stoop	3′ 0″	×	4′ 0″	=	12	"
Total					138	sq. ft.

The totals of the measurements of wood joist construction and concrete slabs are entered separately in the "Quantity" column, and descriptive notations are made under "Explanation".

7. *Subflooring:*

First floor	24′ 9″	×	30′ 6″		=	755	sq. ft.
Bay	3′ 0″	×	6′ 6″		=	20	"
Second floor	16′ 6″	×	30′ 6″		=	503	"
Rear dormer	3′ 3″	×	26′ 0″		=	85	"
Front dormers	3′ 3″	×	3′ 0″	× 2	=	20	"
Total						1, 383	sq. ft.

This measurement is entered in the "Quantity" column and a notation is made under "Explanation". In measuring the subflooring of the second floor no deduction is made for the stairwell opening or for the unfinished area in back of the enclosing partition at stairwell.

8. *Finish Flooring:*

The measurement of this component is identical in this example with the measurement for Component #7, "Subflooring", inasmuch as subflooring is indicated for both floors and the same finish flooring is specified throughout. Therefore, the measurement is taken as 1383 sq. ft. and entered in the "Quantity" column opposite Component #8. A description of the finish flooring is entered under "Explanation". The linoleum over yellow pine, specified for the kitchen, and the tile as specified for bathroom, are measured and described under Component #21.

9. *Partition Framing:*

a. Wood stud framing, plastered on two sides:

	Length		Height		
First story	80′ 6″	×	8′ 0″	=	644 sq. ft.
Second "	93′ 4″	×	7′ 6″	=	700 "
Total					1,344 sq. ft.

No deductions are made for the areas of chimney, fireplace and door openings.

b. Wood stud framing, plastered on one side:

48′ 8″×7′ 6″ = 365 sq. ft.

The enclosing partitions of the second story, which are finished on one side only, are taken at full ceiling height, and the total length includes the lengths of sides of dormers. The lengths of dormer fronts are not included because the area of the enclosing partitions located there approximately balance the excess areas included along dormer sides.

c. The total of wood stud partition framing is taken as the sum of (*a*) and (*b*) above, 1344+365=1709 sq. ft.

d. 2″ gypsum block:

41′ 0″×7′ 3″ = 297 sq. ft.

The partitions enclosing the finished room in basement are measured without deduction for openings.

The measurements derived in (*c*) and (*d*) above are entered separately in the "Quantity" column, and descriptive notations are made under "Explanation".

10. Ceiling Framing:

Second floor	16′ 6″ × 30′ 6″	= 503 sq. ft.
Rear dormer	3′ 3″ × 26′ 0″	= 85 "
Front dormers	3′ 3″ × 3′ 0″ × 2	= 20 "
Bay	3′ 0″ × 6′ 6″	= 20 "
Porch	8′ 6″ × 12′ 0″	= 102 "
Total		730 sq. ft.

This measurement is entered in the "Quantity" column, and a notation is made under "Explanation".

11. Roof Framing:

a. **Rafter framing:**

Front	16′ 6″ × 31′ 0″	= 512 sq. ft.
Rear	16′ 6″ × 2′ 6″ × 2	= 83 "
"	2′ 9″ × 26′ 0″	= 72 "
"	1′ 6″ × 26′ 0″	= 39 "
Rear dormer	9′ 9″ × 26′ 6″	= 258 "
Bay	3′ 6″ × 11′ 3″ × ½	= 20 "
Porch	7′ 6″ × 8′ 6″ × 2	= 128 "
Total		1, 112 sq. ft.

The measurement for rear dormer is taken from its intersection with the main roof to the eaves of the dormer, allowing for the overhang at the sidewalls of the dormer. The measurement of the roof over the bay is computed as the product of half the slope dimension and the perimeter of the bay.

b. Roof sheathing:

The measurement for this element is taken equal to the area of the rafter framing, 1112 sq. ft.

These measurements are entered separately in the "Quantity" column and descriptive notations are made under "Explanation".

12. Roofing:

The total measurement of roofing is identical with the measurement of roof framing. Three classes of roof covering are specified and the separate quantities of each class are computed as follows:

Total area of all roofing	1112 sq. ft.
Area of roof over bay	20 sq. ft. — copper.
	1092 sq. ft.
Area of roof over rear dormer	258 sq. ft. — tin.
	834 sq. ft. — 210# Asphalt shingles.

The areas for roofs over bay and rear dormer are taken equal to corresponding areas of roof framing under Component #11. These measurements are entered separately in the "Quantity" column, and descriptive notations are made under "Explanation". No measurements are made of flashings, counter-flashings, valleys, ridges and saddles.

13. Gutters and Downspouts:

a. Gutters:

(31′ 0″ × 2) + 26′ 0″ + 12′ 0″ + (9′ 0″ × 2) = 118 lin. ft.

b. Downspouts:

(12′ 0″ × 4) + 4′ 0″ + 9′ 0″ + (6′ 0″ × 2) = 73 lin. ft.

These measurements are entered separately in the "Quantity" column, and notations regarding sizes, shapes, and materials are made under "Explanation".

c. Splash blocks:

Four @ $0.75=$3.00

This amount $3,00 is entered in the column headed "Cost"

14. Plaster Base and Plaster:

a. Metal lath and plaster:

	Length		Height				
Exterior walls:							
First story	102′ 8″	×	8′ 0″		=	821	sq. ft.
Bay	11′ 3″	×	7′ 0″		=	79	"
Gables	16′ 0″	×	7′ 6″	× 2	=	240	"
Dormer fronts	(26′ 0″ + 3′ 0″ + 3′ 0″)	×	7′ 6″		=	240	"
Partitions plastered on two sides	1344 sq. ft.			× 2	=	2688	"
Partitions plastered on one side						365	"
Ceilings of first and second stories						1383	"
						5816	

	Length		Height					
Basement ceiling	13′ 0″	×	23′ 0″	=	299			
	3′ 0″	×	5′ 0″	=	15			
	5′ 6″	×	7′ 6″	=	41			
	3′ 6″	×	5′ 0″	=	18	=	373	"
Total							6189	sq. ft.

The lengths of first story walls and bay are taken from the dimensions used for element (*a*) of Component #5. The areas of partitions are taken from measurements of elements (*a*) and (*b*) of Component #9. The total area of first and second story ceilings is equal to the area of the finish flooring, Component #8, inasmuch as the areas of ceilings are the same as areas of the finish flooring in the same story. The dimensions for the gables, dormer fronts, and basement ceiling are taken from the drawings.

b. Plaster on gypsum block:

$$\overset{\text{Length}}{(23'\,0'' + 17'\,0'' + 26'\,0'')} \times \overset{\text{Height}}{7'\,0''} = 479 \text{ sq. ft.}$$

c. Plaster and waterproof bond coat:

$$(18'\,6'' + 23'\,0'' + 22'\,0'') \times 7'\,3'' = 460 \text{ sq. ft.}$$

d. Porch ceiling, wood, painted:

$$8'\,6'' \times 12'\,0'' = 102 \text{ sq. ft.}$$

These measurements are entered separately in the "Quantity" column, and appropriate notations are made under "Explanation".

15. Decorating:

a. Because the same treatment is specified for the walls and the ceilings, this measurement is taken equal to the total area of the plastered surfaces computed for elements (*a*), (*b*), and (*c*), of Component #14, thus:

Area of metal lath and plaster	6,189 sq. ft.
Area of plaster on gypsum block	479 "
Area of plaster and waterproof bond coat	460 "
Total	7,128 sq. ft.

b. Painting basement concrete floor:

13′ 0″ × 23′ 0″ =	299 sq. ft.
3′ 0″ × 5′ 0″ =	15 "
5′ 6″ × 7′ 6″ =	41 "
3′ 6″ × 5′ 0″ =	18 "
Total	373 sq. ft.

These measurements are entered separately in the "Quantity" column, and descriptions are noted under "Explanation".

16. Interior Doors and Trim:

a. Interior doors:

Basement	2
First story	5
Second story	10
Total	17

b. Cased openings:

Living room	1—(4′ 9″ × 7′ 0″)
Dining "	1—(2′ 8″ × 7′ 0″)
Total	2

c. Running Trim:

Basement rooms	66′ 0″ + 63′ 6″	= 130 lin. ft.
First story exterior walls	114′ 0″ + 11′ 3″	= 125 "
Second story gables	16′ 0″ × 2	= 32 "
Dormer fronts	26′ 0″ + (3′0″ × 2)	= 32 "
Partitions finished on two sides	(80′ 6″ + 93′ 4″) × 2	= 348 "
Partitions finished on one side		= 49 "
		716 lin. ft
Deduction for door openings	(3′ 0″ × 2 × 17) + (5′ 0″ × 2) + (3′ 0″ × 2)	= 118 "
Total		598 lin. ft.

The lengths of the first story exterior walls are taken from the dimensions used for element (*a*) of component #5. The lengths of the finished basement wall surfaces, and the second story gables are taken from the drawings. The lengths of the partitions are taken from the dimensions used for elements (*a*) and (*b*) of Component #9.

d. Closet Shelving:

First story	(3′ 0″ × 5) + 2′ 0″	= 17 lin. ft.
Second story	5′ 0″ + (3′ 0″ × 2) + (2′ 0″ × 7)	= 25 "
Total		42 lin. ft.

These measurements are entered separately in the "Quantity" column, and descriptive notations are made under "Explanation".

17. *Windows:*

First story	9
Second story	7
Total	16

The total number of windows is entered in the "Quantity" column, and a description of the type is noted under "Explanation."

18. *Entrance and Exterior detail:*

a. Entrances:

1 Main entrance	$53.20
1 Porch door	24.55
1 Rear entry door	19.50
Total	$97.25

This element embraces completely installed items for which inplace unit prices are selected from Part 2 of the handbook. Therefore, no detailed measurements are made. The total of the individual costs, to the nearest whole dollar, is entered as a lump-sum amount in the "Cost" column, and a descriptive notation is made under "Explanation."

b. Exterior detail:

Entrance steps	(6′ 0″ × 2′ 0″) + 4′ 0″ =	16 lin. ft.	@ $0.55 =	$8.80
Porch columns	6″ × 6″	8 units	@ 6.20 =	49.60
" "	4″ × 6″	2 "	@ 5.60 =	11.20
Porch beam	8″ × 10″ (9′ 0″ × 2) + 12′ 0″ =	30 lin. ft.	@ .50 =	15.00
Shutters		5 prs.	@ 5.00 =	25.00
Iron railings	3′ 0″ × 2 =	6 lin. ft.	@ 1.80 =	10.80
Total				$120.40

Applicable inplace unit prices, selected from Part 2 of the handbook, are multiplied by the above numbers of units to obtain the cost of each. The total amount resulting from adding together all the individual costs is entered as a lump sum in the column headed "Cost" opposite "Exterior Detail."

19. *Cabinets and Interior Detail:*

Kitchen Cabinets:

12″ wall type 11′ 6″ × 3′ 6″ = 41 sq. ft.	@ $1.10 =	$45.10
20″ floor " 12′ 0″ × 2′ 6″ = 30 "	@ 1.40 =	42.00
Bathroom Medicine Cabinet		9.75
Cabinet located in basement		30.00
Total		$126.85

Applicable inplace unit prices from the handbook are multiplied by the above estimated quantities to obtain individual costs. The total of these costs, figured to the nearest whole dollar, is entered as a lump sum amount in the "Cost" column opposite Component #19. Descriptive notations are made under "Explanation."

20. *Stairs:*

This component is estimated as a completely installed unit and it is measured by the number of risers in the flight. The number of risers is entered in the "Quantity" column, and a brief description of the materials used is noted under "Explanation."

21. *Special Floors and Wainscot:*

a. Bath floor:

4′ 0″ × 5′ 0″ = 20 sq. ft. of ceramic tile

b. Bath wainscot:

11′ 0″ × 3′ 6″ = 39 sq. ft.
10′ 0″ × 4′ 8″ = 47 "

Total_____ 86 sq. ft. of glazed tile

c. Kitchen floor:

9′ 0″ × 13′ 4″ = 120 sq. ft.
2′ 6″ × 5′ 0″ = 13 "

Total_____ 133 sq. ft. of linoleum

The unit prices selected for the above special floors and wainscoting, are the differences between the unit prices of the special materials and the unit prices of the materials which are replaced. These measurements are entered separately in the "Quantity" column, and the classes of materials specified are noted under "Explanation".

22. *Plumbing:*

This component is estimated as individual elements and the cost of each element is computed as a separate lump-sum amount, as follows:

a. Bath, kitchen, and laundry:

1 Double-shell 5 foot recess tub	$72.00
1 Enameled iron pedestal lavatory, 27 × 22″	43.00
1 Vitreous china tank and closet combination	45.00
1 Enameled iron sink with apron front, 60 × 22″	53.00
Carried forward	213.00

Brought forward				$218.00
1 pair of cement laundry trays				12.00
Extra for copper piping, 7 fixt.		@	$1.75	12.00
Water service	40 lin. ft.	@	.30	12.00
Sewer connection	40 lin. ft.	@	.75	30.00
				$279.00

b. Lavatory:

1 Vitreous china tank and closet combination	$35.00
1 Enameled iron, lavatory	27.00
	$62.00

c. Water heater:

1 Automatic heater, 30 gal	$60.00
Gas connection for water heater	3.00
	$63.00

Applicable inplace unit prices are selected from the handbook and the total costs are entered as separate lump sum amounts in the column headed "Cost". Descriptive notations are made under "Explanation".

23. *Heating:*

The subject building indicates an automatic, oil fired, forced circulation, warm air heating system. In the absence of detailed specifications, an inplace unit price corresponding to the type of heating equipment assumed is selected from the handbook. The unit price for the customary type of heating equipment is also selected from the handbook. The difference between these two inplace unit prices is the cost of additional mechanical equipment, and it is computed as follows:

a. Automatic, forced circulation warm air, oil burning unit, including 275 gallon fuel tank, and supply and return ducts	$760.00
b. Gravity warm air, hand-fired, coal burning unit, including supply and return ducts	258.00
Difference	$502.00
Allowance for contractor's overhead and profit	50.00
c. Cost of additional heating equipment	$552.00

The inplace unit price of the specified heating equipment, as assumed in (*a*) above, is the contractor's cost of the equipment called for and no entry of this amount is made. However, the inplace unit price of the customary heating equipment, $258.00 from (*b*) above, is entered in the "Cost" column on the line opposite Component #23, and a description of the usual type is noted under "Explanation". The cost of additional heating equipment resulting from the computation, $552.00 in (*c*) above, is entered directly in the Summary of Replacement Cost on the face side of FHA Form No. 2053 on the line opposite "Additional mechanical equipment".

24. Electric Wiring:

a. Lighting circuits:

	Ceiling	Switch	Sidewall	Receptacles
Basement:				
Recreation room	–	–	4	4
Lavatory	–	1	1	–
Stairs	1	1	–	–
Laundry	2	–	–	–
First Story:				
Living room	–	2	8	4
Porch	1	–	–	–
Stairs	1	4	–	–
Stoop	–	–	2	–
Dining room	1	1	–	2
Kitchen	2	1	–	2
Second Story:	Ceiling	Switch	Sidewall	Receptacles
Master bed room	1	1	–	3
Hall	1	2	–	–
Bedroom	1	1	–	2
Bath	–	1	1	1
Bedroom	1	1	–	2
	12	16	16	20

Total = 64 outlets

The number of outlets is entered in the "Quantity" column. A notation of the method of wiring, BX wiring, is noted under "Explanation". For the purpose of this measurement, each outlet for lighting fixtures, switches, and convenience receptacles is considered *one* outlet.

b. Power wiring:

1 outlet for electric range
1 " " oil burner
1 " " laundry machine

Total...... 3 power outlets

The number of power outlets is entered in the "Quantity" column.

c. Service Panel:

This item is entered in the "Quantity" column as "1 panel" and a description is noted under "Explanation".

25. *Lighting Fixtures:*

An allowance of $50.00 is specified for the lighting fixtures in the subject building. This amount is entered in the "Cost" column on the line opposite Component #25 and a notation is made under "Explanation."

26. *Insulation:*

a. Walls:

	Length		Height				
Front	30′ 6″	×	11′ 4″		=	346	sq. ft.
Rear	22′ 8″	×	11′ 4″		=	257	"
End	24′ 9″	×	10′ 4″	× 2	=	511	"
Bay	11′ 3″	×	8′ 6″		=	96	"
Gables	24′ 9″	×	6′ 0″	× 2	=	297	"
Rear dormer	35′ 6″	×	5′ 6″		=	195	"
Front dormers	9′ 0″	×	4′ 6″	× 2	=	81	"
Enclosing partitions	48′ 8″	×	7′ 6″		=	365	"
						2, 148	sq. ft.

The lengths of exterior walls, shown above, are taken from the dimensions used to compute areas of exterior walls under Component #5. The dimensions for enclosing partitions of second story are those used for element (*b*) of Component #9.

b. Ceilings:

Second floor	16′ 6″	×	30′ 6″		=	503	sq. ft.
Rear dormer	3′ 3″	×	26′ 0″		=	85	"
Front dormers	3′ 3″	×	3′ 0″	× 2	=	20	"
Bay	3′ 0″	×	6′ 6″		=	20	"
						628	sq. ft.

The dimensions used above are the same as those used in computing the area of ceiling framing under Component #10, except that the area of porch ceiling is not included.

The measurements for wall and ceiling insulation are entered separately in the "Quantity" column, and descriptions of the materials are noted under "Explanation". The insulation materials measured under this component are restricted to those which are installed exclusively for the purpose of insulation. Insulation materials used primarily as a base for plaster or as an interior wall or ceiling surface are not measured under this component inasmuch as they are considered part of and included in Component #14 "Plaster Base and Plaster".

27. *Miscellaneous:*

The subject drawings and specifications are carefully reviewed to disclose any elements or items which have not been measured previously. This review indicates the following items which have not been included under other components: parcel receiver, kitchen ventilating fan, mechanical refrigerator, and weatherstripping for all openings above basement. These miscellaneous elements are treated in the following manner:

a. The inplace unit price of parcel receiver selected from the handbook is entered in the "Cost" column and a description of it is noted under "Explanation".

b. The inplace unit price of kitchen ventilating fan is selected from the handbook and it is entered directly in the Summary of Cost Estimate on the face side of FHA Form No. 2053 on the line opposite "Additional mechanical equipment", as illustrated.

c. The cost of the mechanical refrigerator is not included in *this* estimate inasmuch as it is assumed here to be a chattel.

d. The cost of weatherstripping is computed from the number of openings so equipped and the inplace unit prices designated in Part 2 of the handbook, as follows:

16	windows	@	\$2.50 =	\$40.00
3	doors	@	5.40 =	16.20
				\$56.20

The computed cost of this element, amounting to \$56.00, is entered in the "Cost" column opposite Component #27, and an appropriate notation is made under "Explanation."

1727. Selection of Inplace Unit Prices. After all of the components have been measured, the applicable Inplace Unit Prices, to three decimal places, are selected from Part 2 of the Cost Data Handbook and entered in the "Unit Price" column opposite the respective components or the elements for which they were selected. The selected inplace unit prices are multiplied by the number of units of the corresponding items in the "Quantity" column. The resulting products are the estimated costs of the components or elements of the components. The individual costs so obtained are entered in the "Cost" column. The costs of some components or elements of components for which no measurements occur in the "Quantity" column have been entered as lump-sum amounts directly in the "Cost" column, as explained in the foregoing example. The individual costs of components or elements are added together and the result is the Total Cost of Components.

1728. Determination of Square Foot Cost. A suitable allowance is determined for contractor's overhead and profit. For the purpose of this example, the allowance is assumed to be $600., and it is added to the Total Cost of Components, resulting in a Total of $6,613. The Calculated Area computed on the face side of the estimate form is entered in the space provided in the upper right hand corner of the reverse side. The Total of $6,613. is then divided by the number of square feet in the Calculated Area, resulting in a Square Foot Cost of $4.58 which is transferred to the space provided for "Modification of Square Foot Cost" on the face side of FHA Form No. 2053, as illustrated.

1729. Determination of Final Square Foot Cost. The character and grades of materials specified for the subject building are reflected by the Square Foot Cost. However, for the purpose of this example, it is assumed that the quality of construction found or likely to be found in the completed structure would represent a saving of 2% in cost, due to less costly construction than was assumed in the development of the Inplace Unit Prices. Therefore, 98% is selected as the applicable Quality Adjustment Percentage, it being within the recommended limits designated in the handbook. The selected percentage is entered in the space provided for "Modification of Square Foot Cost" on the face side of FHA Form No. 2053 and the Square Foot Cost is modified accordingly. The result is entered in the space opposite the Quality Adjustment Percentage.

Calculated Area

MODIFICATION OF SQUARE-FOOT COST	%	$
Square foot cost		4.58
Quality adjustment	98 %	4:49
Locality adjustment	97 %	
Final Square Foot Cost		4.36
(Contractor's name, if known)		

Type		Family Units		Number of Stories	
Detached	X	1	X	1	
Semi-detached		2		1½	X
Row		3		2	
End row		4			

Calculated Area 1443 Sq. ft.

SUMMARY OF REPLACEMENT COST

2053—Cost Estimate—Inplace Unit Method

Calculated Area 1443 Sq. ft.

Component	Explanation	Quantity	Unit	Unit Price	Cost of Component
1. Excavation	6'-6" DEEP	201	C.YD.	.550	111
2. Foundations:	TRENCH	6	"	.900	5
Footings	8"X18" CONCRETE	144	L.FT.	.27	39
Walls	10" POURED CONCRETE	827	S.FT.	.324	268
	6" " "	318	"	.25	80
	9" " "	87	"	.307	27
Basement floor	3" CONC. MONO. FINISH	775	"	.120	93
Basement essentials					205
3. Chimney		31	L.ST.	2.65	82
4. Fireplace					125
5. Exterior walls	FACE BRICK VENEER	1149	S.FT.	.541	622
	FRAME & 8" SIDING	664	"	.287	191
6. Floor framing	2 X 10-16" O.C., #1 Y.P.	1530	"	.124	190
	4" CONCRETE MONO. FINISH	138	"	.140	19
7. Subflooring	1"X6" #2 Y.P. DIAGONAL	1383	"	.067	93
8. Finish flooring	7/8" X 2 1/4" CLEAR WHITE OAK	1383	"	.182	252
9. Partition framing	2 X 4 -16" O.C., #1 Y.P.	1709	"	.073	125
	2" GYPSUM BLOCK	297	"	.057	17
10. Ceiling framing	2 X 6-16" O.C., #1 Y.P.	730	"	.053	39
11. Roof framing	2 X 6 -16" O.C., #1 Y.P.	1112	"	.060	67
Sheathing	1 X 6, #2 Y.P.	1112	"	.060	67
12. Roofing	210 # ASPHALT SHINGLES	834	"	.101	84
	16 OZ. COPPER	20	"	.318	6
	40 # TIN	258	"	.255	66
13. Gutters	5" MOULDED COPPER 16 OZ.	118	L.FT.	.55	65
Downspouts	3"X4" COPPER 16 OZ.	73	"	.60	44
14. Plaster base and plaster	2.3 # PAPER BACKED METAL	6189	S.FT.	.071	439
	2 COATS ON GYPSUM BLOCK	479	"	.041	20
	2 " " WPFD. BOND COAT	460	"	.048	22
15. Decorating	1 COAT SIZE, 2 COATS FLAT	7128	"	.035	249
16. Interior doors	1 3/8" STOCK W.P. 2'-8" X 6'-8"	17	UNITS	15.90	270
Running trim	STOCK W.P.	598	L.FT.	.145	87
CLOSET SHELVING		42	"	.32	13
17. Windows	D.H. STOCK W.P. 12 LIGHTS	16	UNITS	16.80	269
	SPLASH BLOCKS				3
18. Entrance	1 ENTRANCE, 1 PORCH, 1 REAR	—	—	—	97
Exterior detail		—	—	—	120
	3/4" PINE CEILING	102	S.FT.	.107	11
19. Cabinets	41 S.FT. WALL - 30 S.FT. FLOOR	—	—	—	127
Interior detail					
	CASED OPENINGS	2		8.65	17
20. Stairs	OAK TREADS, PINE RISERS	15	RIS.	5.00	75
21. Special floors	BATH, CERAMIC WHITE TILE	20	S.FT.	.70	14
Special wainscot	" " 4"X4" GLAZED " "	86	"	.90	77
KITCHEN FLOOR	LINOLEUM + PINE FOOR	133	"	.10	13
22. Plumbing:	COPPER WATER PIPING	—		—	279
Extra bathroom					
Stall shower					
Lavatory					62
Toilet					
WATER HEATER	AUTOMATIC, 30 GAL., GAS				63
23. Heating	GRAVITY WARM AIR & DUCTS				258
24. Electric wiring	BX CABLE	64	OUTL.	1.60	102
Service panel	PANEL $15.00, POWER OUTLETS	3	"	9.50	44
25. Lighting fixtures	SPECIFIED ALLOWANCE				50
26. Insulation:					
Wall	MINERAL WOOL BATTS	2148	S.FT.	.062	133
Ceiling	" " "	628	"	.062	39
27. Miscellaneous	PARCEL RECEIVER				8
WEATHERSTRIPS	16 WINDOWS, 3 DOORS				56
	2 COATS ON FIN. CEM. FLOOR	373	"	.037	14
				Total Cost of Components	6013
				Contractor's Overhead and Profit	600
				Total	6613
				Square Foot Cost	$ 4.58

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1730. After the quality adjustment has been made, the resulting square foot cost is then adjusted for locality. Locality Adjustment Percentages are available in the handbook where they are tabulated for all important cities and localities in the territory. Where necessary, they are tabulated separately for different types of exterior walls. This tabulation reveals the Locality Adjustment Percentage applicable to the city in which the subject building is to be erected, as 95% for frame structures and 97% for brick veneer structures. Inasmuch as the subject building is predominantly brick veneer, 97% is selected as the Locality Adjustment Percentage. The selected percentage is entered in the space provided for "Modification of Square Foot Cost" on the face side of FHA Form No. 2053. The square foot cost already adjusted for quality is then modified by the locality adjustment percentage. The result is the Final Square Foot Cost which is entered in the space provided.

1731. Determination of Total Replacement Cost. Items included in the Summary of Replacement Cost on the face side of FHA Form No. 2053 are arranged in the following order:

a. Main Building.

b. Garage, other than built-in.

c. Other Improvements, including accessory buildings, walks and terraces laid on the ground, driveways, additional mechanical equipment, items of excessive cost, private water-supply, sewage disposal and electric generating plants, and other elements not reflected in the Final Square Foot Cost.

d. Architectural Service

(Contractor's name, if known) — Calculated Area 1443 Sq. ft.

SUMMARY OF REPLACEMENT COST

Main building		1443 Sq. ft. @	4.36		$ 6 2 9 1 0 0
Garage	10 X 20	200 Sq. ft. @	1.25		$ 2 5 0 0 0
Other improvements:					
~~Accessory buildings~~	TERRACE	78 Sq. ft. @	.25	$ 20.00	
Walks	(3 X 21) + ([illegible] X 18)	89 Sq. ft. @	.18	$ 16.00	
Driveways	(7 X 62) X (10 X 18)	64 Sq. ft. @	.22	$ 135.00	
Additional mechanical equipment	KITCHEN FAN ($22.00) AUTOMATIC FORCED WARM AIR AND OIL BURNER ($552.00)			$ 574.00	
Items of excessive cost				$	
Sewage disposal				$	
Water supply				$	
				$	
				Subtotal	$ 7 4 5 0 0
Architectural service	LIMITED SERVICE				$ 1 5 0 0 0
Estimate of Cost Required to Replace Building Improvements in New Condition					$ 7 4 3 6 0 0

Date ______ Estimated by ______

2053—Cost Estimate—Inplace Unit Method

1732. In order to complete the estimate of total replacement cost, it is necessary to make the following computations and entries:

a. The cost of main building is obtained by multiplying the Final Square Foot Cost by the number of square feet in the Calculated Area, and entries are made in the spaces provided.

b. The cost of garage is computed from the estimated area and a unit cost obtained from the handbook.

c. Costs of accessory buildings, walks, terraces, and driveways are computed separately from estimated areas and unit costs obtained from the handbook.

d. The costs of additional mechanical equipment which have been entered directly in the summary of replacement cost are only the additional amounts for items specified for the subject building in excess of allowances included in the Square Foot Cost. The additional amounts have been computed as described in paragraph 1726 under Components #23 and #27, and their combined total has been entered in the total column.

e. The allowance for Architectural service is determined according to the instructions contained in Section 16. It is assumed for this example that limited architectural service is usually obtained for similar projects in the particular locality, and that the customary charge for such service in the locality is $150. This amount is entered in the "Total" column on the line opposite "Architectural service," and a qualifying notation is made.

f. The total of all costs included in the summary of replacement cost is the Estimate of Cost Required to Replace Building Improvements in New Condition.

PART V

SECTION 18

COMPILATION AND RECORDATION OF DATA

CONTENTS

Effective February, 1938
Federal Housing Administration

PART V

SECTION 18

COMPILATION AND RECORDATION OF DATA

GENERAL INSTRUCTIONS

1801. Systematic compilation, orderly recordation, and habitual reference use of valuation and risk rating data are required of Preliminary Examiners, Architectural Inspectors, Valuators, Mortgage Risk Examiners, Section Chiefs, and Chief Underwriters. These operations are an established part of the routine of underwriting activity and are essential in the interests of uniformity, consistency, and accuracy. The following instructions deal with the sources of information, the procedures to be used in compiling data, the analysis and interpretation of data, and the recordation of data in forms suitable for use. They do not deal with the application of the data to valuation and rating problems. The use of data is prescribed and described in other sections of this Manual.

1802. Sound underwriting practice depends on adequate data facilities. The quality of data determines the limits of the zones within which estimates of all kinds will fall. These zones must be narrowed to practical limits which are sufficiently close together to give reasonable certainty to conclusions and decisions.

1803. Data compilation must embrace a recognition of the many qualities of data. The significance of any compilation is modified by the probable accuracy of the information which it contains. The quality of data may be judged in part by the sources from which they come, and in part by the nature of the material itself.

1804. The sources of information are usually local. Little of the information is secured by actual surveys made by the Underwriting Staff. Most of the data are assembled from secondary sources. Suggested sources are outlined below in connection with the several kinds of data to be secured. Other data are supplied by certain divisions of Washington Headquarters, such as the Technical Division and the Division of Economics and Statistics.

1805. The following items are contained in the typical Insuring Office data recordation system:

a. *File of Economic Background Ratings and Summaries, FHA Forms No. 2096 and 2096a.* The Chief Valuator is responsible for this file which contains the results of examinations of Economic Background Areas.

b. File of Established Ratings of Locations, FHA Form No. 2082. The Chief Valuator is responsible for this file which contains the results of examinations and studies of selected locations in outlined neighborhoods to establish comparison criteria for location rating activities.

c. File of Valuation and Location Record Cards, FHA Form No. 2073. The Chief Valuator is responsible for this file which contains one card for each case processed.

d. Subdivision File, FHA Forms No. 2084 and 2084a. This file contains the results of examinations of subdivision projects and the Chief Valuator is responsible for its maintenance.

e. Real Estate Market Data File. This file contains data on rentals, sales, occupancy, construction and other aspects of residential properties, also significant community and neighborhood characteristics including trends and transitions. The Chief Valuator is responsible for its maintenance.

f. File of Maps and Plats. Maps of cities, city plans, zoning plans, and plats of subdivisions are the responsibility of the Chief Valuator and are displayed on racks, stored in cases, or appropriately filed in folders.

g. File of Data on Legal Status of Property. The Chief Valuator is responsible for this file which contains data pertaining to title and other legal aspects of ownership and tenancy, distinctions between chattels and real property, and legislative enactments or policies affecting the real estate market.

h. File of Population Statistics. The Chief Valuator is responsible for this file which contains population statistics suitable for use in making market analyses, economic background ratings, economic life estimates, valuations, neighborhood analyses and location ratings.

i. File of Rental Income Property Valuation Data. This file is maintained by the Chief Valuator and contains information and experience data of use in making estimates of revenues and operating expenses of rental income properties.

j. File of Established Ratings of Physical Security. This file is prepared and maintained under the direction of the Chief Architectural Supervisor and serves both the Architectural Section and the Valuation Section as criteria data in connection with the establishment of correct ratings of properties.

k. File of Established Standards and Requirements. These are files of the Property Standards, Minimum Construction Requirements, and rulings on new methods of construction established by the Technical Division, Washington Headquarters. The Chief Architectural Supervisor is responsible for the maintenance of the files or handbooks containing these data.

l. File of Technical and Advisory Data. This file is prepared and maintained under the direction of the Chief Architectural Supervisor and contains advisory data on the utility, durability, strength and other qualities of materials.

m. File of Catalogues of Construction Material and Equipment. Manufacturers' catalogues, building material advertising pamphlets, and all similar publications and bulletins are maintained in available form by the Chief Architectural Supervisor.

n. Cost Data Handbooks. These are prepared by the Cost Analyst responsible for the compilation of construction cost data and are under the jurisdiction of the Chief Architectural Supervisor. They are used by both the Architectural Section and the Valuation Section in connection with the estimation of the replacement cost of buildings.

o. Mortgage Insurance Allotment Record File. The Chief Mortgage Risk Examiner is responsible for this file which reflects the current status of formal commitments issued with respect to a borrower for whom more than one commitment has been previously issued.

p. Credit Data File. This file contains credit data used in analyses of requests for the establishment of lines of credit with respect to those borrowers requiring recurring consideration. The Chief Mortgage Risk Examiner is responsible for its maintenance.

1806. The form and location of the above data items should be selected with the object of facilitating and encouraging the general, habitual, and effective use of the data by the staff. In addition to the items listed above, each Insuring Office should establish a *General Subject File and Library* in which miscellaneous publications, reports, surveys, newspaper articles, and other items of value are made available to the staff. Economic trends and business conditions may be observed through the mediums of trade journals and financial publications. Economic studies and the publications of mortgage lending institutions provide a background for the work of Mortgage Risk Examiners. The Chief Mortgage Risk Examiner should mark material of particular value and require it to be read by the members of the staff of the Mortgage Risk Section. The same material will frequently be of interest to other sections. All data compiled are the property of the Federal Housing Administration and should always be available to the Director and members of the Underwriting Staff. They should not be kept in desks or locked files as this may cause great inconvenience during the absence of certain members of the staff from the office.

ECONOMIC BACKGROUND DATA

1807. Economic Background Data consist of completed Economic Background Ratings, FHA Forms No. 2096 and 2096a. These data bear great significance because they reflect the income, employment, and other factors which create cities and influence the extent, character, and direction of city growth.

1808. Underlying economic factors within an Economic Background Area will be revealed through the Economic Background Rating Form which is compiled from (*a*) statistics dealing with the volume, trend, and composition of population, (*b*) compilations relating to the cyclical fluctuations, trends, and diversifications of industrial employment, and the cyclical fluctuations and trends of commercial and specialty employment, (*c*) information pertaining to natural resources, social and cultural advantages, business conditions, and legislative policies, and (*d*) facts concerning geographical, meteorological and topographical characteristics of the area.

1809. Information and statistics used to compile Economic Background Data should be very carefully weighed and selected. A large portion of them will be drawn from other data files of the Insuring Office, namely: Real Estate Market Data File, File of Maps and Plats, File of Data on Legal Status of Property, and File of Population Statistics. The remainder will be drawn from sources tabulated in Paragraph 1844.

1810. *Compilation and Recordation of Economic Background Data.* Chief Valuators are directed to take the following steps in establishing Economic Background Ratings:

a. One Valuator is designated, whenever possible, to make and to review periodically Economic Background Ratings. This work is under the direct supervision of the

Chief Valuator, who is held responsible for its proper continuance. It is highly desirable that the area being rated be visited, although it is not always necessary.

b. Areas for rating are selected on the basis of the volume of business, in order that the ratings will be properly completed at an earlier date in those areas where current business is the greatest.

c. Economic Background Ratings shall be made in accordance with these instructions for all areas from which 10 or more mortgage insurance applications have been received. Other areas may be rated on a comparative basis.

d. Two Economic Background Rating Record Cards, FHA Form No. 2096a, are prepared for each rating made. To facilitate frequent reference, a card for each area rated should be filed alphabetically in the Valuation and Location Record file.

e. Immediately upon rating an area and completing FHA Form No. 2096a, three reports are transmitted to the Underwriting Division, Washington, D. C., as follows:

1. A summary report on the Economic Background of the area, paralleling those reports supplied Insuring Offices by Washington Headquarters

2. Completed Economic Background Rating Form, FHA Form No. 2096

3. One completed Economic Background Rating Record Card, FHA Form No. 2096a

1811. Economic Background Rating Form. The Economic Background Rating Form provides three categories:

a. *Industry* (Manufacturing, Assembling, Fabricating and Refining)

b. *Specialty* (Embracing activities not specifically covered under Industry and Trade, such as exploitation of natural resources, tourist resorts, educational centers, and political capitals.)

c. *Trade* (Trade, Finance, and Transportation)

1812. The initial step is the gathering of information pertinent to the economic structure of the area under consideration. This material embraces, (*a*) the nature and history of the principal economic activities prevalent in the area under consideration, (*b*) the nature, size and stability of industrial and commercial activities within the area, (*c*) population trends, including rate of growth and racial, age, and family distribution, (*d*) natural resources, and (*e*) miscellaneous items such as type of tenure prevalent in the community, distribution of incomes, taxation policies and schools and cultural institutions. Unusual factors encountered, not provided for in the rating form, such as exceptional growth or decline, geographical or climatic peculiarities, or unusual industrial conditions, are important guides to judgment and should be fully considered.

1813. The next step is to analyze the material to determine which categories apply to the area. In most large areas both the Industry category and the Trade category will apply. In smaller areas, other than manufacturing centers, the Trade category alone may apply. Specialty cities require the use of the Specialty category. If a category does not apply to the economic background being considered, it is omitted. This determination is made by ascertaining whether 5% or more of the persons employed in the Economic Background Area are employed directly in the activities covered by the category caption. If less than 5% are so employed, no consideration is given to that category. For example, if, in a given Economic Background Area, 23% are employed in industry and the balance in trade, only the Industry and Trade categories are used and the Specialty category is ignored.

1814. The second step is to establish the weight to be ascribed to each of the applicable categories. If the number employed in Industry and Specialty activities cannot be determined from statistics, reasonable estimates should be made. The percentage of the total number employed in each of the applicable categories except Trade is multiplied by two to determine the weight. This calculation is necessary under the assumption that for each person employed in the activities embraced in the category there is another employed in servicing activities within the area. The weight for the Trade category is determined by subtracting the sum of the weights of the other applicable categories from 100%. For example, if the total number employed is 4,100, of whom 575 are employed in industry, the ratio of 575 to 4,100, or 14%, is established. This factor multiplied by two equals 28%, the Industry category weight. If 250 persons are engaged in state or governmental activities, the ratio is 250 to 4,100, or 6%. This factor multiplied by two equals 12%, the Specialty category weight. The sum of the Industry and Specialty category weights, 40%, subtracted from 100% leaves 60%, the Trade category weight.

1815. In certain instances, due to the large number employed in the activities embraced in one category, the resulting category weight exceeds 100%. In such cases it is to be assumed that those engaged in trade are absorbed by the servicing activity and hence no weight will be obtained for Trade. For example, if 2,600 persons are employed, 1,600 of whom are engaged in industrial activities, the ratio of 1,600 to 2,600, or 62%, is established. This factor multiplied by two equals 124%. The Industry category weight is then arbitrarily reduced to 100%, with no weight resulting for Trade.

1816. The next step is to rate the features in the applicable categories on the Economic Background Rating Form in accordance with the instructions given below covering each category. These ratings are made by entering X marks in the appropriate spaces, carrying the indicated feature weights to the column captioned Rating, multiplying each category weight by the sum of its respective feature weights, and extending the products to the right hand column to be added. The completed sample form shown in paragraph 1843 illustrates the correct procedure.

1817. The final step is the calculation of the Economic Background Rating. This is accomplished by multiplying the sum of the category ratings by the applicable Scope of the Market factor. The Economic Background Rating thus calculated is the *5* column weight for the feature, Relative Economic Stability, of the Rating of Location grid on the Report of Valuator. The other column weights of the feature are computed, the nearest whole number being used in all instances, and the final record transferred to the Economic Background Rating Record card. The *5* column weight for the feature, Relative Economic Stability, may never be less than 10 points. Hence, if the rating calculated falls below 10 points, an arbitrary rating of 10 points must be assigned. In such a case, extreme weakness in the Economic Background Area is indicated.

1818. The Economic Background Rating is an expression of a portion of the hazard to which mortgage funds are subjected and is strongly influenced by the employment opportunities and the marketability of residential properties in the area under consideration. In the course of time residential property values in any community are affected by the action of economic forces, which are extraneous to any given property and which operate over a wide area. It is usually assumed that an increase in employment will be accompanied by the maintenance of the level of the earned incomes of employed persons. Therefore consideration is given to the volume and trend of employment rather than to payroll amounts. Since the risks involved in mortgage investments lie in the future, the Economic Background Rating should reflect the probable future trends of employment. Such forecast should embrace at least a ten to twenty year period.

1819. *Industry Category Rating.* Industry includes manufacturing, assembling, fabricating, and refining of products for distribution beyond the borders of the Economic Background Area under consideration. Employment in agricultural activities is not included in the Industry category. The Industry category is divided into three features, (*a*) Predicted Employment Trend, (*b*) Diversification, and (*c*) Cyclical Fluctuations.

1820. *Predicted Employment Trend.* The rating of this feature should express the net result of weighing all favorable and unfavorable factors affecting the trend of employment, except cyclical fluctuations which are independently rated in the third feature. In making the forecast of the trend of employment, care should be exercised to determine the long time trend. Short time movements are usually those which act in sympathy with temporary nation-wide fluctuations. Limited significance is attached to a decline in local employment during a temporary period of nation-wide decline such as occurred from 1929 to 1933, but a downward long time trend is evidenced if over-all local employment runs counter to expanding industrial employment such as occurred in the United States during the period from 1921 to 1929. There are many combinations of factors that may deserve consideration. A few are reviewed in the paragraphs immediately following. All important factors are to be taken into account whether or not they are mentioned here.

1821. The permanence of the market or the demand for the type of goods produced in the area is one of the fundamental considerations. Industries producing articles subject to the caprice of the market lack the stability of those industries producing branded food products, machinery, glassware and similar products of strong demand. However, the stability of an industry is not always indicated by the determination of whether the goods produced are necessities or luxuries, because there are many conventional products such as cosmetics, cigarettes, and a number of luxuries, that have all the indications of a permanent and stable market. Whether the demand for the article produced is local, regional or national is important. For example, a depression confined to one small section of the country would not seriously affect the automobile or cigarette industries.

1822. The demand for the particular brand of a commodity manufactured in the area should be fully considered. The automobile industry as a whole has had a remarkable growth, but many individual automobile companies have failed. Hence, each important industry must be considered with respect to the stability of the demand for competitive brands. A new industrial enterprise without an established market for its product does not merit the same weight as does another industrial enterprise with an established market. The demand for a product may be excellent, but the manufacturers in a given area may be unable to compete with manufacturers producing the same article in other areas because of high labor costs, high taxes, unfavorable freight rates, remoteness from the principal markets, or from supplies of raw material, and other factors. In such cases, the local industry may be expected to suffer from competition with industries in other cities, and the effects, as far as the particular city is concerned, will be just as injurious as if the demand for the product declined. The relative costs of production of competitive plants within an industry are difficult to ascertain but can be inferred from the general trend of growth. If the output of local plants is growing faster than the national output of the same product, it may be assumed that the local plants are in a strong competitive position and are producing on a relatively favorable basis.

1823. Single-industry areas are usually extremely hazardous. The industrial advantages of most large metropolitan areas are such that if some industries move away, others will enter, thereby maintaining a balance in the number of people actually employed. It is not the number of industries, but the volume of employment afforded that is vital in establishing the rating of the feature Predicted Employment Trend. Increases in employment offered by one large industry may offset decreases in many smaller ones. It is the number gainfully employed and the accompanying trend that indicate demand for housing. The effect of seasonal employment fluctuation, insofar as it affects the continuity of incomes, must also enter into consideration in rating this feature. Certain areas may have excellent employment conditions from the standpoint of diversification and cyclical fluctuations, but, due to the seasonal nature of the activities, an undesirable situation may exist.

1824. In considering these factors it must be remembered that a serious weakness in any one may have a pronounced effect on the rating. Even if the general demand for a product is exceptionally good, if the plants in the city cannot produce it in competition with plants in other cities, this competitive weakness may be decisive. Or, if the plants in a city can produce a product at exceptionally low costs but the general market for the product declines, then the low cost is of little avail. The person rating the area must always bear in mind that the total anticipated volume of employment in the area is the fundamental consideration and he should carefully weigh all the elements that may affect it favorably or unfavorably. Of the Industry category features, Predicted Employment Trend is considered the most important and is given a weight of 70%.

1825. *Diversification of Industry.* Diversification of industry is a favorable factor. In a general economic depression, employment in some industries usually declines farther and faster than in others, with the result that the net decline is generally less in those areas enjoying the greatest diversification. If there is ample diversification of industry, the cyclical fluctuations of different industries tend to counterbalance each other, resulting in greater stability of employment. If 50% or over of all the industrially employed in a city are employed in the plants of a single industry, the lowest rating is given this feature. If less than 10% of all the industrially employed are in a single industry, the highest rating is given.

1826. *Cyclical Fluctuations.* Economic Background Areas that show extreme fluctuations in employment from prosperity to depression do not possess the stability of areas subject to less fluctuation. Statistics can be obtained showing the percentage of minimum employment to maximum employment for the period 1921 to 1933 in metropolitan areas having populations in excess of 25,000. Areas are considered most stable where there has been a decline of 10% or less in employment from the peak year to the period of depression. Those where the decline has been 50% or more are considered least stable. In smaller areas for which adequate statistics cannot be obtained, the Valuator should ask local bankers or other reliable, well informed sources about the extreme fluctuations in employment and the date of their occurrence in order to secure a basis for rating this feature.

1827. *Specialty Category Rating.* In the Specialty category, employment resulting from activities not specifically covered under Industry and Trade is considered. It may also apply to an activity typical only to a particular section. Agriculture will not be considered under the Specialty category.

1828. *Predicted Employment Trend.* Of primary consideration is the trend of employment which can be anticipated to result from the activities during the forecast period. As in industry, only the predominant trend is to be considered. Two facts, the life of the merchantable supply and the cost of production, must always be weighed when considering activities classified as exploitation of natural resources, such as mining, lumbering, fishing, and oil extraction.

1829. Either short life of the supply, excessive cost of production, or lack of continued demand will indicate instability of employment. A low cost of production is of no advantage if the merchantable supply will be exhausted in a short period of time. Similarly, it matters little if there is a vast supply if it cannot be extracted at a cost less than the market price. Such resources may, at some future time, come into the field of profitable operation as the result of new techniques or higher market prices, but such a speculative possibility should not be considered in rating this category. The highest rating in the category is given to areas with the largest supply of these resources and the lowest cost of operation, coupled with a strong demand for the product and evidence of increasing employment.

1830. When rating tourist resorts, educational centers, and political capitals, it is important to consider employment given to the area as the result of persons bringing money to it from outside sources, or drawing their support or income from regions or persons outside the area. Accordingly, the rating is governed by employment resulting from tourists, outside students, non-resident taxpayers, or residents whose incomes are received from outside the Economic Background Area. In rating this feature, the attractiveness of the area as a particular type of center, its continued drawing power, its income and social characteristics, and the wealth of the region supporting it, must be weighed.

1831. Generally, because of the instability and uncertainty of tourist resorts, the rating of this category for an area predominantly of this type is lower than apparent from surface indications. However, a resort that has acquired, to a considerable degree, a year-round character and has demonstrated marked stability may be rated fairly favorably. Accurate statistics for employment resulting from tourist activities are generally not available. The Valuator estimates as accurately as possible, after investigation, the number of persons employed in such activities.

1832. Political capitals may be considered in most cases as immovable. Contractions and expansions of state or county functions decrease or increase the volume of governmental employment. The relative wealth of the state or county, and the legislative policies, should be considered in this connection. The political capital of a state or county with declining population or resources may be forced to curtail its expenditures for governmental functions, with a consequent reduction in employment. The same effect would result from decentralization of these functions.

1833. Educational centers are usually established to a degree which precludes likelihood of reduced employment resulting from the removal of educational institutions. Consideration should be given, however, to the difference in the rate of growth of the larger universities and the resulting effect upon employment trends in their respective centers.

1834. *Cyclical Fluctuations.* If more than one activity is involved, it is necessary to measure the effect of the fluctuation in its relation to all the employment estimated for the category. In the event only one activity is being considered, the fluctuation is more easily measured, and therefore more readily ratable. If data for accurate determination are not available, reasonable estimates may be used.

1835. *Trade Category Rating.* In the Trade category, trade, finance, and transportation are considered. The term, Trade, includes retail, wholesale, jobbing, and other distributing activities with the region outside the Economic Background Area under consideration. It does not include trade with those who reside in the Economic Background Area, inasmuch as that is considered in assigning the multiplier *2* for servicing activities heretofore mentioned. In some cities trade factors are of paramount importance, in others they are relatively minor elements.

1836. *Predicted Employment Trend.* The rating of this feature involves an analysis of the trade region, taking into consideration its population, natural resources, and purchasing power. A serious decline in the purchasing power of the trading region would reduce the number employed in trade in the Economic Background Area. The purchasing power of the trading region may decline because of a number of conditions, such as the growth of competitive cities, loss of soil fertility, exhaustion of mineral resources, loss of manufacturing plants, decline in population, decrease in incomes or inherited wealth of the region, or a combination of these factors. On the other hand, the trading region may increase in purchasing power because of an increase in its population or income, discovery of new resources, more intensive cultivation of the adjacent areas, or because of additional land being placed under cultivation.

1837. Diversification of employment within the Economic Background Area afforded by the activities classified under the Trade category, as well as the diversification of types of trading activity with the region outside the Economic Background Area, is to be considered because these factors definitely affect employment trends. If a community is dependent entirely upon trade with the outside region which lacks diversification of activity, an undesirable condition may be indicated. An example of this is the plight of a community entirely dependent upon trade from its surrounding one-crop agricultural area, when left with little more than subsistence support during periods of crop failure.

1838. *Cyclical Fluctuations.* If dependable statistics are not available, from which a satisfactory determination of cyclical fluctuations of employment in trade can be made, an estimate based upon the best information available should be the basis of rating this feature. In many cases the percentage of minimum to maximum employment in trade from 1921 to 1933 will parallel the cyclical fluctuation of the principal category indicated in the Economic Background Rating.

1839. *Adjustment for Scope of the Market.* The Scope of the Market refers to the degree of marketability of residential properties at current value levels in the Economic Background Area.

1840. The Scope of the Market is a reflection of the ability of financially capable purchasers to absorb the housing available to the market at current value levels. It embraces a consideration of many factors and is affected by (*a*) the income characteristics of the population contrasted with the types of housing available, (*b*) the percentage of home ownership, (*c*) the ratio of residential property foreclosures to total residential property transfers, and (*d*) the gross population of the area. The test of the Scope of the Market is whether a typical property can be readily sold to a financially capable purchaser at current value levels.

1841. The Scope of the Market adjustment feature has five columns to reflect the various degrees of marketability, namely, (*1*) Poor, (*2*) Limited, (*3*) Moderate, (*4*) Satisfactory, and (*5*) Good. It may prove desirable, in some cases, to use an "in between" weight, such as 22 or 37, as the applicable Scope of the Market factor. The use of this factor is largely a matter of judgment and the soundness of its application will, to a measurable degree, determine the soundness of the Economic Background Ratings established.

1842. The accompanying Economic Background Rating Form has been executed in a manner to demonstrate the mechanics of rating. The name of the city is fictitious and hypothetical statistics are employed for the purposes of this illustration.

1843. **File of Economic Background Ratings and Summaries.** Completed Economic Background Rating Forms, FHA Form No. 2096, and summaries, together with the data used in their compilation, should be filed in folders, using a separate folder for each area rated. The ratings are recorded on Economic Background Rating Record cards, FHA Form No. 2096a, and filed in the Valuation and Location Record Card file immediately behind the guides representing the respective cities rated. Some of the data used in

FHA Form No. 2096
(Rev. Dec. 15, 1937)

FEDERAL HOUSING ADMINISTRATION

ECONOMIC BACKGROUND RATING FORM

Economic background area ..... Zenith City ..... (Principal city) Parker ..... (County) Columbia ..... (State) Rating 30

Population—1920 .. 78,500 ..... 1930 ..... 85,900 ..... 1936 ..... 89,800 ..... (Estimated)

Date of rating .. December 15, 1937 ..... made by ..... John Smith, Chief Valuator ..... (Name)

SELECTION AND WEIGHTING OF CATEGORIES

CATEGORIES	NUMBER EMPLOYED (Statistical or estimated)	PERCENT OF TOTAL		CATEGORY WEIGHTS
	Total 39,720	100%		100%
Industry	12,310	31 %	×2=	62%
Specialty	3,200	8 %	×2=	16%
Trade	100% minus sum of other category weights in last column			22%

INDUSTRY CATEGORY (Manufacturing, Assembling, Fabricating, and Refining)

	1		2		3		4		5		RATING	WEIGHTED RATING
Predicted Employment Trend	Decline of 10% and over	14	Decline of 1% to 9%	28	Decline of 0% to increase of 4%	42	Increase of 5% to 9%	56 X	Increase of 10% and over	70	56	
Diversification	50% or over employed in the largest industry	3	30% to 49% employed in the largest industry	6	20% to 29% employed in the largest industry	9 X	10% to 19% employed in the largest industry	12	Less than 10% employed in the largest industry	15	9	
Cyclical Fluctuations Percentage of Minimum to Maximum Employment. 1921 to 1933	Less than 50%	3	50% to 59%	6	60% to 69%	9 X	70% to 79%	12	80% to 100%	15	9	
											Category Weight 62%×74 =	46%

SPECIALTY CATEGORY (State Type of Activities) Zenith University, Political (State Capital)

	1		2		3		4		5		RATING	
Predicted Employment Trend	Decline of 10% and over	14	Decline of 1% to 9%	28	Decline of 0% to increase of 4%	42 X	Increase of 5% to 9%	56	Increase of 10% and over	70	42	
Cyclical Fluctuations Percentage of Minimum to Maximum Employment. 1921 to 1933	Less than 50%	6	50% to 59%	12	60% to 69%	18 X	70% to 79%	24	80% to 100%	30	18	
											Category Weight 16%×60 =	10%

TRADE CATEGORY (Trade, Finance, and Transportation)

	1		2		3		4		5		RATING	
Predicted Employment Trend	Decline of 10% and over	17	Decline of 1% to 9%	34	Decline of 0% to increase of 4%	51	Increase of 5% to 9%	68 X	Increase of 10% and over	85	68	
Cyclical Fluctuations Percentage of Minimum to Maximum Employment. 1921 to 1933	Less than 50%	3	50% to 59%	6	60% to 69%	9	70% to 79%	12 X	80% to 100%	15	12	
											Category Weight 22%×80 =	18%

Sum of Applicable Category Ratings 74%

SCOPE OF THE MARKET

	1		2		3		4		5		RATING
Degree of Marketability	Poor	20	Limited	25	Moderate	30	Satisfactory	35	Good	40 X	40

ECONOMIC BACKGROUND RATING (Sum of Applicable Category Ratings × Scope of Market Factor) 30

Column Weights Established for "Relative Economic Stability" Feature	6	12	18	24	30

List the cities, towns, villages, and communities included in this economic background area.

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compiling the Economic Background Rating Form will be secured from other files established under these instructions. It is not necessary to separate such data from their parent files and file them with the Economic Background Rating Form.

1844. *Sources of Economic Background Data.*

a. Chambers of commerce
b. Real estate boards
c. Industrial bureaus
d. Industrial corporations
e. Employment agencies
f. Financial institutions
g. Utility companies
h. Clearing house associations
i. Educational institutions
j. Labor organizations
k. Agricultural agents
l. Publications of U. S. Chamber of Commerce
m. Publications of city, county and state governments
n. Bureaus of vital statistics
o. Reference to other Insuring Office Data Files, especially the File of Population Statistics

VALUATION AND LOCATION RATING DATA

1845. Exhaustive analyses, reliable forecasts, and dependable conclusions with respect to neighborhood influences must be founded upon the intelligent use of accurately compiled and conveniently recorded valuation and location rating data. Experienced appraisers frequently make fair approximations of location characteristics from appearances only, because they have acquired considerable knowledge of the visible or surface factors which affect locations. Such conclusions are unreliable because they are assumptions predicated upon random generalities instead of carefully compiled factual and informative data. The data program is not a secondary function of an Insuring Office. It is a fundamental aspect of the primary function of insuring economically sound mortgages.

1846. Valuation and location rating data include various types of neighborhood data. The distinction between economic background data and neighborhood data is that the former comprise factors which have some degree of influence on all locations within an Economic Background Area, while the latter consist of factors whose influences are more circumscribed and frequently more direct and forceful.

1847. The Chief Valuator is responsible for the introduction and maintenance of the following files which are required for valuation and location rating data:

a. File of Established Ratings of Locations
b. File of Valuation and Location Record Cards
c. Subdivision File
d. Real Estate Market Data File
e. File of Maps and Plats
f. File of Data on Legal Status of Property
g. File of Population Statistics

1848. Following is a detailed description of each of the required data files listed above. The Chief Valuator will deviate from these instructions only when it is clearly evident that the adoption of some alternate method of filing is essential to the proper functioning of the Valuation Section.

1849. **File of Established Ratings of Locations.** Completed Established Ratings of Locations, FHA Form No. 2082, should be filed in ring binders according to the following sequence:

a. The forms are first divided into groups and the groups alphabetically arranged according to Economic Background Areas.
b. The forms in each Economic Background Area are then arranged numerically.

1850. Each Established Rating of Location will be numbered in accordance with a symbol consisting of the following:

a. *Assigned Number.* In each Economic Background Area the assigned numbers will begin with "1" and run consecutively.
b. *Racial Occupancy Designation.* This will be a letter indicating predominating racial characteristics, as follows:

W—White
M—Mixed
F—Foreign
N—Negro

c. *Price Range Symbol.* This consists of the first digits of the lowest and the highest amounts listed in the price range.
d. *Typical Property Value Symbol.* This will consist of the first digit, or digits, in the amount listed as the value of the typical property. For example, Outlined Neighborhood No. 28 is found to be predominantly of white racial

occupancy, with properties ranging in price from $7,000 to $12,000 and the typical property having a price of $9,000. The Outlined Neighborhood and the corresponding Established Rating of Location will therefore be assigned the following number: 28W7–12–9. If it is desirable to provide for more than one Established Rating of Location in the same Outlined Neighborhood for other significant price ranges, such additional ratings shall be designated by adding the letter A, B or C to the assigned number, thus: 28A, W7–12–9. Additional copies of Established Ratings of Locations for the use of Valuators as prescribed in Section 9, Rating of Location, shall be filed in the same manner as described above. Outlined Neighborhoods will be numbered on Outlined Neighborhood Maps in accordance with the above prescribed method. These maps are used in conjunction with Established Ratings of Locations but shall be filed in the File of Maps and Plats described below.

1851. *Sources of Established Location Rating Data.* The only data included in this file are the completed Established Ratings of Locations, FHA Form No. 2082. Useful information in the completion of these forms should be available in the Economic Background Data File previously described and in the six data files described below.

1852. File of Valuation and Location Record Cards. These cards, FHA Form No. 2073, should be filed according to the following sequence:

a. The cards are first divided into groups according to Economic Background Areas and the groups alphabetically arranged.

b. Each Economic Background Area is then subdivided according to Outlined Neighborhood Areas which are to be arranged numerically.

c. The cards in each Outlined Neighborhood Area shall be arranged alphabetically by streets and numerically by house numbers on respective streets.

1853. Valuation and Location Record cards should be used to record the following information:

a. Occupation of Applicant
b. Business of Employer
c. Total Annual Income
d. Photograph of Property

1854. To facilitate analyses of rental areas or oversupply, undersupply and conformity of structures by use-types, these cards are furnished in the following four color classifications:

a. White: all one family structures, both new and existing construction, except when blue is used.

b. Buff: all two or three family structures, both new and existing construction, except when blue is used.

c. Yellow: all four family structures, both new and existing construction, except when blue is used.

d. Blue: all cases rejected because of Rating of Property or Rating of Location.

To facilitate frequent reference use, this file shall also contain the Economic Background Rating Record cards, FHA Form No. 2096a. These shall be filed immediately behind the guides representing their respective Economic Background Areas.

1855. *Sources of Valuation and Location Record Card Data.* The only data included in this group are the completed Valuation and Location Record Cards. Information required in the completion of these forms will be drawn from Report of Architectural Inspector, FHA Form No. 2014, and Report of Valuator, FHA Form No. 2015.

1856. **Subdivision File.** The data in this file consist of the following completed forms and required exhibits:

a. Subdivision Information Form, FHA Form No. 2084. It is contemplated that the sponsor will present the completed form with exhibits in duplicate.

b. Chief Underwriter's Subdivision Report, FHA Form No. 2084a. This form calls for the conclusions of the Insuring Office as contrasted to the Subdivision Information Form, which calls for factual answers.

c. Copies of constructive suggestions transmitted to sponsor or of rulings contained in commitments previouly issued. Individual folders should be used for filing the data pertaining to each subdivision. These should be indexed by the names of subdivision tracts and arranged alphabetically according to counties. The folders should carry an assigned number which is also used to indicate the location of the subdivision on county maps suitable for this purpose.

1857. *Sources of Subdivision Data.* The only data included in this file are the completed subdivision forms above referred to with attached exhibits. Information in the compilation of these forms should be available from subdivision sponsors, previous decisions, and from other data files of the Valuation Section.

1858. Real Estate Market Data File. This file should contain data with respect to offerings, rentals, sales, mortgage incumbrances, occupancy percentages, demolitions, condemnations, and construction of residential properties. It should also contain charts, graphs, pamphlets, tables, and memoranda of significant community and neighborhood characteristics including trends and transitions. This information may come in the form of published reports, news items, classified advertisements, and trade publication articles, and should be properly dated upon filing. Because of the irregularity of the style in which it is found, either or both of the following filing methods may be employed.

a. Newspaper clippings, classified advertisements, and similar material may be pasted or transcribed to 4 x 6 cards and filed in the File of Valuation and Location Record Cards behind the rating cards and according to Outlined Neighborhoods.

b. Such material approximately 8½ x 11 in size may be placed in ring binders. Material of smaller size may be pasted or transcribed to sheets for filing in ring binders. In all cases, the data are to be filed by Outlined Neighborhoods unless they are not susceptible to such division.

1859. *Sources of Real Estate Market Data.*

a. Market analyses prepared by Division of Economics and Statistics, Federal Housing Administration
b. Real estate boards
c. Real estate brokers
d. Lending institutions and agencies
e. Housing authorities
f. Newspapers
g. Real estate rental and sale offering sheets
h. Official records
i. Case binders
j. University research studies
k. State banking departments
l. Local informed persons
m. Federal Housing Administration block maps
n. Real property inventories
o. Telephone company research bureaus
p. Chambers of commerce
q. Boards of education

r. Utilities and park commissions
s. Transportation companies
t. Zoning and planning commissions
u. Reference to other Insuring Office data files

1860. File of Maps and Plats. Many of the functions of an Insuring Office require frequent reference to appropriate maps and plats. They should be carefully filed to expedite required use and to avoid unnecessary wear and tear. Continual unfolding and folding of maps tend to destroy them. Therefore, maps and plats most frequently used should be filed open and flat upon suitable map racks or upon individual pieces of thin wall board. A large scrapbook approximately 18 x 25, of the type generally used by advertising agencies to preserve full page display ads, is an excellent file for maps of appropriate size. Other maps infrequently used may be filed in folders. The three methods of filing maps and plats and their respective uses are therefore as follows:

a. Frequently used maps and plats should be filed open and flat on suitable map racks or thin pieces of wall board. Maps in this group consist of State or District map showing Economic Background Areas, railroads and highways; maps of active Economic Background Areas showing outlined neighborhoods, transportation lines, parks, playgrounds, schools, cemeteries and railroads; and zoning maps.
b. Less frequently used maps and plats, such as those of inactive Economic Background Areas, geological survey maps and maps of mining operations, may be kept in large scrapbooks. These should be securely fastened to the leaves of the book to avoid unnecessary wear and tear.
c. Infrequently used maps and plats may be filed in folders. Unless frequently used, it is preferable to keep subdivision maps in their respective subdivision folders.

1861. *Sources of Data for File of Maps and Plats.*

a. City engineers' offices
b. Map makers and publishers
c. Bookstores
d. Local draftsmen and engineers
e. U. S. Department of Interior (Geological Surveys)
f. State mining bureaus
g. Extractive trades associations
h. Mining operating companies
i. U. S. Post Office Department

1862. File of Data on Legal Status of Property. These data fall into three general classifications, namely, (*a*) Title and Other Legal Aspects of Ownership and Tenancy, (*b*) Distinctions between Chattels and Real Property, and (*c*) Legislative Enactments or Policies Affecting the Real Estate Market. Individual pieces contributing to these data will show considerable variance in size, style and form, and therefore do not lend themselves to a simple and precise method of filing. Ring binders and folders are probably the most acceptable filing mediums for this material. Bound volumes, if any, should be kept together in a convenient place. The liberal use of memoranda to record known conditions with respect to all phases of these data is strongly recommended. Three general classifications of material, filed in binders or folders, are recommended, as follows:

a. *Title and Other Legal Aspects of Ownership and Tenancy.* This group should include data pertaining to the nature and characteristics of titles and the nature of and distinctions between estates in real property; restrictions, easements, tenants' rights, leases, conveyancing, rights of way, and reservations. Copies of deed restrictions should be retained in the Subdivision File.

b. *Distinctions between Chattels and Real Property.* This group should include opinions of the Legal Division supplied to the Insuring Office with respect to the items to be construed as parts of the realty or as chattels; also memoranda setting forth the public customs as to what items of equipment and accessories are considered as part of the real property.

c. *Legislative Enactments or Policies Affecting the Real Estate Market.* This group falls into three logical classifications. The first is Zoning Ordinances and Planning Regulations. These are usually in book form with accompanying maps. Zoning maps of active areas should be filed as directed above under File of Maps and Plats. The second classification is Taxes and Special Assessments. It should contain data on the subjects of taxation policies, taxation rates, nature and duration of special assessments in each Economic Background Area within the jurisdiction of the Insuring Office. The last of the three classifications is Building Codes and Fire and Police Protection and Regulations. Information on these matters is usually obtainable in booklet or circular form from the municipal building inspector, boards of health, and the fire and police departments.

1863. *Sources of Data on Legal Status of Property.*

a. Recording offices
b. State legislative reference bureaus
c. Real estate boards
d. Abstract and title offices
e. Subdivision developers
f. Deeds containing restrictive covenants
g. Insuring Office applications
h. Legal Division of the Federal Housing Administration
i. State statutes
j. Municipal building inspection bureaus
k. Apartment or tenement house commissions
l. Boards of health
m. Housing authorities
n. Municipal fire and police departments
o. City assessment bureaus
p. City engineers' offices

1864. **File of Population Statistics.** These data are used chiefly in conjunction with material in the File of Economic Background Ratings and Summaries and with outlined neighborhoods in the Valuation and Location Record Card File. They are also used with material from the Real Estate Market Data File and the Subdivision File. Because of the varied uses of population statistics, it is desirable to have such data remain assembled, for reference purposes, rather than to attempt a division of them according to their somewhat overlapping uses. This file should contain, usually in book or pamphlet form, such population statistics as embrace number, race, color, age, family size, tenant and owner status, changes in number or otherwise, incomes and occupations, and such other classifications as will further aid in making market analyses, economic background ratings, economic life estimates, valuations, neighborhood analyses, and location ratings.

1865. *Sources of Population Data.*

a. Bureau of Census publications
b. Current population estimates of Bureau of Census
c. Publications of the U. S. Chamber of Commerce
d. Bureaus of vital statistics
e. City directories
f. University research bureaus
g. Real property inventories
h. Federal Housing Administration block maps
i. Telephone company research bureaus

j. Housing authorities
k. Local informed persons
l. Case binders

1866. File of Rental Income Dwelling Valuation Data. The data in this file consist of historical analyses of revenues and expenses of rental income dwelling properties. The analysis of each property should include data on as much of the past 10 years' experience as is obtainable, and such data should show a logical classification of the income and expense items. To each analysis should be attached a photograph, address and description of the property, and, if possible, a plot plan and floor plan. The classification of revenue and expense items for each year covered by the analysis should include the following:

a. Revenues
  1. Apartment units
  2. Basement space
  3. Garages
  4. Miscellaneous revenues
  5. *Total Revenue Collections*
b. Expenses
  1. Advertising
  2. Commissions
  3. Alterations for tenants
  4. Office salaries
  5. Office expense
  6. Legal and auditing expense
  7. Telephone
  8. Expense of collections
  9. Management fees
  10. Miscellaneous
  11. *Total Renting and Administrative Expense*
  12. Heating and ventilating
  13. Janitor
  14. Lighting
  15. Refrigerating
  16. Water
  17. Gas.
  18. Garbage and rubbish removal
  19. Protection
  20. Grounds expense
  21. Cleaning
  22. Extermination

23. Miscellaneous
24. *Total Regular Operating Expense*
25. Repairs to structure
26. Repairs to equipment and fixtures
27. Painting
28. Decorating
29. Structural replacements
30. Equipment replacements
31. Miscellaneous
32. *Total Repairs, Maintenance, and Replacement Expense*
33. Taxes
34. Hazard insurance
35. Miscellaneous
36. *Total Taxes and Hazard Insurance*
37. *Total Operating Expense; Items b–11, b–24, b–32, and b–36*
38. Ratio of Total Operating Expenses (*b–37*) to Total Revenue Collections (*a–5*)
39. Ratio of Total Operating Expenses to Total Revenue Collections, both adjusted to 90% occupancy, or other suitable standardized percentage used for comparisons.
40. Ratio of item *b–11* to item *b–37*
41. Ratio of item *b–24* to item *b–37*
42. Ratio of item *b–32* to item *b–37*
43. Ratio of item *b–36* to item *b–37*

Most of the above items should show the income or expense per room, per family unit, per cubic foot, or per square foot.

1867. Rental income dwelling valuation data, on each building for which information is recorded, should include information with respect to the occupancy percentage experience, the character of services rendered, and whether family units are rented furnished or unfurnished. The following method should be employed for filing Rental Income Dwelling Valuation Data. Folders shall be captioned for each type and size of rental income dwelling. The description, plans, photographs, and record of earnings and expenses in each analysis shall be suitably fastened together and filed in the proper classification folder. The income and expense items, and the accompanying ratios, of each property analyzed should be tabulated on a large columnar sheet for comparison study. Separate columnar sheets should be used for each of the types and sizes of properties.

1868. *Sources of Rental Inoome Dwelling Valuation Data.* The principal sources of rental income dwelling valuation data include the following:

a. Multi-family property owners
b. Real estate boards
c. Real estate and property management brokers
d. Owners' and managers' associations
e. Housing authorities
f. Case binders
g. Financial institutions
h. Research organizations
i. Other data files

PROPERTY RATING DATA

1869. The total rating of property can be more reasonably determined when founded upon adequate and reliable property data. The compilation and recordation of such data are the primary and fundamental steps in property rating and it should be clearly understood that they are indispensable in the process of determining the risks attributable to the physical security. The compilation and recordation of property rating data is a continuing function. Data, to be dependable, must be current. Moreover, information used in establishing appropriate data must emanate from reliable sources and when possible, be checked against other information of a somewhat similar character to further confirm its accuracy.

1870. Efficient methods of recordation and filing of property data are essential to their effective use. The Chief Architectural Supervisor is responsible for the introduction and maintenance of the following files which are required for property rating data.

a. File of Established Ratings of Physical Security
b. File of Established Standards and Requirements
c. File of Technical and Advisory Data
d. File of Catalogues of Construction Material and Equipment

1871. **File of Established Ratings of Physical Security.** This file consists of all Established Ratings of Physical Security which have been compiled for reference and review purposes by the Architectural Section. The originals should be retained in the office and kept available for comparison and review of current cases. The file should contain duplicate sets of Established Ratings of Physical Security which may be used by Architectural

Inspectors and Valuators for reference and feature comparisons when rating current cases. Established Ratings of Physical Security will be maintained in binders and suitably classified according to types, sizes, and construction characteristics of the properties.

1872. *Sources of Data for Established Ratings of Physical Security.* The only data included in this file are the completed Established Ratings of Physical Security. Useful information in the compilation of these established ratings will be available in the Construction Cost Data File, case binders, and other data files.

1873. **File of Established Standards and Requirements.** Contained in this file are regulatory data governing construction and use of property. These data indicate the line of demarcation between substandard properties and those which barely meet the eligibility requirements. They include the Property Standards, Minimum Construction Requirements, and rulings on methods of construction established by the Technical Division, Federal Housing Administration. The national electric code, the code of the National Board of Fire Underwriters, and similar material will also be contained in this file. Rulings on methods of construction, issued by the Technical Division, are kept in ring binders. The remainder of these data are filed in binders or folders. Building codes constitute a part of the File of Data on Legal Status of Property, but due to the frequent use of these codes by the Architectural Section, they are kept with the material in this file.

1874. *Sources of Data on Established Standards and Requirements.* The principal sources of data for this file are:

a. Federal Housing Administration
b. National Board of Fire Underwriters
c. File of data on legal status of property

1875. **File of Technical and Advisory Data.** This file embraces advisory data prepared by recognized authorities and it serves to provide authentic information concerning the utility, durability, strength, and other qualities of various materials. It also includes technical bulletins dealing with recent developments on dwelling construction, principles of planning small houses, mechanical equipment for homes, contract documents for small house construction, modern design, and other similar subjects. In addition to the above, the file will contain such technical bulletins and papers received by the Insuring Office which deal with frame house construction, masonry construction, thermal insulation of buildings, heating and ventilating, Federal specifications for materials and equipment, and similar topics. The file will be constructed in the following manner. Bound volumes and thick, paper back bulletins will be kept together in a convenient and suitable place. Other technical bulletins, reports, and papers will be filed in binders or folders to provide the most convenient means of reference.

1876. *Sources of Technical and Advisory Data.* The sources of these data include:

a. Federal Housing Administration
b. Superintendent of Documents, Government Printing Office
c. U. S. Bureau of Standards
d. American Institute of Architects
e. American Society of Heating and Ventilating Engineers
f. U. S. Department of Commerce
g. Trade Associations

1877. File of Catalogues of Construction Material and Equipment. This file consists principally of catalogues and pamphlets which comprise data with respect to the equipment and construction materials which are either immediately or potentially available and desirable to the market. The file shall be constructed as follows:

a. Bound volumes will be kept together in the most convenient and suitable place.
b. Pamphlets will be filed in folders under suitable captions and classified to an extent consistent with the volume of such material.

1878. *Sources of Data on Construction Material and Equipment.* Many of these data will be received by offices without specific request. In such cases they should be routed to the Architectural Section for proper filing and use. Other sources include:

a. Manufacturers, distributors, and developers
b. Newspapers and magazines
c. Sweet's Catalogue Service

BORROWER RATING DATA

1879. Case binders constitute the file for most of the data normally used in rating borrowers. Types of data which are filed in case binders are factual data reports, bank account certifications, bank reference letters, salary and employment records, records of mortgage status and mortgagee experience, credit references, and general reference data. In addition to the above, the Chief Mortgage Risk Examiner is responsible for the compilation and maintenance of data pertaining to mortgage insurance allotments. These data afford an accurate record of the amount of liability outstanding and credit allotted to each mortgagor in whose favor more than one firm commitment has been issued.

1880. Mortgage Insurance Allotment Record File. This Form, FHA Form No. 2211, which is adaptable to the individual borrower and the commercial borrower, reflects the current status of formal commitments issued with respect to a borrower for whom more than one commitment has been previously issued. The file is constructed as follows:

a. Mortgage Insurance Allotment Record Cards shall be divided into two classifications, namely:
  1. Operative Builder Borrowers
  2. Non-Operative Builder Borrowers

b. The cards in each of the above classifications shall be arranged alphabetically.

1881. *Sources of Data for Mortgage Insurance Allotment Record File.* Data for this file are drawn from Insuring Office case binders.

1882. Credit Data File. This file shall contain current financial statements, itemized statements of contingent liabilities, operating statements of borrowers, commercial reports, factual data reports, and all memoranda compiled in connection with analyses of requests for the establishment of lines of credit with respect to those borrowers requiring recurring consideration such as operative builder borrowers, and other commercial borrowers. Such data will be placed in separate folders for each borrower and filed alphabetically.

1883. *Sources of Data for Credit Data File.* The sources of data for this file are:

a. Information from the borrower
b. Credit reporting agencies
c. Commercial reports
d. Borrower's banking institution
e. Borrower's employer
f. Mortgagees, creditors, general reference sources

CONSTRUCTION COST DATA

1884. The data program of the Federal Housing Administration includes comprehensive compilation and orderly recordation of construction cost data. This function is set forth independently in Section 19.

PART V

SECTION 19

CONSTRUCTION COST DATA

CONTENTS

Effective February 1938
Federal Housing Administration

PART V

SECTION 19

CONSTRUCTION COST DATA

COST INFORMATION

1901. Cost Data Handbooks. Cost information in the form of basic unit prices is furnished to the architectural and valuation sections in the form of Cost Data Handbooks. These books are divided into two parts for convenient use. Part 1 contains basic cost data necessary to make an estimate by the Integrated Square Foot Method. Part 2 of the handbook contains inplace unit prices required to make an estimate by the Inplace Unit Method.

1902. Ordinarily, the valuation sections are supplied with Part 1 only. The architectural sections are supplied with both Part 1 and Part 2 of the handbook. All cost data shall be considered as being strictly confidential and distributed only to authorized members of the Underwriting Staffs requiring the use of such information. Adherence to the following instructions is required:

a. All handbooks shall be numbered serially and a record shall be maintained indicating the number of copies issued, number of pages per copy and the name of the persons to whom issued.

b. A memo receipt indicating the serial number and title of the copy issued shall be obtained from each authorized recipient.

c. All copies must contain the following in the Foreword: "This copy and the information contained herein is the property of the Federal Housing Administration and for the confidential use of authorized members of the Underwriting Staff. Distribution to, or use of, by others is strictly prohibited."

1903. Compilation and Tabulation of Cost Data. Basic square foot costs, inplace unit prices, component unit adjustments, quality adjustment percentages, and locality adjustment percentages are prepared by a Cost Analyst and assembled in tables which form the contents of the Cost Data Handbook.

1904. The Cost Data Handbook is indexed in the following manner in order to provide uniformity throughout all offices.

Part 1
- Foreword
- Classification schedule
- Basic Specifications
- Basic Square Foot Costs
- Component Unit Adjustments
- Miscellaneous Costs
- Quality Adjustment Percentages
- Locality Adjustment Percentages
- Items of rapid deterioration and obsolescence

Part 2
- Table of Established Trade Prices
- Inplace Unit Prices
  - One section for each component

1905. The Cost Analyst is responsible for gathering information and converting this information into basic data which are tabulated in the handbook. The methods used by the Cost Analyst are described in the following paragraphs.

DETERMINATION OF INPLACE UNIT PRICES

1906. Trade prices prevalent in the territory to which the Cost Analyst is assigned are assembled and formally tabulated for use in the development of basic cost data. These trade prices should be obtained from all available sources. An analysis is made of all prices obtained, and these prices are systematically tabulated and recorded by the Cost Analyst. Only the typical prevailing labor and material prices from dependable sources are selected for use in developing cost data.

1907. Material and labor prices thus obtained are first assembled for the selected base city, and next for those cities and localities within the territory from which a substantial number of applications for mortgage insurance have been or are likely to be received. The prices are usually converted into inplace unit prices for the base city before the material and labor prices are obtained for the other cities in the territory. The city selected as the base city for cost data purposes is usually one of the Insuring Office cities within the cost data territory, but it may be any large city in which construction costs are found to be reasonably stable and fairly representative of the territory served. The base city or locality is the city for which complete cost data is developed, and it serves as a base for comparison of costs.

1908. An analysis is made to determine the average time required by the various trades for the individual assembly operations, and labor prices are converted into erection costs for each element of a component of a building.

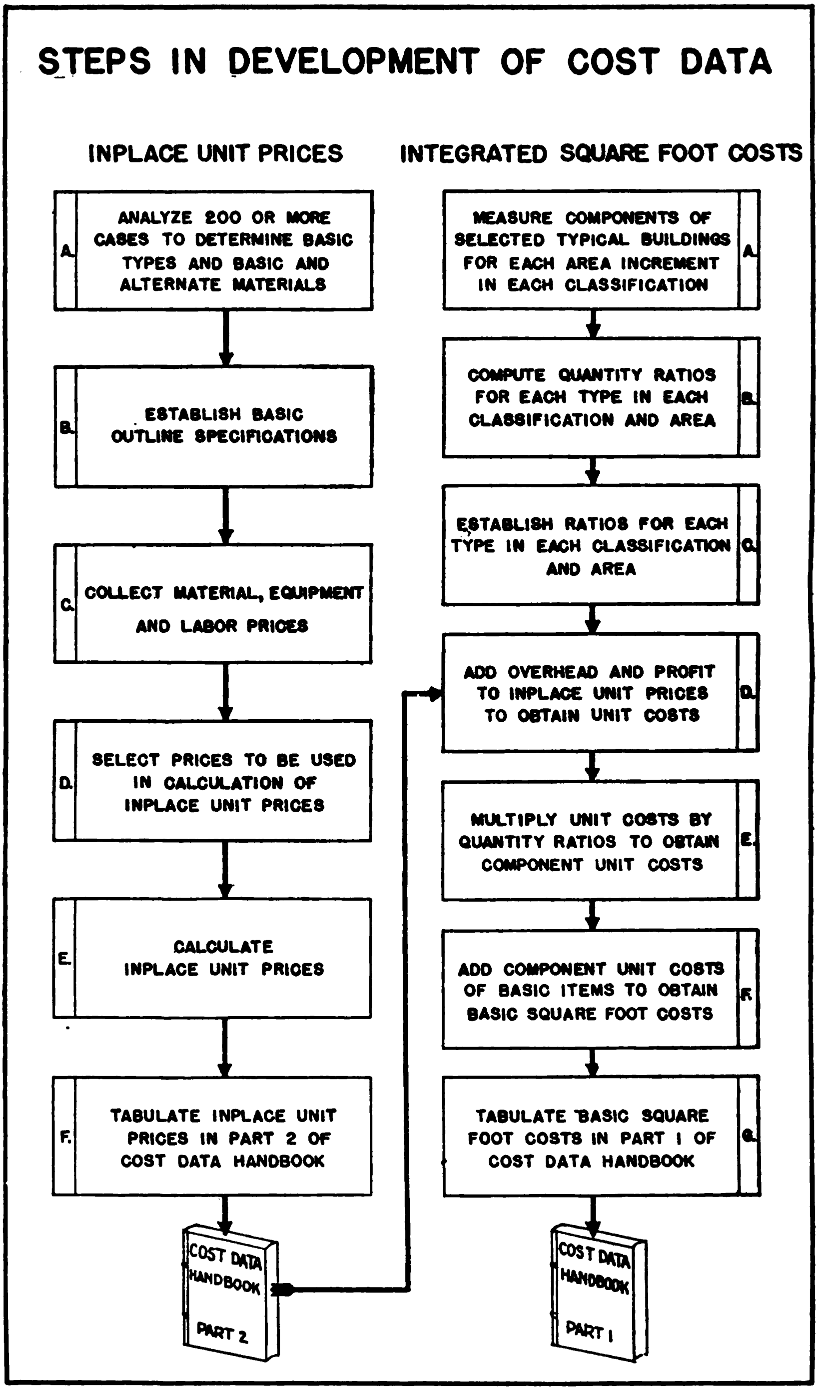
1909. A study is made of all usual types of building construction within the territory to determine the in-place unit prices required for construction likely to be encountered. This study usually proceeds in the following order: A number of cases of proposed and existing construction are selected from the case files. The number selected is determined by the number of cases processed per month, and should include not less than 200 cases.. In areas where there is a wide diversity of types of construction, the number of cases analyzed is increased accordingly. These cases are analyzed as to date of completion, locality distribution, classification, exterior wall construction, type of heating equipment, type or size of basements, type of foundation, type of roof covering and other pertinent characteristics which will be later used in the development of basic specifications and tabulation of necessary data.

1910. Material and erection costs for individual elements are added together, and the sums are multiplied by factors established for components or elements of components to develop Inplace Unit Prices.

1911. Factors. A factor or material allowance coefficient is a number which indicates the quantity of a particular material, including waste and allowances for incidental items, which is required in one surface square foot of construction or finish. Its amount depends on the character of construction and the sizes of its members.

1912. The following are factors which apply to usual dwelling construction:

a. Masonry Walls:	*Concrete*	*Concrete Block*	*Brick*
4″ thick	.33 cu. ft.	1.1 blocks	7 bricks
8″ "	.67 " "	1.1 "	13 "
12″ "	1.0 " "	1.1 "	19.5 "
b. Floor Framing:	*16″ o. c.*	*20″ o. c.*	
2″ x 6″			
2″ x 8″	1.8	1.6	
2″ x 10″	2.2	1.9	
2″ x 12″	2.6	2.2	
c. Sheathing and Subflooring:	*Right Angle*	*Diagonal*	
1 x 6s & 8s—S2S	1.2	1.3	
1 x 6s & 8s—T&G	1.3	1.4	
d. Finished Wood Floor:	*2¼″ Face*	*3¼″ Face*	
Tongue & Groove	1.4	1.3	


STEPS IN DEVELOPMENT OF COST DATA
INPLACE UNIT PRICES
INTEGRATED SQUARE FOOT COSTS
A
ANALYZE 200 OR MORE CASES TO DETERMINE BASIC TYPES AND BASIC AND ALTERNATE MATERIALS
B
ESTABLISH BASIC OUTLINE SPECIFICATIONS
C
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D
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E
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COST DATA HANDBOOK PART 2
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F
TABULATE BASIC SQUARE FOOT COSTS IN PART 1 OF COST DATA HANDBOOK
G
COST DATA HANDBOOK PART 1

e. Roof Framing:	*16″ o. c.*	*20″ o. c.*
2″ x 6″	1.0	.9
2″ x 8″	1.4	1.1
2″ x 10″	1.7	1.4
f. Ceiling Framing:	*16″ o. c.*	*20″ o. c.*
2″ x 6″	1.0	.8
2″ x 8″	1.2	1.0
2″ x 10″	1.5	1.2
g. Partition Framing:	*16″ o. c.*	
Studs 2″ x 4″	1.4	
Studs 2″ x 6″	2.0	
h. Siding:	*16″ o. c.*	
6″ Drop	1.3	
6″ Bevel	1.4	
8″ "	1.4	
10″ "	1.3	
i. Wallboard:	1.1	

1913. Inplace unit prices of associated elements are combined to form inplace unit prices for the usual combinations of elements that comprise the individual components. Inplace unit prices for components and elements of components are then tabulated and indexed in Part 2 of the Cost Data Handbook.

DETERMINATION AND USE OF QUANTITY RATIOS

1914. An examination of a sufficiently large number of plans reveals certain consistent or reasonably consistent relationships between the quantities of certain components of the building, such as walls and roof, and the number of square feet of livable floor area. These relationships are reasonably constant in buildings estimated by the Federal Housing Administration because of the type of buildings encountered. Minimum room sizes are limited by Property Standards and building codes. Maximum sizes are limited by the available area or cost of the structure. Ceiling heights are becoming standardized through the demand for economy in initial cost and in the operating expense of heating and cooling equipment. Halls and stairways in typical buildings are usually the minimum width or length necessary to permit easy passage. Plumbing and kitchen equipment have been developed to such a degree that sizes of bathrooms or kitchens are largely governed by the number of fixtures used. The relationship between the minimum area of windows and floor area is limited by Property Standards and governed by climatic conditions of the territory. Because of the consistency of the relationships between walls, floors, roofs, items of equipment and the number of square feet in the livable floor area, it is possible to compute ratios of quantities for each of the components of a building. These ratios are determined for each component and each range of floor area, and are termed, *quantity ratios*. Quantity ratios are used to avoid laborious calculations in building up basic unit costs of a large number of types and areas.

1915. A quantity ratio is a number which expresses the relation between the measurement of a component part of a building and the measurement of the livable floor area of that building. The ratio is obtained by dividing the total number of units in the component by the number of square feet of livable area. The quantity ratio expresses the number of units of a component per square foot of livable floor area. For example:

a. The number of square feet of exterior wall of a typical house, similar to the one illustrated in Section 17, is 1715 and the livable floor area of that house is 1363 square feet. The number of square feet of exterior wall is divided by the number of square feet of livable floor area thus:

$$\frac{1715}{1363}=1.26$$

The result, 1.26, is the quantity ratio for "Exterior Walls", and it indicates that this particular structure has 1.26 square feet of exterior wall for each square foot of livable floor area.

b. The derivation of the quantity ratio for electric wiring is illustrated as follows:

$$\frac{47 \text{ outlets}}{1363 \text{ sq.ft.}}=.035$$

The result indicates that the building has .035 wiring outlets per square foot of livable floor area.

The application of quantity ratios to the calculation of component unit costs is illustrated in the following example:

$$\$0.595\times 1.26=\$0.75$$

In the above computation, $0.595 is the unit cost of exterior wall, and 1.26 is the applicable quantity ratio. The result, $0.75, is the Component Unit Cost for "Exterior Walls". The unit cost used is the inplace unit price plus an allowance for contractor's overhead and profit. The following example illustrates the mathematical accuracy of the use of quantity ratios and also indicates the laborious computations eliminated through its use.

Assuming 1715 square feet of exterior wall, in the building referred to in (a) above, to have a unit cost of \$0.595 per square foot, the following computations would ordinarily be necessary to calculate the component unit cost of exterior walls:

$$\$0.595 \times 1715 \text{ sq. ft.} = \$1020.43$$

$$\frac{\$1020.43}{1363 \text{ sq. ft.}} = \$0.75$$

These computations combined into a single operation are shown as follows:

$$\frac{\$0.595 \times 1715 \text{ sq. ft.}}{1363 \text{ sq. ft.}} = \$0.75$$

The above may be indicated without changing its value thus:

$$\$0.595 \times \frac{1715}{1363} = \$0.75$$

or

$$\$0.595 \times 1.26 = \$0.75$$

The fraction, 1715/1363, is equal to 1.26, the quantity ratio derived in (a) above. Its use obviates the necessity of computing the total dollar cost of the component and subsequently dividing \$1020.43 by the livable floor area.

The quantity ratio is just as accurate as the total measurement from which it results. However, ratios to three significant figures are more convenient for examination and recordation. Furthermore, quantity ratios once established, remain fixed although prices may change. Revisions in component unit costs are therefore computed with new unit prices applied to established quantity ratios.

1916. Quantity ratios, to three decimal places, are computed for most of the twenty-seven components or their elements. For those components which are estimated in lump sum amounts, quantity ratios are expressed as a fraction having a denominator equal to the average of the increment of floor area to which they are applicable. Quantity ratios for components Nos. 1, 4, 18, 19, 20, 22, 23, 25, and 27 are expressed as fractions, and therefore, are not tabulated. The quantities of the various components are measured from a sufficient number of plans to determine applicable quantity ratios. In general, for a given classification, eight to ten cases per area-increment may suffice. Ratios that are not reasonably consistent with others in the same area-increment are discarded, and an additional number of plans are measured. The illustration on the following page shows an example of quantity ratios for a one and one-half story building.

FEDERAL HOUSING ADMINISTRATION

METROPOLITAN CITY Insuring Office

Classification
Type DETACHED
Family ONE
Stories 1 1/2

Quantity Ratios

No.	Component	900 1000	1000 1100	1100 1200	1200 1300	1300 1400	1400 1500	1500 1600	1600 1700
		Area in Square Feet							
1.	Excavation *								
2.	Foundations								
	Footings	.095	.092	.089	.087	.085	.083	.082	.081
	Walls	.718	.678	.648	.620	.597	.577	.561	.548
	Basement Floor	.580	.579	.577	.574	.570	.567	.563	.557
	Basement Essentials								
3.	Chimney	.036	.032	.029	.026	.024	.022	.021	.020
4.	Fireplace *								
5.	Exterior Walls	1.23	1.24	1.25	1.25	1.26	1.26	1.27	1.28
6.	Floor Framing	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
7.	Subflooring	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
8.	Finish Flooring	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9.	Partition Framing	1.34	1.31	1.29	1.27	1.25	1.23	1.21	1.20
10.	Ceiling Framing	.47	.46	.45	.45	.44	.44	.43	.43
11.	Roof Framing	.889	.885	.882	.879	.877	.875	.875	.874
12.	Roofing	.889	.885	.882	.879	.877	.875	.875	.874
13.	Gutters	.109	.106	.101	.096	.090	.085	.079	.073
	Downspouts	.048	.042	.037	.033	.030	.027	.025	.024
14.	Plaster Base & Plaster	4.235	4.125	4.050	3.990	3.950	3.920	3.900	3.888
15.	Decorating	4235	4.125	4.050	3.990	3.950	3.920	3.900	3.888
16.	Interior Doors & Trim	.011	.011	.011	.011	.011	.011	.011	.011
17.	Windows	.150	.150	.150	.150	.150	.150	.150	.150
18.	Entrance & Exterior Detail *								
19.	Cabinets & Interior Detail *								
20.	Stairs *								
21.	Special Floors & Wainscot								
	Bath Floor	.032	.041	.047	.053	.058	.063	.068	.072
	Bath Wainscot	.093	.082	.072	.065	.058	.052	.047	.043
22.	Plumbing *								
23.	Heating *								
24.	Electric Wiring	.038	.037	.036	.035	.035	.034	.033	.032
25.	Lighting Fixtures *								
26.	Insulation								
	Walls								
	Ceilings								
27.	Miscellaneous *								

* QUANTITY RATIOS FOR COMPONENTS NOS. 1, 4, 18, 19, 20, 22, 23, 25 AND 27 ARE EXPRESSED AS FRACTIONS AND THEREFORE ARE NOT TABULATED.

DETERMINATION OF BASIC SQUARE FOOT COSTS

1917. A selection of typical buildings to form a basis for the tabulation of Basic Square Foot Costs is made from those types of buldings which have been, or are likely to be frequently offered as security for insured mortgages. A field survey is made and case files are examined in order to select the types for which Basic Cost Data should be first developed.

1918. Basic Specifications. The selected types of construction are classified in accordance with instructions contained in Section 16 under the heading, "Classification of Buildings." Basic specifications are established for the selected types. The materials and equipment frequently used as alternates to the basic specifications are next listed in the order of their prevalence.

1919. Basic square foot costs for each classification of buildings are determined for an area range, starting at the lowest probable area and progressing to the largest probable area. Each area range is divided into increments of one hundred square feet. Columns are provided for several areas on each of the sheets used for tabulation of cost data. Each of these columns represents one division of areas and is used for all areas between the two limits indicated. The cost data tabulated in these columns are based upon the average of the two limiting areas.

1920. Ordinarily, one set of basic specifications is required for each classification. As an example, for detached, single-family, one-story dwellings, one set of basic specifications may suffice. It is not necessary to indicate the sizes of the various structural members, quality of plumbing equipment, and other similar elements, since the sizes of structural members and quality of materials are increased in proportion to the increased areas of dwellings and these differences are included in the basic square foot costs. For example, in establishing basic square foot costs for a six hundred foot area dwelling, the costs include plumbing equipment of a passable quality, while in a fourteen hundred foot area dwelling, better equipment of a quality in keeping with the size of the structure is included.

1921. Component Unit Costs. Inplace unit prices for separate elements to which are added allowances for overhead and profit, are multiplied by applicable Quantity Ratios to obtain component unit costs.

1922. Basic Square Foot Costs. The component unit costs of all of the 27 components selected according to the basic specification are added together to form Basic Square Foot Costs. These basic square foot costs are computed for each range of Calculated Area for each type and are tabulated in Part 1 of the handbook.

		Classification			
	FEDERAL HOUSING ADMINISTRATION	Type	DETACHED		
		Family	ONE		
	METROPOLITAN CITY Insuring Office	Stories	1 1/2		
		Sq.Ft.Area	1400-1500		
	Basic Square Foot Cost				
No.	Component	Inplace Price	Unit Cost	Quan. Ratio	Comp. U.Cost
1.	Excavation	.550	.60	.180	.07
2.	Foundations				
	Footings	.264	.29	.082	.02
	Foundation Walls	.270	.297	.587	.17
	Basement Floor	.120	.13	.553	.07
	Basement Essentials	.120	.13	.553	.07
3.	Chimney	2.65	2.90	.023	.07
4.	Fireplace				
5.	Exterior Walls.	.541	.595	1.26	.75
6.	Floor Framing	.124	.136	1.11	.15
7.	Subflooring	.067	.073	1.00	.07
8.	Finish Flooring	.166	.183	1.00	.18
9.	Partition Framing	.073	.080	1.25	.10
10.	Ceiling Framing	.053	.058	.520	.03
11.	Roof Framing	.060	.066	.707	.05
12.	Roofing	.066	.073	.707	.05
	Roof Sheathing	.060	.066	.707	.05
13.	Gutters & Downspouts	.200	.22	.065	.03
14.	Plaster Base & Plaster	.051	.056	4.24	.24
15.	Decorating	.035	.038	4.24	.16
16.	Interior Doors & Trim				.51
17.	Windows	16.80	18.50	.012	.23
18.	Entrance & Ext. Detail	72.00	80.00	–	.06
19.	Cabinets & Int. Detail	80.00	88.00	–	.06
20.	Stairs	75.00	83.00	–	.06
21.	Special Floors & Wainscot				
	Bath Floor	.730	.80	.015	.01
	Bath Wainscot	.900	1.00	.063	.06
	Kitchen Floor				
22.	Plumbing	327.00	360.00	–	.26
23.	Heating	258.00	283.00	–	.21
24.	Electric Wiring	1.59	1.75	.035	.06
25.	Lighting Fixtures	–	40.00		.03
26.	Insulation				
	Walls				
	Ceilings				
27.	Miscellaneous				
	BASIC SQUARE FOOT COST				3.64

FEDERAL HOUSING ADMINISTRATION

Metropolitan City Insuring Office

CLASSIFICATION
Type Detached
Family 1
Stories 1½

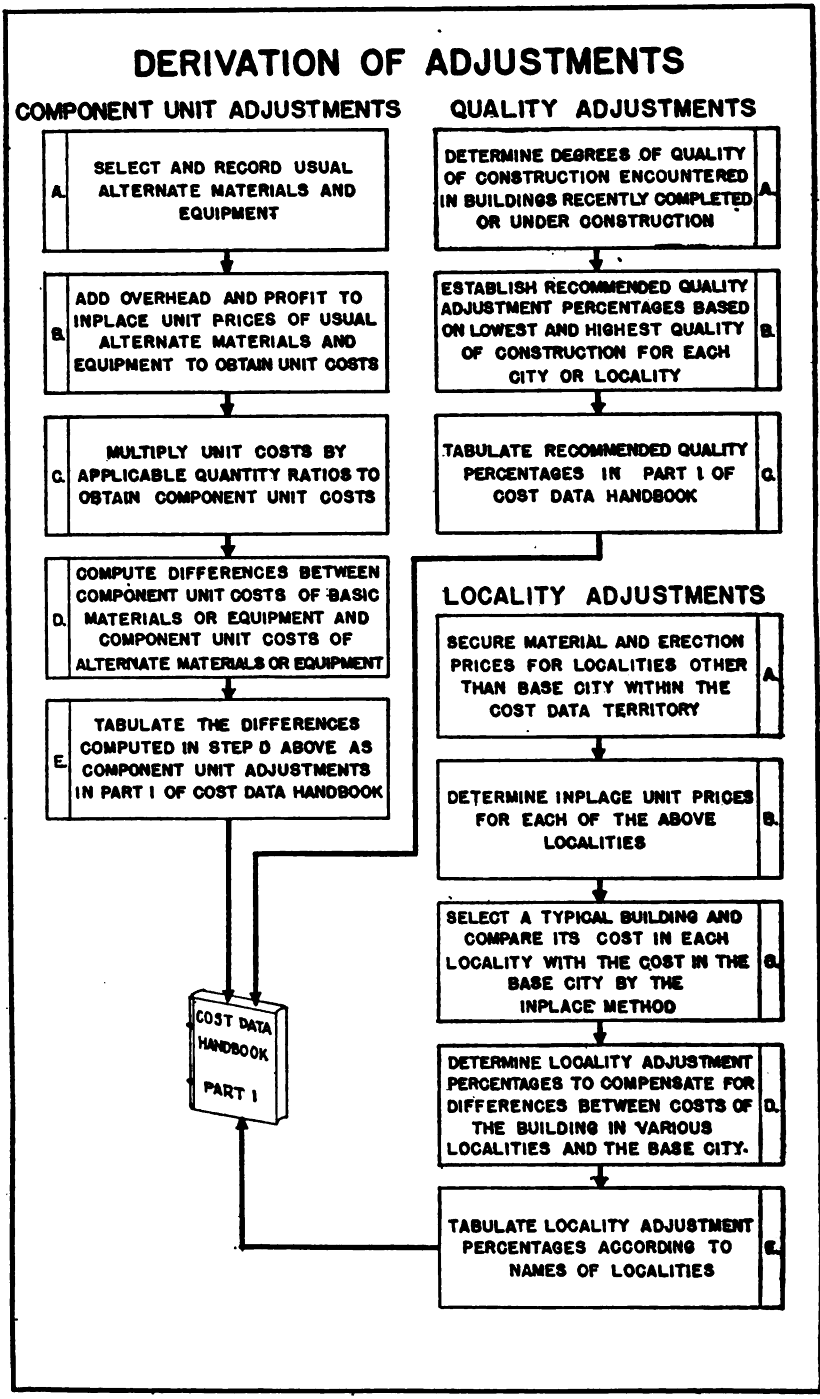
Exterior Wall Construction		900 1000	1000 1100	1100 1200	1200 1300	1300 1400	1400 1500	1500 1600	1600 1700
		Basic Square Foot Costs							
Frame Shingled or Sided	*5.37	3.46	3.42	3.38	3.35	3.32	3.29	3.26	3.23
Frame Stucco on Metal Lath	*6.33	3.53	3.49	3.45	3.43	3.39	3.35	3.32	3.29
Common Brick Veneer	*7.47	3.65	3.62	3.58	3.55	3.49	3.49	3.46	3.43
Common Brick 8" Wall	*8.17	3.67	3.64	3.60	3.37	3.51	3.51	3.48	3.45
Face Brick Veneer	*7.75	3.80	3.77	3.73	3.70	3.67	3.64	3.61	3.58
Face Brick 12" Wall									

*Cost per lineal foot of exterior wall including foundation

Basic Perimeter		95	98	100	103	107	110	114	118
Basic Wall Height 10'4"									
Component Unit Adjustments									
25% Basement	-	.19	.20	.21	.22	.22	.23	.23	.24
50% Basement	-	.15	.16	.17	.17	.18	.18	.19	.19
2 - Foundation - 12" Brick	+	.34	.31	.30	.28	.27	.26	.25	.23
Foundation - 10" Concrete	+	.06	.06	.05	.05	.04	.04	.03	.03
4 - Fireplace	+	$90.	$100	$100.	$110.	$120.	$140.	$150.	$160.
8 - Clear White Oak Floor	+	.02	.02	.02	.02	.02	.02	.02	.02
13 - Gutters-D'nspouts-Copper	+	.07	.06	.06	.05	.04	.04	.03	.03
14 - Metal Lath	+	.12	.12	.11	.10	.09	.09	.08	.08
22 - Extra Bath-Complete	+	.26	.24	.26	.24	.22	.24	.30	.30
23 - Hot Water Heat	+	.15	.14	.13	.12	.12	.12	.12	.12
26 - Insulation - 4" RW-Walls	+	.13	.12	.12	.11	.11	.10	.10	.10
Ceilings	+	.03	.03	.03	.03	.03	.03	.03	.03

Miscellaneous Costs

4" Footing Drain-Lineal Foot	.065	Copper Screens - per window	3.00
Sewer Connection - Lineal Foot	.90	Copper Screens - per door	8.00
Shingles		Galvanized Screens - per door	5.00
210# Asphalt - Square Foot	.11	Galvanized Screens - per window	2.00
Clear Red Cedar - Square Foot	.07	Linen Cabinets - square foot	1.00
Heavy Asphalt - Square Foot	.15		
Standard Slate - Square Foot	.20	Garages	
Shutters - per pair	5.50	1 car Frame - Detached	250.00
Kitchen Cabinet - Wall Sq. Ft.	1.20	2 car Frame - Detached	325.00
Kitchen Cabinet - Floor Sq. Ft.	1.55	1 car B. V. - Detached	300.00
Tile Floor	1.00	2 car B. V. - Detached	400.00
Tile Wainscot	1.20	1 car Frame - Attached	160.00
Extra Lavatory	32.00	1 car B. V. - Attached	200.00
Extra Closet Combination	40.00	4" concrete walks - square foot	.18
Copper piping - per fixture	2.00	5" concrete drive - square foot	.22
Laundry Trays	20.00		
Weatherstripping - per door	6.00	Kitchen fan	22.00
Weatherstripping - per window	2.75		
Standard Linoleum on Pine Floor	.11		
40# Tin Roofing - Square Foot	.28		


DERIVATION OF ADJUSTMENTS
COMPONENT UNIT ADJUSTMENTS
A. SELECT AND RECORD USUAL ALTERNATE MATERIALS AND EQUIPMENT
B. ADD OVERHEAD AND PROFIT TO INPLACE UNIT PRICES OF USUAL ALTERNATE MATERIALS AND EQUIPMENT TO OBTAIN UNIT COSTS
C. MULTIPLY UNIT COSTS BY APPLICABLE QUANTITY RATIOS TO OBTAIN COMPONENT UNIT COSTS
D. COMPUTE DIFFERENCES BETWEEN COMPONENT UNIT COSTS OF BASIC MATERIALS OR EQUIPMENT AND COMPONENT UNIT COSTS OF ALTERNATE MATERIALS OR EQUIPMENT
E. TABULATE THE DIFFERENCES COMPUTED IN STEP D ABOVE AS COMPONENT UNIT ADJUSTMENTS IN PART I OF COST DATA HANDBOOK
QUALITY ADJUSTMENTS
A. DETERMINE DEGREES OF QUALITY OF CONSTRUCTION ENCOUNTERED IN BUILDINGS RECENTLY COMPLETED OR UNDER CONSTRUCTION
B. ESTABLISH RECOMMENDED QUALITY ADJUSTMENT PERCENTAGES BASED ON LOWEST AND HIGHEST QUALITY OF CONSTRUCTION FOR EACH CITY OR LOCALITY
C. TABULATE RECOMMENDED QUALITY PERCENTAGES IN PART I OF COST DATA HANDBOOK
LOCALITY ADJUSTMENTS
A. SECURE MATERIAL AND ERECTION PRICES FOR LOCALITIES OTHER THAN BASE CITY WITHIN THE COST DATA TERRITORY
B. DETERMINE INPLACE UNIT PRICES FOR EACH OF THE ABOVE LOCALITIES
C. SELECT A TYPICAL BUILDING AND COMPARE ITS COST IN EACH LOCALITY WITH THE COST IN THE BASE CITY BY THE INPLACE METHOD
D. DETERMINE LOCALITY ADJUSTMENT PERCENTAGES TO COMPENSATE FOR DIFFERENCES BETWEEN COSTS OF THE BUILDING IN VARIOUS LOCALITIES AND THE BASE CITY.
E. TABULATE LOCALITY ADJUSTMENT PERCENTAGES ACCORDING TO NAMES OF LOCALITIES
COST DATA HANDBOOK PART I

DERIVATION OF COMPONENT UNIT ADJUSTMENTS

1923. Component Unit Adjustments are derived from component unit costs as follows:

a. The various materials and combinations of materials which are commonly used in the territory are listed in the order of the 27 components and are arranged so that the elements of each component are grouped together.

b. Component unit costs for each material or element are computed for each tabulated area and are recorded in the proper column for each classified type.

c. Component unit costs of materials which are selected as part of the basic specifications are compared with alternate materials, and their differences are tabulated as component unit adjustments. These adjustments are derived separately for each increment of area in each classification. Adjustments for certain components are of such character that a single adjustment is applicable to the entire area range on a given classification sheet.

DETERMINATION OF QUALITY ADJUSTMENT PERCENTAGES

1924. The quality adjustment provides for the differences in workmanship and materials, as well as details of construction between the quality of construction reflected by the square foot cost in either method, and the quality of the actual construction, assuming the same specifications. This difference results from varying degrees of workmanship under identical specifications. The adjustment is accomplished by the application of a percentage described in Section 16 as the Quality Adjustment. These quality adjustment percentages are indexes of comparative quality, expressed as a percentage of the quality of construction reflected in the square foot costs.

1925. A careful field examination of buildings involved in recently processed cases in each locality within the territory is made to determine the degrees of quality of completed construction. At the same time an inspection is made of other buildings under construction to determine the quality of construction which is customary and readily acceptable in various parts of the territory. This degree of quality is the basis on which the cost data are established, and the quality adjustment percentage for such construction in each locality is, therefore, 100%.

1926. Recommended limits are set for the lowest quality of construction which is acceptable, and the highest quality which is encountered. The effect upon the cost of construction is considered when setting these limits. In general, the range between these limits does not exceed 10%. The recommended limits of Quality Adjustment Percentages are included in Part 1 of the Cost Data Handbook.

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Metropolitan City Insuring Office

Recommended Quality Adjustment Percentages

Locality	Low		High	
Metropolitan City (Base)	95%		105%	
Forest Valley	94		104	
Rapid River	93		103	
Railroad Junction	90		100	
Lakeview	93		103	
Millbrook	90		100	
Eagle Landing	92		102	
Oiltown	93		103	
Centerville	92		102	
Desert City	90		100	
Brownsville	91		101	
Elm City	95		105	

FEDERAL HOUSING ADMINISTRATION

Metropolitan City Insuring Office

Locality Adjustment Percentages

Locality	Wood Frame	Brick Veneer		
Metropolitan City (Base)	100%	100%		
Forest Valley	90	104		
Rapid River	98	98		
Railroad Junction	99	95		
Lakeview	100	100		
Millbrook	97	102		
Eagle Landing	104	110		
Oil Town	102	102		
Centerville	91	93		
Desert City	96	89		
Brownsville	100	102		
Elm City	90	103		

DETERMINATION OF LOCALITY ADJUSTMENT PERCENTAGES

1927. Locality Adjustment Percentages, as tabulated in Part 1 of the Cost Data Handbook, provide a means whereby the basic square foot costs and inplace unit prices compiled for a base city may be used in other cities or localities without the necessity of compiling separate basic costs for all types and variations in each locality.

1928. The accuracy of the estimate is dependent upon the accuracy of the Locality Adjustment Percentage used. Therefore, unusual care is necessary in the preparation of these percentages.

1929. One or more typical buildings most applicable for the entire cost data territory are selected for the purpose of determining locality adjustment percentages. Selected typical buildings must be of a type and construction common to all of the cities and localities other than the base city, but not necessarily typical of the base city.

1930. Inplace unit prices are then developed for the materials which enter into the construction of the typical building for each city and locality other than the base city for which inplace unit prices have already been prepared. The same methods are used and the same care is exercised in the development of the inplace prices for the other localities as was used in the base city. The inplace unit prices determined for the other cities do not become a part of the Cost Data Handbook, but are recorded on standard sized sheets for reference by the Cost Analyst.

1931. Necessary measurements are made and quantities are recorded for each component of the selected typical buildings. Estimates are made using these quantities and the inplace unit prices applicable to each locality. A comparison of the totals of each of these estimates is made, and the comparison is expressed in percentages, taking the base city estimate as 100%. These percentages are tabulated in Part 1 of the Cost Data Handbook according to the names of the cities.

1932. If more than one type of building construction is common to the territory, and there appear to be different relative costs for different types in each locality, it may be necessary to determine more than one percentage for each locality.

VERIFICATION AND REVISION OF COST DATA

1933. *Verification.* A periodic review or inspection of cost estimates selected at random from cases in process, or those recently processed, is made by the Cost Analyst to discover the following:

- *a.* The most common errors involved in the application of the two prescribed methods of cost estimation
- *b.* Those individuals who are in need of further training

1934. The Cost Analyst makes a periodic verification of cost estimates for selected cases. First, he determines whether an estimate is correct. Second, he compares the verified estimate with the actual cost of the buildings after completion, which actual cost he obtains from reliable sources.

1935. *Revisions of Basic Costs.* Current trade prices of both materials and labor are gathered at regular intervals and are analyzed to determine the cause, extent and probable permanence of changes which may be taking place. These materials and labor prices are obtained at intervals of six months or less to ascertain whether there has been sufficient change in level to make cost revisions necessary. If this analysis discloses changes of a permanent character which will have a total effect of less than 10% upon the total estimated cost of construction, major changes in basic data may be unnecessary. In such instances the locality percentages for the cities concerned are increased or decreased to compensate for these changes. This may likewise apply to the base city.

1936. If current material or labor prices have changed to such an extent that the total effect upon the estimated cost is 10% or more, then it is necessary to make a temporary adjustment to the locality percentages to compensate for the changes. These temporary adjustments are used only until all basic inplace unit prices and basic square foot costs, together with component unit adjustments, are completely revised to comply with the new price levels. Major changes in material and construction prices due to artificial conditions such as manipulation, temporary material or labor shortages and other factors of this character are not considered a basis for cost revision. Seasonal changes in costs within twelve month periods are not considered as a basis for revision.

FHA Form No. 2014
(Revised February 1938)

FEDERAL HOUSING ADMINISTRATION

special. | Interior partitions, etc ....

Resistance to Use Security (Assuming proposed or required repairs or alterations have been made)								
Function	Livability and Functional Plan					10	20	
	Mechanical and Convenience Equipment		2	4	6	8	10	
	Natural Light and Ventilation		2	4	6	8	10	
Architectural Attractiveness			4	8	12	16	20	
TOTAL RATING OF PHYSICAL SECURITY								

(9) Is there any evidence of termites, dampness, dry rot, or undue settlement? ☐ Yes ☐ No. Explain under "Remarks."

(12) Estimated annual cost of fuel for heating.......... $..........

(13) Estimated average annual cost of ordinary maintenance $..........

(14) Estimated remaining physical life of building with ordinary maintenance .... years.

(15) The following repairs, alterations, additions, or changes in drawings and specifications, estimated by me to cost $.......... are ☐ required to avoid rejection; ☐ none required.

Item *Cost*

2014—Report of Architectural Inspector 16—6729

applicant, or proceeds of the mortgage, that in my opinion the decisions set forth herein are justified; and that I have never inspected this property before except for ....
(State when and for whom)

mortgage may refinance special assessments, repair bills, or similar items.

Kitchen floors	Tile	Linoleum	Wood
Kitchen wainscot	Tile	Cement plaster	None
Typical wall finish	Plaster, metal lath	Plaster, wood lath	Wallboard
	Plaster, sheet lath		
Trim	Oak or birch	Gum	Pine or fir
Doors	Oak or birch	Gum	Pine or fir
Electrical wiring	Conduit	B. X.	Knob and tube
Electrical outlets	Adequate	Average	Inadequate
Heating	Hot water	One pipe steam	Hot air
	Vacuum	Forced air	Stove
Fuel	Oil	Gas	Coal
	Coal stoker		
Plumbing	Tubs	Showers	Lavatories (fixt.)
	Toilets	Sink	Laundry trays
	Hot-water storage	Copper, brass pipe	Iron, steel pipe
Insulation	Roof or ceiling	Walls	Floor
	Weatherstripped: ☐ Yes. ☐ No.	Caulked: ☐ Yes. ☐ No.	Storm sash: ☐ Yes. ☐ No.
Miscellaneous and special.	Recreation room		
	Interior partitions, etc.		

Estimate of Cost Required to Replace Building Improvements in New Condition (*assuming proposed or required repairs or alterations have been made*):

Main Building .... sq. ft. @ $.......... $..........

Garage .... sq. ft. @ $.......... $..........

Other Improvements .... $..........

Architectural Service .... $..........

Total .... $..........

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BOUND EDITIONS

OF

UNDERWRITING MANUAL

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