



The Official Guide to the Demonstration of Knowledge Requirement: General

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General Information

The Official Guide to the Demonstration of Knowledge Requirement: General provides details regarding policies and procedures relating to the Demonstration of Knowledge requirement for admission to MAI Designated membership. It is a companion document to Regulation No. 1, Admission to General Candidacy and MAI Membership. Definitions of terms used in this guidebook are provided in Regulation No. 1.

Wherever this guidebook grants permission to a Chair or Vice Chair of a body to appoint a person or persons to perform a task, the same appointive permission is extended to any person who is designated by the Chair or Vice Chair to make such appointments. Only MAI members of the Demonstration of Knowledge Grading Panel (or designee) are permitted to grade or review general demonstration of knowledge requirement submissions to determine if such submissions meet the requirements for credit.

Recommended Texts and Resources

This guide is not intended to be a textbook. It is expected that the Candidate has completed a basic education in appraisal theory and application and possesses the requisite experience to complete the Demonstration of Knowledge requirement.

- *The Appraisal of Real Estate* (current edition)
- *The Dictionary of Real Estate Appraisal* (current edition)
- *Standards of Professional Practice* and the *Guide Notes to the Standards of Professional Practice*
- **General Demonstration Appraisal Report Writing Seminar** (required for Traditional and Capstone options)
- **General Demonstration Report Grading Sheets** (section of this guidebook)
- **Regulation No. 1, Admissions to General Candidacy and MAI Membership**

Appraisal institute currently offers several options for completing the General Demonstration of Knowledge requirement. The information contained in this guidebook will help you identify which may be the best option for you.

1. Traditional Demonstration Appraisal Report
2. Capstone Program
3. Research Project
4. Peer Reviewed Publications
5. Master's Thesis or Doctoral Dissertation

General Demonstration Appraisal Report Writing Seminar

The Official Guide to Demonstration of Knowledge Requirement: General can be helpful a helpful overview or outline for writing a demonstration report, however, the most complete document and source for preparing an actual narrative report is the *General Demonstration Appraisal Report Writing seminar*. This online seminar is designed primarily for Candidates who are preparing to write an appraisal report for Traditional and Capstone submissions. The seminar is helpful to those individuals looking to expand their knowledge in acceptable methods for report writing. Candidates who have attended the seminar in the past have found it very helpful in writing their demonstration appraisal report.

Attendance is mandatory for general Candidates who have never taken the seminar and intend to pursue the Traditional Report option or enroll in the General Demonstration Report—Capstone Program.

Attendance is also mandatory for those Candidates whose initial traditional option report submission failed to meet the technical requirements on initial grading and are working on a revision.

General Demonstration of Knowledge Requirement Contact List

If you have technical questions regarding your general demonstration of knowledge requirement, you may contact the following panel members.

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Grading Sheets

These grading sheets indicate the areas that are graded in options for the Demonstration of Knowledge requirement.

[Traditional Report \(Fundamental Market Analysis\) Grade Sheet](#)

[Traditional Report \(Obsolescence\) Grade Sheet](#)

[Capstone Program Grade Sheet](#)

[Research Project Grade Sheet](#)

[Thesis/Dissertation Grade Sheet](#)

[Peer Reviewed Publications](#)

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Traditional Demonstration Appraisal Report Option

Prerequisite

Must complete the *General Demonstration Appraisal Report Writing seminar* within the last five (5) years before submitting a Traditional Demonstration Appraisal Report.

Demonstration Appraisal Report Defined

A demonstration appraisal report is the most complete presentation of a property appraisal that an individual can produce given the limits of the individual's abilities and the market evidence available at the time. The term, "*most complete*," simply means the most concise. This is accomplished via a thorough presentation of each section of the report demonstrating the Candidate's level of knowledge and expertise.

A demonstration appraisal report and a well-prepared business report differ in their function, as the business report is written to satisfy intended use. Therefore, some sections of a business report may be given less emphasis than other sections, and in some cases, sections may be omitted or inapplicable. The demonstration appraisal report, on the other hand, is intended to test the ability of the Candidate to assemble a complete appraisal report and to handle each section thoroughly and concisely, thus, each important element of the report is given weight in the grading process. When the demonstration appraisal report is completed, each section is linked with the other sections to provide a continuous narrative leading to a final value conclusion.

The purpose of preparing a demonstration appraisal report is to test the Candidate's ability to gather the necessary data, analyze the data properly, support conclusions, and write an appraisal report setting forth the analysis and conclusions, which will lead the reader to concur with the opinion of value.

Selection of a Subject Property

The most important step in preparing a demonstration appraisal report is the selection of a subject property. If a poor selection is made, it may not be possible to write a demonstration appraisal report that could receive a passing grade. Many properties do not lend themselves to demonstrating all that is required. For many properties in the market, sufficient comparable market data is not available.

If the right property is chosen, there will be ample data to prepare all segments of the report, and the work of the Candidate will be significantly easier. The Candidate can then concentrate on preparing the best demonstration appraisal report that the market data will permit.

It is suggested that the Candidate select a property use (office, multifamily residential, warehouse, retail strip center, etc.) within a community where ample market data are available. Once the use is selected, all market data available to support that use should be accumulated and given a cursory analysis. From the data available, the Candidate should select a subject property that best fits the data.

If the community in which the Candidate works has limited market activity, the Candidate may choose to investigate a nearby community that has a more active market. On the other hand, a well-supported opinion of value done on a property in a small market will be rated by the grader in that context.

The general demonstration appraisal report must relate to income-producing real estate. If a multi-family property is appraised, it must contain at least five units.

Grading Eligibility Requirements

To receive credit for the Demonstration of Knowledge Requirement, a Traditional Demonstration Appraisal Report must pass both a technical grading process and a verification process. To be eligible for grading, the demonstration appraisal report submission, at a minimum, must contain organized data, analysis and conclusions in support of the following:

- A. Must include one of the following options:
 1. A fundamental market analysis. Levels A, B and C (approaching level D), using the fundamental market analysis option; or
 2. Inferred analysis (level A and B), using the obsolescence option. An analysis of obsolescence present in the subject property (the property must suffer measurably from either functional obsolescence, external obsolescence, or both. In addition, if this option is pursued, a Level B Inferred Market Analysis is required).
- B. **Highest and best use** conclusions for the site as if vacant and the property as improved.
- C. The property selected must suffer measurably from incurable long-lived physical deterioration. If more forms of depreciation or obsolescence are present, they must be properly treated. The breakdown method of depreciation must be applied.
- D. The appraisal must analyze the effect of expenses on rents and total occupancy cost in the development of a net income stream, even if only net leases are involved.
- E. The report must contain the following three approaches to value and demonstrate appraisal techniques applicable to those three approaches.
 1. The **cost approach**, including:
 - a. Site value as if vacant, with market extracted adjustments;
 - b. Complete reproduction cost new; and
 - c. Breakdown method of depreciation.
 2. The **sales comparison approach**, including market supported adjustments.
 3. The **income capitalization approach**, including;

- a. Fixed and variable expense forecast on a line-item basis; and,
 - b. Reserve for replacements forecast on a line-item basis.
- F. The effective date of value can be no more than five calendar years prior to the year of submission.
- G. "Market value" must be the type of value estimated.
- H. The report should pertain to an "as-is" valuation, with respect to current physical characteristics (i.e., no proposed new construction, additions, repairs, etc.). Hypothetical conditions are not appropriate for demonstration report purposes.
- I. A General Candidate may not use the same subject property for a subsequent demonstration appraisal report option that was used for a prior demonstration appraisal report option (includes Traditional, Capstone).

For grading, refer to [Grading Processes for Demonstration of Knowledge Options](#).

The Physical Report

The demonstration appraisal report should be the best work of the Candidate's career to this point. Therefore, the photographs, exhibits, grammar, spelling, overall presentation should be as professional as the Candidate can possibly produce.

The report must be submitted in electronic format, preferably in searchable PDF format.

The analytical sections of the report, which include everything after the introduction (i.e., property description and market analysis through the reconciliation and final value opinion), should provide adequate justification, support, and documentation.

Justification demands evidence that a statement is well founded. Justification is best provided by reference to market-extracted data. It is an explanation of how the supporting data and documentation have been interpreted to reach the conclusion.

Support means to verify or substantiate conclusions with as much factual data as possible. For example, a conclusion in the area analysis that there is an oversupply of office space in the community should be supported with market information and an explanation of how it was extracted and confirmed in the market.

Documentation is the process of providing evidence of a statement or fact. Reliable or authoritative sources should always be used and referenced. Examples of some areas of the report requiring extensive documentation are comparable sales, income, expenses, vacancy, rate selection, cost new estimates, and depreciation.

Market Extraction

One of the major objectives of the demonstration appraisal report is to demonstrate the process of extracting data from the market to support, document, and justify the conclusions presented throughout the report. Some examples of extracted support data follow.

In the sales comparison approach, all adjustments to comparable sales should be market supported. The method for extracting market support can vary significantly depending on the kind of data available. Examples of market extraction may include extracting depreciation from comparable sales, which could then be applied as an age/condition adjustment in the sales comparison approach. A location adjustment could be supported by demonstrating the differences in value from one property location to another. Other means of extracting market support could include paired sales analysis, linear regression, and examining differences in income caused by varying conditions. Most of the adjustments must be based on quantitative analysis.

In the cost approach, the cost new estimate could include estimates from the published cost services (segregated section, not calculator section) and a detailed cost breakdown prepared by a qualified building contractor. These costs can be further supported using cost comparables found in the market.

Depreciation must be supported by the breakdown method. An important part of the breakdown method is the estimate of economic life, which can be extracted from market sales. External and functional obsolescence can be demonstrated through comparisons with sales and rentals of properties with both similar and dissimilar functions and external characteristics.

In the income capitalization approach, market rent estimates can be supported with an appropriate analysis of comparable rentals. Vacancy loss estimates can be supported by conducting vacancy ratio studies of comparable properties in the area. Reference can be made to data included in the market analysis section for support.

Expense estimates can be supported with operating expenses from comparable properties. Overall capitalization rates and yield capitalization rates can be supported by market extraction of comparable sales data.

Exhibits

Exhibits should contribute to the clear understanding of your written description and discussion. Place illustrations within the report where they will be most helpful to the reader. Exhibits should include, but not be limited to, the following:

Photographs Color photographs of the subject property, nearby properties, comparable improved sales, land sales (view from street and aerial), and rentals should be included along with any other scene that might be considered important to understanding the value conclusion.

Maps indicating the market area, neighborhood boundaries, the location of the subject property, the location of comparable sale properties (including land sales), and the location of rental properties

should be included in the report. Be sure to include a directional arrow on each map. Other maps that may be helpful could include an area map locating the subject and subject neighborhood in relation to the central business district, work centers, competing neighborhoods, and other important locational considerations, which relate to the property being appraised. Exhibits appropriate to the fundamental market analysis should be included.

Site Plan A site plan that shows lot and building dimensions, easements, the placement of the improvements on the site, and abutting rights of way is expected. The plan could also indicate the location of driveways, parking, traffic flow through the site, and any other characteristics, which would help the reader better visualize the site. Examples of additional items to consider would be existing easements, topographical lines, and the location and identification of any excess land.

Floor Plan Include a plan of each level of the principal building, showing all room partitions, doors, windows, and relevant dimensions. The floor plan should be to scale.

Properties That Cannot Be the Subject of a Traditional Demonstration Appraisal Report

- A property that is the subject of a demonstration appraisal report used in a real estate course, clinic, seminar, or other organized appraisal learning experience.
- A property that was involved in litigation at the time the report was submitted or at the date of valuation or likely to be in litigation during the grading process.
- A property that is one- to four-unit residential units.
- A property that was used for another demo option (completed or not completed).

Without Assistance

You are required to certify that you personally and without assistance assembled all the data used in preparing the appraisal, analyzed the data, formed the conclusions, and prepared the appraisal report. You must also certify that the appraisal and the appraisal report comply with the requirements of Regulation No. 1., policies and procedures further implementing Regulation No. 1, the Standards of Professional Practice of Appraisal Institute, and the Code of Professional Ethics. If the demonstration appraisal report is found to be nonfactual or not the Candidate's own work, it will not receive credit. The Candidate will then be required to submit another demonstration appraisal report on another subject or another Demonstration of Knowledge requirement option.

In preparing the demonstration appraisal report, the general Candidate may receive assistance in matters such as photography, drawings, and word processing.

A Candidate may also receive verbal advice, suggestions, theoretical explanations, and references to textbooks and techniques, available literature, etc., relating to appraisal practice, but such advice, suggestions, explanations or references should not include review or commentary on the demonstration appraisal report.

Traditional Demonstration Appraisal Report Option Outline

The outline shown below is suggested for a demonstration appraisal report. It is highly recommended that this outline be followed closely. It is recommended, but not necessary, that the Candidate follow the exact order of the outline. Each individual segment of each section of the outline should be addressed in the demonstration appraisal report.

A. Title Page

The title page should include:

- Identification as an appraisal report
- Property type
- Property address
- Effective date of report
- Effective date of value
- Name and address of the appraiser
- Name and address of client and intended user (i.e., Appraisal Institute)

B. Letter of Transmittal

The letter of transmittal formally presents the appraisal report. It may be addressed to Appraisal Institute or to a real client. A suitable letter of transmittal may include:

- Date of letter and salutation
- Street address or location of the property and a brief description, if necessary
- Property type
- Statement identifying the interest in the property being appraised
- Reference to client's request for appraisal
- Statement of appraisal's purpose, intended use/user
- Statement that inspection of the property and necessary investigation and analysis were performed by the appraiser
- Statement as to the type of appraisal and appraisal report format
- Reference that the letter is accompanied by a complete appraisal report
- Effective date of value opinion (must be within five calendar years of the year the demonstration report is submitted)
- Reference to assumptions and limiting conditions
- Value opinion (written and numerical)
- Appraiser's signature, with certificate/license number if appropriate

C. Table of Contents

The table of contents lists the major components of the report in sequence with page references. The numbering of pages normally begins after the table of contents. Use headings and subheadings to identify the major divisions of the report.

D. Photographs

A photograph of the subject property at the beginning of the report is recommended to give the reader a mental picture of the property.

E. Summary of Important Facts and Conclusions

An outline of the report's major points and important conclusions is recommended. Such a statement provides the reader with a convenient summary and gives the appraiser an opportunity to stress points that were considered in reaching the final opinion. Examples of items to include site size, building size and age, zoning designation, gross rentable area, net rentable area, estimate of land value, indicated value by the cost approach, indicated value by the sales comparison approach, indicated value by the income capitalization approach, and final opinion of market value.

F. Scope of Work

Describe the extent of the process of collecting, confirming, and reporting data. This is required by the current *Standards of Professional Practice*. The extent of the appraisal investigation could include details of the property inspection. In some cases, such as the appraisal of large apartment complexes, it may not be possible to inspect each individual unit. This section of the report could describe the extent of the inspection.

The appraiser should also describe the extent of the investigation such as the parameters for comparable sales and rental searches and the extent of the confirmation process.

G. Identify the Type and Definition of Value

The purpose of the appraisal must be to arrive at a supportable opinion of market value of the property in its "as-is" condition. Include definition. The most recent edition of *The Dictionary of Real Estate Appraisal* is an appropriate source.

H. Intended Use of Appraisal and Intended User

The intended use of the appraisal should be to satisfy the requirements of the Appraisal Institute pertaining to demonstration appraisal reports. Intended users include representatives of Appraisal Institute.

I. Property Rights Appraised

The property rights appraised should be clearly identified and defined. These rights should be consistently valued throughout. Most reports value the fee simple estate; however, in some cases the leased fee estate may be chosen. It is important to remember that the property rights appraised should be handled consistently throughout the analysis.

J. Date of Value Opinion

The effective date of value is integral to the report. The effective date of value in a demonstration appraisal report must be no more than five (5) calendar years prior to the year that the report is submitted for credit.

K. Identification of the Property

The property should be identified by a complete address, legal description, owner, and type of ownership. Other identifying remarks may also be included.

L. History of the Property

A detailed history of the property should be provided *and analyzed*. A minimum of a three-year sales history preceding the date of value is required. The history section of the report may include the following: original assemblage, acquisition, construction cost information, capital additions or modernization expenditures, financial data, and the dates of transfers of ownership for at least the past three years. Prior or current listings, offers, and/or contracts should also be included.

Descriptions, Analysis, and Value Conclusions

A. Property Description and Productivity Analysis

Site Data and Analysis

The site must be accurately described. In addition, the attributes of the site must be analyzed. This is the most critical aspect of this section.

A legible and dimensioned site plan or survey copy must be provided. Identify road frontages, curb cuts and interior traffic flow, the location of the building and landscaping, parking, and all characteristics that help describe the site and its present use. Other items to include should be information on easements, neighboring encroachments, or any other factor that helps graphically depict the site. This section should include the following as a minimum:

- A. Site dimensions, area, and shape
- B. Topography
- C. Drainage, soil, and subsoil conditions
- D. Access (describe streets and their adequacy)
- E. Type, size, adequacy, and location of utilities
- F. Man-made improvements such as walks, curbs, and drives
- G. Proximity to any nuisances, hazards, or detrimental influences
- H. Analysis of units of comparison
- I. Flood zone and the effect, if any, on site utility
- J. Easements and encroachments and analysis as to their effect on the site
- K. A final conclusion as to how the site conditions affect the use of the site

Improvement Analysis

The improvement analysis should contain a detailed description of all improvements on the site followed by an analysis of these improvements as to their age, condition, physical life, etc.

Description Portion

The description portion should include the current use, architectural style, type, building dimensions, area, interior layout, structural and construction details, mechanical equipment description, and any ancillary improvements such as building and site improvements. The improvement can be described in an abbreviated outline form, in a narrative form, or in combination of both. It is suggested that a floor plan be provided here showing the building layout with dimensions.

Analysis Portion

The analysis portion should include a discussion of the age and condition of the improvements. This analysis should include an age and condition evaluation of the short- and long-lived building components. If the short- and long-lived component analysis is provided in the cost approach, a reference to that section should be provided in this section.

Since the breakdown method of depreciation must be used in the cost approach, market support for the effective age, and economic life of the building should be included here. Functional utility or inutility should be discussed and analyzed. This analysis can be continued later in the Highest and Best Use section where more specific conclusions must be developed regarding the property as improved.

B. Zoning and Land Use Plans

This section should include:

- A) Zoning designation and its meaning
- B) Allowable uses under the zoning including setbacks, parking, height, building coverage, etc.
- C) A conclusion as to the conformity or nonconformity of the site or property as improved to public and/or private restrictions.

C. Taxes and Assessment Analysis

This section should present taxes and assessment information that might affect the valuation of the subject property. The subject's current taxes and assessed value should be presented. Any special assessments should also be discussed at this point. Taxing trends in the area of the subject property should be discussed and analyzed. A tax and assessment history of the subject property should be provided in support of that analysis. In addition, a comparison of the subject taxes and assessments with other, competing properties' taxes and assessments should be provided to assess and support future taxes for the subject. This section should end with a conclusion regarding the subject current and forecast tax liability.

D. Fundamental Market Analysis (FMA)

Market analysis is defined as a study of market conditions for a specific type of property. A complete market analysis is used to screen alternative uses as well as provide the data to test financial feasibility and the use or uses that are maximally productive. Market analysis is typically performed on four separate levels (Levels A through D). For most appraisal problems, Levels A and B are adequate. However, for the demonstration appraisal report (FMA option), a fundamental market analysis performed at Level C, and possibly Level D, is required. Levels C and D are characterized by the depth of analysis and the requirement for primary research to be done by the appraiser. Reliance on secondary data is not sufficient for this section of the demonstration appraisal report. If the Candidate is pursuing the FMA option, a thorough fundamental (Level C/D) market analysis must be performed to support an acceptable highest and best use conclusion. For the obsolescence option, an inferred market analysis (Level B) is required.

Data collection and analyses traditionally used in the regional and city and neighborhood sections are to be provided within the market analysis section. The six-step process for market analysis is developed in the course materials for *General Appraiser Market Analysis and Highest & Best Use*.

For additional information, refer to the course, *Advanced Market Analysis and Highest & Best Use* and the book *Market Analysis for Real Estate* by Stephen F. Fanning, MAI.

This section of the appraisal process should develop the foundation for the conclusions of highest and best use as though vacant and as improved, to be summarized in the highest and best use section.

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An overview of the Six-Step Fundamental Market Analysis process

Step 1 - Define the property (Property Productivity Analysis).

- A. Physical attributes
- B. Legal and regulatory attributes
- C. Location attributes
 - 1. Identify economic attributes: the association between land uses and their linkages
 - 2. Identify movement of demand in relation to the direction of urban growth
 - Analyze urban growth structure
 - Pattern
 - Direction
 - Rate
 - Analyze factors influencing urban growth structure
 - Natural
 - Man-made (including adequacy and cost of utilities)
 - Political
 - 3. Identify competition and comparison of location advantages and disadvantages between competition and subject (Including detrimental influences, nuisances, and hazards)
- D. Market appeal attributes
 - 1. Identify specific features such as design or amenities that appeal to market participants

Step 2 - Define the user of the property (Market Delineation).

- A. Market area concepts
 - 1. Time-distance concepts
 - 2. Area over which equally desirable substitute properties tend to compete with the subject
- B. Delineate competitive market area geographically
 - 1. Define and support boundaries
- C. Identify characteristics of most probable user (consumer profile)

Step 3 - Forecast demand factors.

- A. Major demand types (demographics analysis)
 - 1. Population creates households
 - 2. Income creates retail-buying power
 - 3. Employment creates office and industrial users
- B. Tastes and preferences: behavioral, motivational, and psychological factors
- C. Demand segmentation

Step 4 - Inventory and forecast competitive supply.

- A. Existing stock of competitive properties
 - 1. Predominate type of development and conformity
 - 2. History of the area
 - 3. Life stage and trends
- B. Potential competition
 - 1. Under construction
 - 2. Proposed competition
 - 3. Probable additional competition
- C. Factors influencing completion of potential competition
 - 1. Extent built-up
 - 2. Land availability and costs
 - 3. Interest rates and most probable sources of financing including loan ratios and available mortgage rates
 - 4. Materials and labor costs
 - 5. Entrepreneurship

Step 5 - Analyze the interaction of supply and demand.

- A. Competitive environment
 - 1. Range of sale prices, rents, and capitalization rates
 - 2. Vacancy and/or occupancy rates
 - 3. Turnover in ownership/occupancy
- B. Residual demand concepts

Step 6 - Forecast subject capture.

- A. Capture rate and absorption period (specific time period)
- B. Risk analysis
- C. Reconciliation of market analysis conclusions for use in highest and best use analysis

In addition to all the requirements for a Level C market analysis, this section of the report should provide the area background data pertinent to the valuation of the subject property. Consideration should be given to all significant factors in this analysis, but only data relevant to the subject property should be discussed, analyzed, and included in this section of the report.

Note: physical attributes as well as the **legal and regulatory attributes** under Step 1 should have been previously analyzed and presented prior to the beginning of this section of the report presentation (i.e., in the site description and the improvement description). The fundamental market analysis would, therefore, continue in this section with the locational attributes analysis portion of Step 1.

Fundamental market analysis identifies the interaction of the four forces on supply and demand, which in turn directly influences the value of real property. The four forces are categorized as follows:

- 1) Economic
- 2) Governmental
- 3) Social
- 4) Environmental

Identification of key points under these four major topics can help in organizing this section. Once the broad background features have been defined, narrow the analysis to the most pertinent points. Typical market behavior in the area should be the guide in determining the appropriateness of the information reported. This section should identify the economic basis for the value conclusion.

The conclusion should consist of a summary of pertinent factors affecting property values, including a forecast of future economic trends in the competitive market area. This analysis helps establish a framework for forecasting income projections, remaining economic life, and the existence of any external or functional obsolescence. This section should also include the price and rental levels of other properties that directly compete with the subject in the market area.

This section should include a map locating the relevant market area within the region or city and delineating the competitive market area boundaries. An additional map could also be helpful in graphically locating the subject property within the competitive market area. If possible, identify property uses on the map.

Avoid the canned material and flowery rhetoric found in some promotional materials. Exhibits in this section of the report can be very helpful in making relevant facts and trends clear.

This section must have a conclusion relative to the probable future of the area, general property values, and the relationship of these future conditions to the property appraised.

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E. Highest and Best Use Analysis

This section of the report must be complete and thorough. This should begin with a proper definition of highest and best use and include the source of the definition.

Two separate studies are mandatory for this section:

- 1) A highest and best use analysis of the site as vacant
- 2) A highest and best use analysis of the property as improved

Highest and best use of the land as if vacant.

This analysis should address four criteria. The highest and best use must be:

- 1) Legally permissible
- 2) Physically possible
- 3) Financially feasible (include mathematical analysis of option uses)
- 4) Maximally productive (with support from market data)

This analysis should end with a conclusion as to the ideal highest and best use of the land if it were vacant. If externalities exist, this analysis should include an analysis of the ideal improvement without the presence of externalities.

Highest and best use of the property as improved.

This section should describe the process of comparing and contrasting the ideal improvements for the site as if vacant (developed in “as vacant” analysis) with the improvements that exist on the site. The result of this analysis should identify and support property obsolescence. **Note:** Since the highest and best use of the site as if vacant would provide for new improvements, the existing improvements (which are not new) are not the highest and best use of the site as if vacant.

With any improved property, there are three possibilities that must be considered:

1. Demolish the existing improvements and redevelop the site;
2. Continue the existing use;
3. Modify the existing use.

All basic principles of real estate valuation should be considered. The conclusion should address not only the optimum use, but also timing (capture/absorption), and market participants (user of space/most probable buyer).

Mathematical support must be provided for conclusions as appropriate.

F. The Valuation Process

Briefly explain the theory of each approach and outline how the approach will be handled in the appraisal process. The economic principles could be quoted with an explanation of how they apply to the appraisal process. The section should end with an explanation of the reconciliation process.

Note: the introductory material may be included at the beginning of each approach rather than as a separate section.

G. Cost Approach

The cost approach is divided into three segments: the land value opinion, the estimate of the cost new of the improvements, and the depreciation estimate. The cost approach is also known as the summation approach because at the end the three segments are brought together to derive an indication of value.

1) Site Valuation

The best method for estimating land value is via analysis of verified comparable vacant land sales. The sales should be reduced to appropriate units of comparison. The value of the land or site should be estimated as if the site were vacant and available for its highest and best use. Each comparable sale should be briefly described. The description must include the following data for each sale:

- Location
- Land area
- Dimensions
- Selling price
- Unit selling price
- Date
- Grantor (complete name)
- Grantee (complete name)
- Use at time of sale and current use
- Zoning
- Recording data
- Financing
- Name and phone number of person with whom sale was verified
- Other relevant data

The report must include a photograph (view from street level) of each sale and a map showing the location of the sales relative to each other and to the subject property.

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Each sale must be analyzed with regard to the recognized elements of comparison:

- Property rights conveyed
- Financing terms
- Conditions of sale
- Market conditions
- Location
- Physical characteristics

All adjustments must be market supported and demonstrated, not just discussed narratively. Show all calculations.

Quantitative adjustments are required. A properly structured summary of the adjustment process is required.

This section should end with a reconciliation of the comparable sales into a final land value opinion.

2) Cost New Estimate (Current Reproduction Cost)

The cost new estimate should be developed from at least two independent sources. Current reproduction cost is required. If a cost service is used, the source material must be specifically identified, and the process demonstrated. Remember that the calculator section of the *Marshall Valuation Service* provides replacement costs, not reproduction costs. It is important to remember to include indirect costs of all types, entrepreneurial incentive, and the direct and indirect costs of all site improvements in the total cost new.

If cost estimators or contractors supplied cost figures, their expertise must be established. If reference is made to recently completed comparable structures, they must be photographed, identified, and analyzed with appropriate adjustments to the property being appraised.

3) Accrued Depreciation Estimate

The breakdown method must be used. For a property to qualify for grading as a demonstration appraisal report it must suffer from incurable long-lived physical deterioration and all forms of obsolescence that are present must be correctly identified and properly measured. If curable physical depreciation is present, it must be analyzed in the report. The report must demonstrate the appraiser's ability to estimate depreciation factually from market data. If more than one form of obsolescence is present, they must be treated factually based on market data. The estimate of depreciation must be substantiated with market support.

Finally, the computations in the cost approach must be shown. This includes an estimate of the total cost new of the improvements, an itemized breakdown of accrued depreciation and support there for, and deduction of total depreciation from the total cost new to indicate the depreciated improvements value. To this figure land value is added.

This section must end with an indication of value derived by the cost approach.

H. Sales Comparison Approach

This section should begin with a brief discussion of the criteria used in the selection of comparable sales. The comparable sales should be described in detail. The description must include:

- Address/location of sale property
- Size of property (land and improvements)
- Other descriptive information
- Selling price
- Unit selling price (may be more than one)
- Grantor
- Grantee
- Recording data
- Date
- Financing
- Name and phone number of person with whom sale was verified
- Marketing time/history
- Intended use
- Motivation
- Other significant data also should be included, including the age and condition of the improvements, income, vacancies, and other verified facts such as past expenses, refurbishing costs, and land and building ratio.

The report must include a photograph of each sale and a map locating the sales relative to each other and to the subject property.

Sales should be presented on an adjustment grid that demonstrates all supportable adjustments. All adjustments should be market supported and computations leading to the concluded adjustment must be provided in the report, not just discussed. Each sale should be analyzed with consideration of the recognized elements of comparison:

- Property rights conveyed
- Financing terms
- Conditions of sale
- Market conditions
- Location
- Physical characteristics and economic characteristics

This approach should end with reconciliation of the value indications derived from the comparable sales after adjustment. The reconciliation should end with a final indication of value by the sales comparison approach. If the property suffers from curable physical deterioration or obsolescence, these losses must be properly and consistently handled without double-depreciating.

I. Income Capitalization Approach

The first step in this approach is to present the property's actual income history. If possible, a three-year history of rents should be obtained along with the current rent roll. The amount of detail reported will depend on the property. Review and summarize existing lease(s). The details of existing leases could be placed in the addenda.

When reporting comparable rentals, the following information must be provided:

- Date of lease
- Term of lease
- Rental rate
- Size of space
- Rental unit of comparison
- Conditions of lease (expenses paid by landlord and those paid by tenant)
- Other significant conditions confirmed about the rental property

The rental data presented should include a photograph of each rent comparable and a rental map locating the rentals and the subject property.

Using units of rental comparison and actual rental transactions, estimate the current market rent for the property being appraised. This approach must be handled properly, recognizing the type of estate being valued (e.g., fee simple, lease fee) as stated in the introduction to the appraisal report. Using actual market rentals, adjust for major differences between the rentals and the property being appraised, based on market support. Rental comparisons must be presented in an adjustment grid summary. There is to be market support and justification for the adjustments and an adequate explanation. Project the subject's future gross income potential at market or contract rent depending on the type of estate being valued.

Vacancy and collection loss must be estimated. A survey of similar properties in the area should be conducted to estimate potential vacancy and rental losses. The results may be detailed here or summarized from the market analysis section. The subject property's past vacancy and collection losses should be presented. Background information developed in the area, region, and neighborhood sections should be used as additional support for the projected vacancy loss.

Show the itemized statements of past expenses for the property being appraised, if they are obtainable. The past expenses of the property being appraised should be compared item for item with the expenses incurred by similar properties in the area. From this information, project the stabilized fixed and operating expenses anticipated for the property being appraised.

Replacement reserves must be estimated for short-lived items. Show all computations (maybe in this section or summarized from the cost approach). Reserves for the subject property, after computation, should be handled consistent with market practices for the subject property type in the relevant competitive market area. With the previously estimated figures, develop the estimated net income for the subject property.

If the property functions in a net lease market, all expenses must be properly estimated, supported, and allocated between landlord and tenant. The necessary expenses paid by the lessee must be discussed individually, in the same manner and with market support, as if the property were leased on a gross basis. Since a lessee can choose from any of several potential rental options, the process of selection would include not only the net rental due but also the lessee's expense liability for each potential option location.

Outline a reconstructed operating statement for the subject property that includes total potential gross annual income, vacancy and collection loss allowances, effective gross income, all expenses, and net operating income.

The selection of a capitalization method depends on the appraisal problem. Direct capitalization is expected in demonstration appraisal reports; yield capitalization, if applicable to the subject property valuation and well supported, is an acceptable option as an additional capitalization method. Direct capitalization rates must be developed from sale data. The summation method is not sufficient by itself, and the band-of-investment technique must be supported by market data. While other capitalization methods are not discouraged, selecting an appropriate property for a demonstration appraisal report will usually result in a value that can be supported by direct capitalization.

If there is surplus income because of excess lease rental or a lease percentage clause, this income must be explained and properly treated. If the income stream is below market level, it should be explained and properly treated in valuing a leased fee interest.

If income depends on capital expenditures, make the appropriate adjustment. If the income includes personal property, show and support value allocations to the real and personal property. If the property suffers from curable physical depreciation or functional obsolescence, make appropriate adjustments.

Derive a value estimate and justify capitalization method(s) and techniques selected. Include a discussion of why one or more techniques were used, and others were not.

It is not acceptable to base the overall rate utilized in direct capitalization from an analysis of comparable sales for which the income and expense data are estimated by the appraiser. An additional data set of sales that are leased may be needed to provide data for an overall rate analysis, if the sales utilized in the Sales Comparison Approach are not leased.

J. Reconciliation and Final Value Opinion

The purpose of reconciliation is to complete the process of correlation, which has taken place throughout the report, and to develop the value indications derived in the approaches into a final opinion of value. Reconciliation is a discussion that analyzes the quantity and quality of the data examined in each approach. This analysis includes examination of the strengths and weaknesses of the three approaches, the relevance they have to the property being appraised, and the appraisal problem. It is not a restatement of methodology presented or analysis within the report.

Explain any wide discrepancies. It is not necessary for the results of the three approaches to be close numerically. Apply sound reasoning to the facts and interpretations that lead to the final opinion, keeping in mind the definition of value and the intended use and intended users of the report.

Certification and Addenda

1. Certification

A signed certification must be included in the appraisal report. The certification must conform to the wording set forth in *Code of Professional Ethics of the Appraisal Institute* and *Standards of Professional Practice*.

- [A Word about Appraisal Institute Standards, Certifications, Compliance Statements, and Appraisal Institute Certification Statements](#)
- [Sample Certification Statement Appraisal Report](#)

2. Assumptions and Limiting Conditions

Assumptions and limiting conditions in the demonstration appraisal report generally follow the certification. See the most current edition of *The Appraisal of Real Estate* for suggested wording, appropriate standard conditions, and examples of general assumptions and limited conditions.

Any factors peculiar to the assignment in question should be fully explained. Hypothetical conditions are not appropriate for demonstration report purposes.

3. Qualifications of the Appraiser

Qualifications should be listed in a brief and concise fashion.

4. Addenda

Addenda are supplements to a report and may be used to avoid interrupting the narrative. Data that pertains directly to your narrative, such as comparable sales data, other market data, maps, and sketches, should be included in the body of the report unless they are overly lengthy. The addenda should include any necessary supplementary exhibits, such as:

- Additional photographs of the subject property. When possible, include pictures of items of curable depreciation, and interior views to help the reader visualize the property.
- Photographs of nearby properties referred to in the report.

- Maps of secondary importance.
- Statistical data, other similar study results, related to subject property.
- Any additional supporting data referred to in the body of the report.

Things to Do

- Explain your reasoning completely, yet concisely. Conciseness is important. Too many Candidates tend to write lengthier reports than are needed.
- Put directional arrows indicating north on maps, plats, and aerial photos.
- Give sources of all definitions. Use current references.
- Prepare professional exhibits.
- Consider the effects of any adverse conditions noted on the subject property and treat consistently throughout the approaches to value.
- Remember that the factors affecting the property appraised in one approach must be considered in the other two approaches. Focus on consistency throughout the report. This includes appropriate treatment of all sources of losses in value.

Things NOT to Do

- Do not fabricate data.
- Do not rely on unsupported assumptions, conclusions, or opinions.
- Do not rely on outdated material.
- Do not use formats from demonstration appraisal reports prepared several years ago.
- Do not select a new, or almost new, property that will not give you an opportunity to measure incurable long-lived depreciation.
- Do not adjust gross rent multipliers.
- Do not fail to include a Level C market analysis if pursuing the FMA option.
- Do not conclude that the present use is the highest and best use of the property simply because it conforms to other improvements in terms of zoning.
- Do not express opinions or conclusions based on estimates with an unrealistic degree of precision. Use good judgment and round appropriately.
- Do not use statements such as “Based on my experience and knowledge...” or “Knowledgeable people in the area say...” to support your adjustments. They are unacceptable.

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FAQs: Traditional Demonstration Appraisal Reports

General Considerations

1. Why are demonstration reports required?

Preparing a report demonstrates the Candidate's ability to focus appraisal theory and principles on a specific appraisal problem and develop an acceptable solution. A report can determine whether a Candidate has attained the level of performance necessary for Designated membership in the Appraisal Institute.

2. May others help me prepare my demonstration appraisal report? To what extent?

Others may help by typing or word processing the report and proofreading the copy for spelling or grammatical errors. All the writing, analysis, numerical calculations, and conclusions must be your own. It is unethical for a Designated member or fellow Candidate of the Appraisal Institute to correct your demonstration report prior to submission.

3. What happens if Appraisal Institute discovers that a demonstration report is entirely or partly the work of another? What if the facts have been fabricated?

By signing the application, the Candidate certifies that the report is his/her own work and that the report complies with the requirements of Regulation No. 1 and the Code of Professional Ethics and Standards of Professional Practice of the Appraisal Institute. If this statement is found to be untrue, credit will be rescinded, and the Candidate will not be allowed to base any new submission upon the same property. Fabricated data will also result in the loss of credit for the report.

4. When are reports sent back to a local representative for verification of the factual data?

When a demonstration appraisal report meets technical requirements, it is sent to a local representative appointed by the Chair of the Demonstration Appraisal Grading Panel (or delegate) for factual verification. The local representative does not re-grade the report.

5. How far back can the effective date of value be?

The effective date of valuation of the demonstration appraisal report may be no more than five (5) calendar years prior to the year the report is received.

6. If I have written a passing demonstration report for another organization, will Appraisal Institute accept it?

No, Appraisal Institute does not grant reciprocal credit. To receive credit toward SRA or MAI Designated membership, the demonstration report must be prepared for, but not necessarily addressed to, Appraisal Institute.

7. May I submit a demonstration report on a property that I own?

Yes, with proper disclosure and the ability to complete the assignment objectively and credibly.

8. How can I ensure that my report qualifies for grading?

Please refer to the above sections: Grading Eligibility Requirements and Without Assistance.

9. What is the process for grading reports?

Please refer to the section near the end of this guidebook: Grading Processes for Demonstration of Knowledge Options.

10. May I submit a demonstration appraisal report on a property subject to a net lease?

Yes, you may value this property, but all applicable expenses must be analyzed because the income capitalization approach must account for the effect on net rent of all expenses, whether they are the responsibility of the owner or the tenant.

11. Must I appraise the leased fee interest in a leased property?

No, but the interest appraised must be clearly disclosed, and the specifics of the lease must be discussed along with a statement of the effect, if any, of the lease interest on the fee simple unencumbered value of the property. You may appraise any interest in the property that is appropriate, with necessary disclosure.

An example of proper disclosure: If there is a lease in place and you are appraising the fee simple interest, a statement to the effect that "the market value of the fee simple interest could be greater than, equal to or less than the market value of the leased fee interest," but in this case, only the fee simple interest is analyzed with no analysis of the leased fee interest.

12. Must I follow the format suggested in *The Official Guide to the Demonstration of Knowledge Requirement: General*?

No, you need not follow this format, but do refer to the form for content. You may use whatever format seems logical, e.g., it may be practical to put the approaches in a different order.

13. How do I resolve the contradictory information on methods and techniques that I may have received from various texts, teachers, seminars, and other sources?

No grader will dispute the authority of current edition of *The Appraisal of Real Estate*. If you think a method or technique used in your report may be controversial, help the grader by citing your source.

14. How long should the report be?

Most demonstration reports are too long. Candidates are understandably reluctant to risk being downgraded for omissions or insufficient explanation. Although some people can write completely and succinctly, others find it very difficult.

Experience shows that reports often run long due to redundancy, the inclusion of extraneous material, and misunderstandings about what the problem is and how it should be solved. Most Candidates use too many words when they should strive to use concise words.

In preparing a demonstration report, select a subject property that lends itself to the demonstration process (take-home examination). Build the report correctly, using only relevant information. Try to anticipate and satisfy the reader's questions, but do not repeat yourself. Search for the best ways to get your message across, which may involve exhibits and photographs.

Sharp editing and writing skills are needed to prepare a report. If you cannot structure the narrative logically, you are not ready to write a demonstration report. Remember, the skills needed to write a good demonstration report may lag behind the ability to appraise the property in question.

15. Should a property in litigation or one that may be involved in litigation during the grading process be the subject of a demonstration appraisal report?

No. There may be legal and confidentiality issues.

16. How do I select a subject property or market area?

Before selecting a property, gather market data and other information. Choose a property that will allow you to demonstrate your ability to make use of market data in applying all three approaches and arriving at a value conclusion.

17. What advice would you offer to someone who is contemplating writing a demonstration appraisal report?

First, read and follow this guide then, select a type of property with which you are familiar. Make sure you have the necessary experience and adequate market data. Next, select a specific subject, and define the appraisal problem to be solved. Finally, write and submit your appraisal report.

Technical Considerations

18. How should data previously included in regional, city, and neighborhood sections be presented?

All the items previously addressed in the regional, city, and neighborhood analyses should be in the market analysis section.

Be careful to avoid an abundance of disorganized data researched or compiled by others. Do not include a history of the area or detailed statistics that are not relevant to the problem at hand.

The conclusions presented in the market analysis section of the report should alert the reader to any potential economic or external problems or benefits that could affect the subject property. Often, the remaining economic life of the subject property can be illustrated in this section.

19. What is meant by the levels of market analysis?

The primary distinction is in the depth and detail of the analysis and in the difference between primary and secondary data. Levels C and D require that the supply and demand data analyzed and presented in that section be derived by the appraiser, not summarized from studies done by others. Levels A and B refer to an inferred analysis (see material in Part One).

Other specifications and requirements are provided in the materials for Appraisal Institute course *Advanced Market Analysis and Highest & Best Use*.

20. What problems may be encountered in estimating effective age and economic life?

Too often, effective age and economic life are presented as unsupported conclusions or conclusions based on the statements of others.

Effective age is an observable judgment based on inspection and knowledge of property maintenance and the capital improvements made to the property. The conclusion of remaining economic life, however, can be supported using one or more techniques of market measurement. This fundamental statistic cannot be adopted from a cost manual of broad national averages; it is a function of the local market. If the property's remaining economic life is not carefully measured or reasoned, this weakness will permeate the rest of the report.

21. If the property I am appraising is an office building in an office park, do I need to include a detailed discussion of highest and best use?

Yes, it may seem obvious, but in a demonstration report, the obvious must be analyzed, reasoned, and verified. The definition of highest and best use that is used dictates how the rest of the section is presented. First, the site use must be analyzed as if vacant, then the property must be analyzed as improved. Economic, physical, and legal considerations that would affect the vacant site can be covered briefly. Site measurements can be presented, and the site's appropriateness for possible uses can be discussed. Option uses must be studied to provide specific support for the "ideal" use for the site as though vacant.

After concluding the proper type of use, the degree to which the actual improvements meet this ideal can be discussed and differences can be shown. Because of the requirements of the demonstration report, the existing improvements will not represent the optimum use of the land as though vacant.

22. What problems may be encountered in the site value section?

Use of an insufficient number of sales can hamper analysis. Also, using sales that are too similar to the subject site can hinder site valuation. Part of the answer, of course, lies in selecting an appropriate subject property and using the most comparable data available. If this section does not fully demonstrate your abilities, later sections surely will. Be thorough and consistent in adjusting the comparable sales to the subject property. It is imperative that you extract adjustments from the comparable sales to support the indicated site value for the subject site.

23. Would an adjustment for market conditions be made before any other adjustments?

Not necessarily. Sometimes an adjustment for financing or conditions of sale must be made before a time adjustment is logical or applicable. Refer to the current edition of *The Appraisal of Real Estate* for more information.

24. May I use a cost manual to estimate current construction cost?

Reproduction cost is a requirement of the Traditional Demonstration Appraisal Report option. When using a cost manual in a Traditional Demonstration Appraisal Report option, be sure to use the section of the manual that provides reproduction cost new (current construction cost of an exact replica), not replacement cost. The *Marshall Valuation Service* calculator cost section is replacement cost; the segregated cost section can be helpful in developing an estimate of reproduction cost.

Graders strongly suggest supporting the estimate with an alternate source such as the cost of recent comparable properties, a contractor's bid, or updated actual costs. Whatever source(s) you use, be sure to explain what the estimate does and does not include, such as architect's fees and other indirect costs, entrepreneurial incentive, and site improvements costs.

25. Do I have to have two forms of depreciation?

This depends upon which option has been chosen. Under the obsolescence option, the subject property must suffer from at least one form of depreciation (physical long-lived incurable) and a form of obsolescence (functional or external, curable or incurable). Under the FMA option, the subject property must suffer from at least one form of depreciation (physical long-lived incurable), and all forms of depreciation that are present in the property must be adequately identified and properly addressed in all three approaches to value.

26. What mistakes are commonly made in calculating depreciation?

A Candidate may fail to account for some form of functional or external deficiency that was clearly described or intimated in early sections of the report. Another individual may depreciate an item and then double depreciate it in the steps that follow. An error can be made by concluding that functional obsolescence is either curable or incurable when the data presented in the other two approaches contradicts this conclusion.

When age/life depreciation is derived from comparable sales, some appraisers fail to establish that the proportion of short-lived items to long-lived items in the comparable sales is similar to this proportion in the subject, or if the proportions are dissimilar, they fail to break down these items in the sales. When depreciation is supported by sales, some appraisers fail to account for similarity or dissimilarity in construction.

Sometimes an appraiser may report small amounts of deferred maintenance, which would be imperceptible in market transactions. Accrued depreciation is market-oriented in all categories. If the appraiser has penalized the subject property with a type of depreciation that the rest of the market data does not recognize, the property probably doesn't have it either.

27. May I use the depreciation schedules listed in cost manuals?

No. Depreciation is a function of the market, and, therefore, it is reflected only by local market actions. Cost manuals deal with national averages, which may or may not apply in your subject area and are not acceptable in the demonstration report.

28. What mistakes are commonly made in the sales comparison approach?

Some appraisers fail to extract adjustments from the comparables before comparing the sales to the subject. This almost always results in adjustments that are subjective rather than objective and that are not market-supported.

Appraisers need to measure differences using paired data analysis. It's important to use the unit or units of comparison that are actually used by participants in the market (e.g., dollars per square foot of building area or dollars per unit).

Appraisers should not adopt costs as the basis for adjustments unless they clearly establish that market participants would view the issue in this way. Adjustments must be abstracted from market data.

Appraisers may fail to account for the impact of nonconventional financing on the value of the comparables, considering only those factors that affect the seller or the buyer. Sometimes appraisers do not appropriately or adequately adjust the sales for depreciation, excessive vacancy, or income below market level—which exists in the subject property but not in the comparables, or vice versa.

29. What are the most common oversights or deficiencies in using the income capitalization approach?

Some reports may not show the causes of vacancies in rent comparables and the causes for the variations in rent. Other reports rely on estimated income and expense data. Actual data is required for the demonstration report. Sale comparables must be adjusted to include all the appropriate categories of expenses, so that capitalization rates can be more accurately measured.

Discounted cash flow procedures are best suited to leased fee valuations of properties that have multitenant leases with varying terms, rates, and conditions. The discount rates for these procedures and the overall rates used for reversionary values must be supported in the market.

If other capitalization techniques are used, all rates must be supported by market data.

The reasons for using one or more capitalization techniques should also be discussed.

30. What should I address in the reconciliation and final opinion of value section of my report?

Do not repeat the analysis presented in other sections of the report. Rather, explore the inherent strengths and weaknesses of the approaches, show how they are interrelated, and establish which is the strongest (best supported) and/or most recognized in the market. The conclusion should relate to the strongest approach; or, if two approaches have equal weight, the conclusion should fall between the two approaches. Avoid the appearance of adopting an average as your conclusion.

Research Project Option

Introduction and Overview

As an option to the Demonstration of Knowledge requirement a general Candidate of Appraisal Institute may submit a research project. If a Candidate wants to submit a proposal for a research project, he/she should start by reviewing this section.

A Candidate must have sole professional responsibility for the development of the research project. A Candidate must personally and without assistance define the problem, develop the analysis, formulate the conclusions, and prepare the research project.

The Research Project Proposal: Documentation and Procedures

Applicants should provide a great deal of detailed information. Much of the work on the total project should go into the proposal.

Minimum Criteria

1. An exploration of why the proposed topic/hypothesis is important, what might be the implications of the findings, and what applications there might be for the results.
2. Complete consideration of the processes of discovery, application and integration of the results of the research.
3. Preliminary analysis and research into available resources including a thorough review of what work has previously been done by others in the particular area of research.
4. Literature review.

Research Project Proposal Submission Requirements

1. The proposal must be written in standard business English (unless otherwise approved by the Chair of the Admissions Committee), such that it can be understood by the grader, using terminology from the current editions of *The Appraisal of Real Estate*, and *The Dictionary of Real Estate Appraisal*.
2. The proposed research project must involve a practical real estate economics related topic/problem to be solved and the process for solving the problem (not including one- to four-family properties).
3. The proposal must identify in sufficient detail the topic/thesis to be researched such that the project will demonstrate a thorough understanding of real estate economics.
4. The proposal must identify in detail the proposed methodology.
5. The proposal must identify in detail proposed resources and any possible applicable source literature. A bibliography should be included.
6. The proposal must outline the independent/original or primary research to be done. The research project proposal may be supported by secondary research to assist in documentation of the proposal.

7. The proposal must set forth the proposed time frame for completion of the research project, not to exceed one (1) year from the date the Candidate is notified of the approval of the proposal.

Initial Responsibilities of Grader upon Receipt of Topic Proposal

1. The grader is strongly advised to seek academic or specialty advice if the proposal is intended to expand the body of knowledge.
2. The grader will make one of the following recommendations:
 - a) Accept the proposed topic.
 - b) Decline the proposed topic. Proposals which are rejected are not eligible for revision, however, the Candidate may submit another proposal on a new topic. Generally, proposals are rejected when the objectives are ill-defined, or the topic doesn't appear to be one in which the Candidate could demonstrate a thorough understanding of the principles, theories, techniques, and applications of real estate economics. A Research Project Proposal must be submitted and approved before a Research Project can be submitted.
 - c) Recommend additions or modifications and resubmission of the proposed topic. If a reviewer indicates that the proposal topic does add to the AI Body of Knowledge, but the proposal may need further modification or information, then the Candidate will have an opportunity to revise the proposal for consideration.

Research Project Requirements

1. The General Candidate will prepare the Research Project in conformance with the approved proposal.
2. Research project must be written in standard business English (unless otherwise approved by the Chair of the Admissions Committee), such that it can be understood by the grader, using terminology from the current editions of *The Appraisal of Real Estate* and *The Dictionary of Real Estate Appraisal*.
3. Research project must be "self-contained" that is, complete and thorough. The document must include the entire body of research data and analyses utilized to support the conclusions.
4. The research project report must be consistent with approved methodology of the research project proposal and be submitted within the approved time frame.
5. Research Project is sufficiently complex to demonstrate a thorough understanding of real estate economics.
6. Evaluates the nature, quality, or utility of real property or an interest in or aspect of real property.
7. Provides a solution to a practical problem in real estate economics.
8. The research project report must contain, at a minimum:
 - a) An introduction/overview
 - b) A definition of the problem
 - c) Research methodology

- d) Presentation of data
- e) Discussion of analyses and findings
- f) Conclusions

Submission of the research project to Appraisal Institute for publication is optional at the discretion of the author, upon receipt of a passing grade as an option for the general Demonstration of Knowledge requirement. If the project is published, the Candidate may make no representations of acceptance by Appraisal Institute and may not mention Appraisal Institute's acceptance of the report as a part of the general admissions requirements.

For grading, refer to [Grading Processes for Demonstration of Knowledge Options](#).

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Sample Outline for a Research Project Proposal

Sample Proposal

1. The problem and its setting
 - a. The statement of the problem
 - b. The statement of the subproblems
 - c. The hypotheses
 - d. The delimitations
 - e. The definitions of terms
 - f. The assumptions
 - g. The importance of the study
2. The review of the related literature
3. The data, their treatment, and their interpretation
 - a. The data
 - i. The primary data
 - ii. The secondary data
 - b. The criteria governing the admissibility of the data
 - c. The research methodology
 - d. The specific projected treatment of each subproblem
 - i. Subproblem 1 (*The subproblem is here restated*)
 1. Data needed
 2. Where the data are located
 3. How the data will be secured
 4. How the data will be treated and interpreted
 - ii. Subproblem 2 (*Here, again, the subproblem will be restate and the four steps: a, b, c, and d, are detailed. Then each succeeding subproblem will be given similar treatment.*)
 - e. The qualifications of the researcher (and the qualifications of each one of the researcher's staff if more than the researcher is involved in the project)
 - f. The outline of the proposed study
 - g. A selected bibliography

Practical Research Planning and Design, Fifth Edition, Paul D. Leedy

General Basic Research Project Proposal outline

1. Goal and Complexity as outlined,
2. Clear definition of problem/hypothesis studied,
3. Research methodology,
4. Adequate presentation of supporting data,
5. Analysis,
6. Data synthesis/conclusions/solutions,
7. Use/understanding of real estate principles,
8. Use/understanding of real estate theories,
9. Use/understanding of real estate techniques,
10. Professional presentation,
11. Bibliography, resources, and references.

Research Project Topic Samples

Study on Current Situation, Problems and Development Plan for Real Estate Assets
Finding the Green in Green: Appraising Green Buildings
Research on Appraisal of Intangible Assets including Goodwill Value
Study on the Vacant Land for Highest and Best Use
Net Asset Analysis of J-REIT: History, Valuation and Findings
Study criterion for calculating allotment of reconstruction union member
Calculation of Land Selling Price to Maximize Profitability of Masan Marine New City Project
Prediction on Seoul Office Demand and Supply in 2010
The Highest & Best Use Development of the Commercial Site in Hage-dong, Seoul City
Research on the effectiveness of comprehensive real estate tax and property transfer tax on APT price in Korea
Analysis of the housing market from 2003-2007
The regression approach to appraise the value of golf courses in Korea
The spatial effects on office market in regard of spatial autocorrelation: focused on the representative three submarkets (CBD, Gangnam, Yeouido)
A study on the rent estimation model for three major districts in Seoul office market
Analysis of the effects of urban street-side environment on commercial land values
Real Estate in China from Legal, Market & Valuation Points of View
Comprehensive Analysis of the Global Condominium-Hotel Real Estate Sector
Compensation Rent of Power Cable Area & Study of Appraisal Method
The highest and best use analysis on 'China Culture Town' in Ko Yang City (Kyonggi province)
The study on the highest and best use for the vacant land of #170-1, Samsung-dong
A Study of Pricing Real Property Purchase Options Using the Black Scholes Option Pricing Model
Investment Analysis of Three Metro Tucson Office Properties
Japanese Real Estate Investment Survey
Variation in Land Values and Feasibility Analysis
Analysis of Intl RE Investment
Investment Analysis of Newtown Development, Phnom Penh, Cambodia
Communication Tower Rights of Way Located on the Navajo Nation
Hotel Appraisal Analysis Based on Tenure and Tenancy Structures
Overview of trends driving change in Japanese warehouse market and impact on RE investment in warehouse/logistics
Valuation through Review of H&BU of RE for Business Use (As RE of Main Office Bldg. of 'W Construction' Becomes the Objective)
Studies on Price-Making Factors & Profitability Analysis of Golf Course
Retail Property Market Consulting Report at 1189, Kwonsung-dong, Kwonsung-gu, Suwon-city, Gyunggi Province, Korea
Who Benefits from Development? A Comparative Study of IRRs between Participants through Public Site Development Cases: (With Special Reference to the Housing Site Development, Sang-dong, Bucheon city)

Research on the Criterion for Estimating Allotment of Reconstruction Union Member (A Case Study of the Neighborhood Shop in Songpa-Samsung Apt. Complex)
Forecasting the Appropriate Sales Price through an Analysis of the Project
Marketability & Formulation of a Marketing Strategy for the Ampang 108 Project in Malaysia
The Influences of Unpleasant Facility on the Value of Residential Property (in the case of waste incinerating facility in the Seoul Metro. Area)
Study on Tenant Organization & Characteristics of Shopping Center (Focusing on Cases in Korea & Japan)
A Study on the Rationality of Utility Index Calculations by Co-op Apt. Units in Housing Redevelopment Projects
To Review the Reasonable Pricing after Investigating High Vacancy Rates that are Caused by a Sharp Increase in Commercial Bldg. Supply Through Reconstruction
Studies on Price-Making Factors & Profitability Analysis of Golf Course
Displaced Population
Appraisal Report on Retail Property Development Loan of Chengdu 'XX Land Plaza' Project (Phase I)
Research of the RE Market Development of Ningbo City Satellite Town
Analysis of the NOI rate of JREIT
Research of Residential Market Located in Local Cities in Japan
Mortgage on Real Estate XXX Owned by Group Corporation
Feasibility of Commercial Housing Dev. Loan of ShenYang China Resources Centre Phase I Project
Glorious Ding City Feasibility Analysis
Feasibility of Real Estate Dev. of Lichi Spring Garden Project (research project on market analysis in Japan)
Feasibility of Real Estate Development Loan for Guangzhou WD Company
A Research on Current Investment Market (mainly JREIT market) in Japan
Normal lease and term lease rents in Japan
Matching Model to Valuation
Impact for Total Value of JREIT
The Secondary Marketplace: Maintaining Systematic Stability of Res. & Comm. Lending in a Dynamic Financial Environ.
Condominium Market Research-Makuhari Project
Beijing XX District XXX Removal and Renovation (Phase III)
Japanese Residential Properties as an Investment Target
Analysis of the Market of Purchase and Sales and Office Rent in Major Cities of Japan (Sapporo, Sendai, Tokyo, Nagoya, Osaka, Fukuoka)
The Market Trend & Level of Yield on Land with Leasehold for Business Use in Japan
Research on Residential Market in Nagoya City, Japan
Yian Home Phase III
Shenghua Phase II
Shenyang Shangding Mansion
Golf courses development validity analysis (Yeosu area)
Korea Institutional Investors Intl. RE Investment Strategies
Econ. Feasibility Analysis on Remodeling for Small Scale Office Bldg. (Daechi-dong, Gangnam-gu)

Feasibility Study of Retail Complex in the Site Dev. District (Hopyeong Dist., Namyangju-si)
Feasibility Analysis of Housing Redevelopment & Improvement Project by Key-Area Housing Supply Increase Plan
Estimate of Market Value at 61-2, Bojeong-dong, Giheung-gu, Youngin-si, Gyeonggi-do
Analysis on validity of investment on an office bldg. by auction and rate of return on capital
Feasibility study of Guro-dong construction project of apt. type factories
Project feasibility analysis of Constructing Miryang Memorial Park
Study on the proposed sale prices for project apt. complex w/a hedonic price model
HBU practical method for the construction stopped bldg. (Hansae Research Ctr., Gi-hung town, Yongin city)
Feasibility Study Report of Ziwei-Yonghefang Project
Feasibility Study Report on Xinli Cental Mansion Phase I
Shijiazhuang Wanda Plaza Investment Co. - Business District Evaluation
First Phase Project of Tourism Real Estate in Yunnan Province Xundian County BeiDaYing
Olympic Garden A2 Zone Project Feasibility Study Report
Feasibility Rpt. of XSJ Project in G City
Residential Development Loan of ZXY Company Zhengtong-Fengjingwan Project
Feasibility Analysis Rpt. on Multifamily Residential District of ABC Planned to Develop by Stage Project
Analysis of Actual and Forecast Rental Rate Growth for Class Office Bldgs. in 19 Major US Markets
Study of Impact of the Great East Japanese Earthquake on the Real Estate Market & How to Account for Earthquake Risk in Valuation
Clarification of Market Rate of Items Related to Income Approach

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Additional Research Project Samples

<p><i>How Accurate Are Commercial-Real-Estate Appraisals? Evidence from 25 Years of NCREIF Sales Data</i> May 20, 2011, Susanne E. Cannon, Department of Real Estate, DePaul University; Rebel A. Cole, Departments of Real Estate and Finance, DePaul University</p>
<p><i>The Sub-Prime Lending Debacle: Competitive Markets Are the Solution, Not the Problem</i> Kevin Villani, University Financial Associates LLC; Patric Hendershott, University of Aberdeen</p>
<p><i>The Effect of non-linear incentives on mortgage officers' decision</i> Kostas Tzioumis, Office of the Comptroller of the Currency; Matthew Gee, University of Chicago</p>
<p><i>Characteristics of "High Conforming Jumbo Mortgages" and Implications for the Impact of Reductions in the Conforming Loan Limits for Fannie Mae and Freddie Mac</i> Paul Manchester, Federal Housing Finance Agency; Ian Keith, Federal Housing Finance Agency</p>
<p><i>Bidding Wars for Houses</i> Lu Han, Rotman School of Management; William C. Strange, Rotman School of Management.</p>
<p><i>Listing Behaviors and Housing Market Outcomes</i> (Examining the relationship between list-price and sale-price) May 24, 2011 Grace Bucchianeri, University of Pennsylvania; Julia Minson, University of Pennsylvania</p>
<p><i>To Sell or Not to Sell: List Price, Transaction Price and Marketing Time in the Housing Market</i> Paul Carrillo, George Washington University</p>
<p><i>Home Price and Time-on-Market Under Changing Market Conditions</i> Zhiyong An, Central University of Finance and Economic; Yingchun Liu, Laval University; Zhenguo Lin, Mississippi State University; Ping Cheng, Florida Atlantic University.</p>
<p><i>Funding Constraints and Commercial Real Estate Pricing Spiral</i> (Examines the relationship between the availability of credit and asset price movements in commercial real estate markets) April 2011 Andy Narano, University of Florida; Benjamin Scheick, University of Florida; David Ling, University of Florida.</p>
<p><i>Capital Market Reactions to Real Estate Mergers and Acquisitions: An International Perspective</i> Massimo Massah, Deutsche Bank AG; Colin Lizieri, University of Cambridge</p>
<p><i>The Impact of the Taxpayer Relief Act of 1997 on Housing Turnover in the U.S. Single Family Residential Market</i> May 2011 Andrea J. Heuson, Finance Department, University of Miami; Gary Painter, School of Policy, Planning and Development, University of Southern California.</p>

<p><i>Collateral Damage: Regulation in the Housing Market</i> Nathan George, University of California, Berkeley.</p>
<p><i>The Foreclosure Problem is Not Going Away – Addressing the Issue of Distressed Sales in a Revaluation Cycle</i> Richard Borst, Tyler Technologies, Inc.</p>
<p><i>Individual Homelessness: Entries, Exits and Policies</i> Brendan O’Flaherty, Columbia University</p>
<p><i>Is Preserving Small, Low-End, Affordable Rental Housing Feasible?</i> Philip Garboden, Johns Hopkins University; Sandra Newman, Johns Hopkins University.</p>
<p><i>Mortgage Choice by Households: Empirical Evidence from the Mortgage Market</i> (Does financial literacy and advice affect the mortgage type chosen by households?) Ruben Cox, RSM Erasmus University; Dirk Brounen, Tilburg University; Peter Neuteboom, RSM Erasmus University.</p>
<p><i>Subprime Mortgages, Mortgage Choice, and Hyperbolic Discounting</i> Andra Ghent, Baruch College</p>
<p><i>Stated-Income Loans: Separating the Wheat from the Chaff</i> (Examining the effects and probability of delinquency of low-no cost loans) Kostas Tzioumis, Office of the Comptroller of the Currency; Irina Paley, Office of the Comptroller of the Currency</p>
<p><i>The Roles of Mortgage Leverage and Mortgage Character in the House Price Bubble; The Influence of Exotic Mortgage Loans in the Housing Price Bubble: Pilot Study of 20 Counties in Florida</i> Wayne Archer, University of Florida; Brent Smith, Virginia Commonwealth University</p>
<p><i>Public and Subsidized Housing as a Platform for Becoming a United States Citizen</i> June 2, 2011, John Carruthers, George Washington University; Brigitte Waldorf, Purdue University; Natasha Duncan, Mercyhurst College</p>
<p><i>The Effect on Program Participation of Replacing Current Low-Income Housing Programs with an Entitlement Housing Voucher Program</i> March 8, 2011, Jeffrey Tebbs, United States District Court, District of Connecticut; Edgar Olsen, University of Virginia</p>
<p><i>Rental Housing after Subsidy; Affordability of Florida’s Formerly Subsidized Housing Stock</i> May 25, 2011, Doug White, University of Florida; Marc Smith, University of Florida; Caleb Stewart, University of Florida</p>

<p><i>Low-Income Housing Tax Credit Developments and Neighborhood Property Conditions</i> (Examines the effects that low-income, subsidized housing has made on property conditions in disadvantaged neighborhoods)May 2011 Kelly Edminston, Federal Reserve Bank of Kansas City</p>
<p><i>The Role of Home Equity Lending in the Recent Mortgage Crisis</i> Prakash Michael LaCour-Little, California State University-Fullerton; Wei Yu, California State Polytechnic University, Pomona; Libo Sun, California State Polytechnic University, Pomona</p>
<p><i>Lien Structure and Residential Mortgage Default</i> (Examines the differences in the effects of using total LTV to predict 1st lien default and using 1st and 2nd lien LTV separately to predict 1st lien default)Jared Janowiak, Freddie Mac</p>
<p><i>A Reality Check for Credit Default Models</i> (Researchers control for the false discovery rate (type I error) in Credit Default probability models, saying that techniques such as data snooping and decision tree analysis lead to an extremely high likelihood of a type I error)Hua Kiefer, Office of the Comptroller of the Currency; Leonard Kiefer, Freddie Mac</p>
<p><i>Mortgage Default and Prepayment Risks among Moderate and Low Income Households</i> Chao Yue Tian, University of North Carolina at Chapel Hill; Anthony Pennington-Cross, Marquette University; Roberto Quercia, University of North Carolina at Chapel Hill</p>
<p><i>A Study of Real Estate Markets in Declining Cities</i> (Can we predict which neighborhoods are most likely to experience persistent and severe declines?)James Follain, Rockefeller Institute of Government</p>
<p><i>Sentiment, Housing Prices and Housing Bubble</i> (Examines the effects of sentiment, which he defines as overoptimism in the housing market and how it drove the housing bubble)Thao T.T. Le, Department of Real Estate, School of Design & Environment, National University of Singapore</p>
<p><i>A Consistent Estimate of Land Price, Structure Price, and Depreciation Factor</i> (Shows how a land price index, property price index, and depreciation factors can be estimated from home price data without relying on assumptions for construction costs or depreciation)May 2011 Jian, Chen, Freddie Mac; Yan Chang, Freddie Mac</p>
<p><i>Dwelling Age and Gentrification: Is Downtown the Future Home of the Rich?</i> Sherida Powell, George Washington University</p>
<p><i>Internet Research and REIT Returns</i> (Examine the relationship between online search volume by prospective real estate buyers and future movements in equity REIT prices)Alan Ziobrowski, Georgia State University; Prashant Das, Georgia State University; Owen Tidwell, Georgia State University</p>

<p><i>Did Leveraged ETFs Increase Intraday REIT Volatility During the Crisis?</i> Shaun Bond, University of Cincinnati; Brian Hatch, University of Cincinnati; Qing Bai, University of Cincinnati</p>
<p><i>Why do REITs Overpay and By How Much?</i> S. Nuray Akin, University of Miami; Brennan Platt, BYU; Grant McQueen, BYU; Barrett Slade, BYU</p>
<p><i>REITs Ownership and Property Performance: Evidence from Lodging Industry</i> (They find that REIT-owned hotels experience higher profit margins than other lodgings) Shawn Howton, Villanova University; Johnny Lee, Villanova University; Mi Luo, Villanova University</p>
<p><i>Foreclosure's Wake: The Credit Experiences of Individuals Following Foreclosure</i> (Examining the credit scores of individuals who have had their house foreclosed on) Cheryl Cooper, The Urban Institute; Kenneth Brevoort, Federal Reserve Board</p>
<p><i>What Happens to Seriously Delinquent Mortgage Borrowers and Their Homes?</i> May 18, 2011, Sewin Chan, New York University; Vicki Been, New York University; Andrew Haughwout, Federal Reserve Bank of New York; Claudai Sharygin, New York University</p>
<p><i>Do Foreclosures Cause Crime?</i> Ingrid Ellen, New York University; Claudia Sharygin, New York University; Johanna Lacoce, New York University</p>
<p><i>Is What's Bad for the Goose (Tenant), Bad for the Gander (Landlord): A Retail Real Estate Perspective</i> (A study on the effects of tenant bankruptcies on the risk and return performance of landlords; The tenancy contracting mechanisms determine the performance of the landlord when bankruptcy occurs) May 10, 2011, Peng Liu, Cornell University; Crocker Liu, Cornell University</p>
<p><i>Determinants of Information Producers: Evidence from Real Estate Markets</i> (A model is developed, with the number of appraisers given as the Y variable, and several characteristics likely to influence the supply and demand for appraisers given as predictor variables. This model aims to examine the major determinants of the number of appraisers) March 8, 2011, Nuray Guner, Middle East Technical University; David Downs, Virginia Commonwealth University</p>
<p><i>Can Sentiment Surveys Pre-empt Real Estate Market Activities?</i> Gianluca Marcato, University of Reading; Anupam Nanda, University of Reading</p>
<p><i>Institutional Ownership and the Dynamics of Trading Volume Around FFO Announcements</i> (Examining the effect of announcements of Funds of Operation by REITs and institutional ownership and trading volume) May 25, 2011, Philip Seagraves, Georgia State University; Frank Gyamfi-Yeboah, University of Florida; Alan Ziobrowski, Georgia State University</p>

<p><i>Does Cheap Rent Attract Starving Artists?</i> (An examination of the retail art market and spatial patterns of art galleries in Manhattan from 1970-2003) Jenny Schuetz, University of Southern California; Elizabeth Currid-Halkett, University of Southern California; Richard Green, University of Southern California</p>
<p><i>Risk Management of Land Development Adjacent to Critical Infrastructure</i> James Lambert, University of Virginia</p>
<p><i>The Impact of New Housing Investment on Neighboring Property Values</i> May 22, 2011, Joseph Ooi, National University of Singapore</p>
<p><i>Trends in Mortgage Lending to Low-and-Moderate Income Borrowers and Communities 2005 to 2009</i> Karyen Chu, Federal Deposit Insurance Corporation</p>
<p><i>The Long-Run Dynamics of Affordable Rental Housing</i> John Weicher, Hudson Institute; Fredeick Eggers, Econometrica, Inc; Fouad Moumen, Econometrica, Inc.</p>
<p><i>The Rental Housing Finance Survey: A New Approach to Measuring Multifamily Residential Finance</i> May 24, 2011, Kurt Usowski, U.S. Department of Housing and Urban Development; Wendy Chi, U.S. Department of Housing and Urban Development; Richard Levy, U.S. Census Bureau; Arthur Cresce, U.S. Census Bureau</p>
<p><i>Strategic Defaulters: Who Are They?</i> Carla Inclan, Freddie Mac; Lexian Liu, Freddie Mac</p>
<p><i>Determinants of the Incidence of Loan Modifications</i> May 2011 Mary Weselcouch, New York University; Scott Murff, Office of the Comptroller of the Currency; Ioan Voicu, Office of the Comptroller of the Currency; Vicki Been, New York University</p>
<p><i>Information Content of Data Anomalies in Mortgage Loan Modification Programs</i> May 17, 2011, William Segal, IFE Group; Karen Chang, U.S. Department of the Treasury</p>
<p><i>Effects on Loan Modifications: Findings from the Evaluation of the National Foreclosure Mitigation Counseling Program</i> Neil S. Mayer, Neil Mayer and Associates; Peter Tatian, The Urban Institute; Kenneth Temkin, Temkin Associates; Charles A. Calhoun, Calhoun Consulting LLC</p>
<p><i>The Evaluating Alternative Methods of Forecasting House Prices: A Post-Crisis Reassessment</i> William Larson, George Washington University</p>
<p><i>Forecasting Aggregate US House Prices with Disaggregate Data</i> May 25, 2011 Joshua Patteson, Freddie Mac; Leonard Kiefer, Freddie Mac</p>

FAQS: Research Project Option

1. What is the research project option?

The research project option was designed for Candidates from the academic world as well as Candidates from other parts of the world who live in countries where the economies make it impossible to do the Traditional Demonstration Appraisal Report option. In addition, the research project option was developed to recognize the broader scope of analytical practices.

The research project option allows a Candidate to receive credit for the Demonstration of Knowledge requirement by developing an original research project. The original research project is a project that expands the overall body of knowledge of the appraisal profession. The proposed research project is to be of sufficient scope and complexity to demonstrate that the Candidate has a thorough understanding of the principles, theories, techniques, and applications of real estate economics.

2. What type of topic can I choose?

The focus of the project should be one that addresses a practical real estate economics topic or problem.

3. Are there any pre-approved topics?

There are no currently pre-approved topics; however, the research project *must not* focus on one- to four-unit properties.

4. What is the process?

First, the Candidate must submit application and topic proposal to the Appraisal Institute. After the topic proposal is accepted, the research project can be submitted for grading.

5. Why must I submit a proposal first?

The foundation of this requirement is firmly entrenched in the academic world. The Appraisal Institute wants to be sure that your topic is meaningful and can adequately demonstrate a thorough understanding of the principles, theories, techniques, and applications of real estate economics. The proposal will be initially reviewed by a grader who will either accept the proposal or offer feedback for possible changes. Once the proposal is accepted, the grader will give you final approval to complete and submit the research project.

6. What must my original research project proposal contain?

- a) An exploration of why the proposed topic/hypothesis is important, the possible implications of the findings, and the possible applications of the results.
- b) Complete consideration of the processes of discovery, application, and integration of the results of the research.
- c) Preliminary analysis and research into available resources; what has already been done in the field?
- d) Literature review.

7. How long should my proposal and research project be?

There is not a specific requirement. The proposal and research project that follows must be described in sufficient detail for the grader to make an informed decision about its appropriateness. The proposal is a measurable component of the overall research project option. Your concern should be to present your proposal and research project in a way that communicates clearly and effectively. Clear communication allows the grader to have a pleasant experience. Poor presentation can interfere in the process of communication and lead to lower marks. Good presentation makes the most of the hard work that you put into your research.

8. Can I get assistance with my research project?

No. The Candidate must have sole professional responsibility for the development of the research project. The research project may include work that is performed during the Candidate's business practice if the Candidate personally, and without assistance, defined the problem, developed the analysis, formulated the conclusions, and prepared the project. Please review the above section Without Assistance, for further information.

9. Do I have to defend my research project?

The term "research project" as used in this document and Appraisal Institute literature should not be confused with a doctoral dissertation. The research project prepared by the Candidate is a rigorous and thorough analysis presented in a written document. The Candidate will not be required to defend the research project orally.

10. Is there a recommended format for the proposal and research project?

The form and presentation of the proposal and the research project is left to the Candidate. There are several publications and books available that could provide a meaningful outline. Care should be taken to meet the requirements of the current versions of the *Uniform Standards of Professional Appraisal Practice* and *Certification Standard of Appraisal Institute. International Valuation Standards* may also be applicable.

11. Can you give me some guidance as to what to include in my proposal?

There is not one correct way to develop your proposal. Items to consider might be a statement of the problem and its setting, a review of related literature, the data, treatment of the data and its interpretation, the qualifications of the researcher, the outline of the proposed study, and a selected bibliography. In outlining the problem and its setting, it is important to give a clear statement of the problem and its potential sub-problems. It is also important to state a clear hypothesis, the limitations of the study, any definitions pertinent to the assignment, a list of assumptions, and the importance of the study. The data should be outlined with both the primary and secondary data summarized. The research methodology and the specific treatment of each problem would be helpful as well.

12. Why are proposals rejected or sent back for revisions?

Generally, proposals have been sent back for revisions when the objectives are ill-defined, or the topic doesn't appear to be one in which the Candidate could demonstrate a thorough understanding of the principles, theories, techniques, and applications of real estate economics.

13. My proposal was accepted by the grader, but I have decided to select a different topic. Can I do this?

Yes, however, a new proposal must be submitted and approved before continuing with the research project.

14. Can I submit a research project that has already been published?

No.

15. How can I ensure that my report qualifies for grading?

Please refer to the above sections: The Research Project Proposal: Documentation and Procedures and Without Assistance.

16. What is the process for grading reports?

Please refer to the section near the end of this guidebook: Grading Processes for Demonstration of Knowledge Options.

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Capstone Program Option

The *General Demonstration Report—Capstone Program* is an additional option Candidates may choose to complete the demonstration of knowledge requirement for MAI Designated membership. Like the traditional demonstration appraisal report option, the same skills and knowledge base are required to produce a complete demonstration appraisal report. However, this program was designed to offer an option that accelerates the completion of the report. Instead of selecting and compiling data on a property, participants are provided with a subject property and data to analyze and then write the report in a limited time span of approximately two months. Participants are **required** to attend two webinars. The first webinar is typically scheduled three (3) weeks after the release of materials. There will be a five and a half (5.5) day on-site session (attendance is optional) where facilitators will be on hand to answer questions and offer guidance.

On-site session reports due: At noon on day seven (7) of the on-site session (in the time zone of the on-site session) the full report meeting grading eligibility requirements must be submitted.

Synchronous session reports due: At noon on day seven (7) Central Time (CT), the full report meeting grading eligibility requirements must be submitted.

The program is designed to be completed in approximately two (2) months; therefore, participants must realize they will need to commit a considerable amount of that time on analysis and writing tasks *prior* to the on-site session. One **optional pre-class** writing assignment (fundamental market analysis) is required before the second webinar. It is important that participants understand they will need to spend a minimum of 175 to 250 hours to successfully complete this program. And during the five and a half (5.5) day on-site session, participants should expect to work on their reports after the seven-hour days spent on-site with facilitators. Ten (10) to twelve (12) hour a day that week will not be unusual.

Grading

The Capstone report must meet the same technical requirements as the traditional demonstration report option. The Capstone report will be graded to determine whether the general Candidate has demonstrated the requisite level of knowledge, understanding, and application of appraisal principles, practices, and procedures required in the demonstration appraisal report.

Optional Fundamental Market Analysis Submission

This is an optional pre-class writing assignment.

However, do not be confused as a Level C Fundamental Market Analysis (FMA) is required for the Capstone final report submission.

The Fundamental Market Analysis section should contain all analysis, including appropriate charts, along with the corresponding narrative explanation and conclusions within all six steps of the process. If the Fundamental market analysis pre-class assignment is submitted for feedback, it should be submitted by **noon Central Time (CT) at least one week prior** to the second webinar, via the approved online software.

Note: We highly encourage participants to submit the optional FMA pre-class assignment, as those who do, historically, are much better prepared when submitting a completed final report.

Capstone Grading Eligibility Requirements

To be eligible for grading, the demonstration appraisal report submission, at a minimum, must contain organized data, analysis, and conclusions in support of the following:

- A. A **fundamental market analysis**. Levels A, B and C (approaching level D), using the fundamental market analysis option.
- B. **Highest and best use** conclusions for the site as if vacant and the property as improved.
- C. The property selected must suffer measurably from incurable long-lived physical deterioration. If more forms of depreciation or obsolescence are present, they must be properly treated. The breakdown method of depreciation *must be applied*, to address any and all forms of potential depreciation or lack thereof.
- D. The appraisal must analyze the effect of expenses on rents and total occupancy cost in the development of a net income stream, even if only net leases are involved.
- E. The report must contain the following three approaches to value and demonstrate appraisal techniques applicable to those three approaches.
 1. The **cost approach**, including:
 - a. Site value as if vacant, with market extracted adjustments;
 - b. Complete reproduction cost new; and
 - c. Breakdown method of depreciation.
 2. The **sales comparison approach**, including market supported adjustments.
 3. The **income capitalization approach**, including;
 - a. Fixed and variable expense forecast on a line-item basis; and,
 - b. Reserve for replacements forecast on a line-item basis.
- F. "Market value" must be the type of value estimated.
- G. The report should pertain to an "as-is" valuation, with respect to current physical characteristics (i.e. no proposed new construction, additions, repairs, etc.). Hypothetical conditions are not appropriate for demonstration report purposes.

For grading, refer to [Grading Processes for Demonstration of Knowledge Options](#).

Prerequisites

- Pass *Advanced Market Analysis and Highest & Best Use* examination.
- General Demonstration Appraisal Report Writing seminar (within the last five (5) years)
- Be a General Candidate for Designation

Participant deliverables

- **Synchronous offerings:** Finish all sections of the demonstration appraisal report by noon central time on seventh day and upload completed report to the Box.com link provided in an email from demo@appraisalinstitute.org for grading. This Box.com link will expire at noon central time for Synchronous offerings. Refer to the above grading section for what constitutes an eligible Capstone report.
- **Classroom offerings:** Finish all sections of the demonstration appraisal report by noon of the offerings time zone on seventh day and upload completed report to the Box.com link provided in an email from demo@appraisalinstitute.org for grading. This Box.com link will expire at noon (per specific location's respective time zone). Refer to the above grading section for what constitutes an eligible Capstone report.

Timeframe to Complete Program and Report

Days 1-21	Download materials, begin review of materials.
Day 22	WEBINAR #1: Introduction to program & Intro to Fundamental Market Analysis (FMA).
Days 23-38	Complete optional FMA pre-class assignment: FMA.
Day 39	Optional FMA pre-class assignment due.
Day 47	WEBINAR #2: Feedback on optional pre-class FMA writing assignment.
Days 48-66	Continue working on other parts of the report up to HBU.
Days 67-72	ON-SITE SESSION.
Day 73	General demonstration report due.

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Policies Related to Capstone Programs

A. No Refunds or Time Extensions

Due to the accelerated nature of this program, no refunds or time extensions will be granted. If a Candidate cannot commit to this strict schedule or submit your report by the deadline, we recommend he/she chooses another option for satisfying the Demonstration of Knowledge requirement.

B. Without Assistance

The general Candidate must personally, and without assistance, process and analyze all the data, form the conclusions and prepare the demonstration appraisal report. In preparing the demonstration appraisal report, the general Candidate may receive assistance in certain matters, such as photography, drawings and word processing. A Candidate may also receive verbal advice, suggestions, theoretical explanations, and references to textbooks and techniques, available literature, etc., from facilitators relating to appraisal practice, but such advice, suggestions, explanations or references should not include review or commentary on the demonstration appraisal report.

C. Deadlines for submission of initial report or revised reports

The deadlines for report submissions are strictly enforced. A Candidate should come prepared to submit his/her report on time! They have had over two months to prepare for this deadline.

Objectives

- Test ability to analyze the necessary data properly, support conclusions, and write an appraisal report providing analysis and conclusions which will lead the reader to concur with the opinion of value.
- Demonstrate critical thinking and technical expertise.
- Demonstrate the ability to interpret real-world market knowledge.
- Present a consistent theme throughout the entire report.
- Support and defend your analysis.
- Communicate effectively and consistently.
- Demonstrate knowledge of valuation methods and analytical techniques.

FAQS: Capstone Program Option

1. What exactly is the Capstone Program?

Like the traditional demonstration appraisal report option, the same competencies and knowledge are needed for the Capstone, however, the program offers Candidates an opportunity to write an appraisal report at an accelerated pace by providing them with a subject property and data. The Capstone is a rigorous program designed to be completed in roughly two (2) months, so it therefore requires Candidates to commit a considerable amount of time during this program.

2. How much time should a Candidate dedicate to the Capstone?

Candidates should know they will dedicate a minimum of 175 to 250 hours to complete the program. Candidates should expect to work on their reports 10 to 12 hours a day once the classroom session commences. Spending an adequate amount of time is not the single determining factor as to whether a Candidate receives a passing grade. He/she must also possess the knowledge and skills to apply concepts and theories in the writing of the report.

3. How is the seven-day on-site session structured?

Generally, the on-site session resembles more of a writing workshop than a classroom lecture. Attendance of the on-site session is optional (Candidates are free to come and go), but the setting does promote a conducive environment for Candidates to write their reports.

4. What is the role of the facilitator?

The facilitators are guides and coaches; they do not function as instructors.

5. What if a Candidate fails the Capstone or need to register again, may he/she enroll in a Capstone with the same subject property?

Yes, Candidates may register for the same subject property.

6. Does AI offer refunds or transfers into another Capstone offering?

No. The Capstone encompasses a period of 73 days, commencing two (2) months prior to the offering of the webinar. Due to Capstone's schedule and the release date of the handbook, AI Education cannot give refunds nor transfer a Candidate to another offering.

7. A Candidate must write my report "without assistance." What does this mean?

AI defines the concept of "without assistance" as the following: The Candidate must personally analyze data, form conclusions, and prepare the Capstone report without any help from another individual. The Candidate may receive verbal advice, suggestions, theoretical explanations, and references to textbooks and techniques, available literature, etc., from facilitators, however, these suggestions, advice, explanations, or references should not include review or commentary. For more information, please refer to the above section, Without Assistance.

8. What happens if a Candidate chooses not to submit the optional FMA pre-class writing assignment?

The Candidate **will not** receive any feedback other than a general discussion of areas of weakness noted collectively from graders reviewing other pre-class writing assignment submissions.

9. What is the deadline for a Candidate to submit their report?

Synchronous offerings: Sunday, no later than noon central time.

Classroom offerings: Sunday, no later than noon, per the offering's respective time zone.

10. What happens if a Candidate misses the noon deadline?

A Candidate's report will not be accepted.

11. What if a Candidate has a medical emergency prior to the noon deadline?

The Candidate must contact one of the facilitators immediately and submit a report via the box.com upload link.

12. How can a Candidate ensure that their report qualifies for grading?

Please refer to the above section: Capstone Grading Eligibility Requirements.

13. What if a Candidate receives a failing grade, may he/she revise?

Please refer to the section near the end of this guidebook: Grading Processes for Demonstration of Knowledge Options.

14. May a Candidate request a re-grade?

Please refer to the section near the end of this guidebook: Grading Processes for Demonstration of Knowledge Options.

Peer Reviewed Publications Option

A Candidate, who is a PhD., may satisfy the Demonstration of Knowledge requirement by receiving credit for at least three (3) peer reviewed publications based on original research (in a field related to real property economics) approved by the ADQC or its designee. Multi-authored publications will be accepted.

A Candidate, who is not a PhD., may satisfy the Demonstration of Knowledge requirement by receiving credit for at least three (3) peer reviewed publications based on original research (in a field related to real property economics) approved by the ADQC or its designee. All publications must be authored solely by the applicant. Multi-authored publications will not be accepted.

The submissions must be quantitatively rigorous, and deal with valuation or economic issues relevant to real property appraising and/or real property analysis. The submissions must be directly applicable to valuation issues and/or real property economic issues. There must be a nexus between real property appraising and the article that is being submitted.

The submission should be specifically related to valuation or valuation issues. When a Demonstration Report is written, what is being sought is for the Candidate to illustrate that he or she has mastered the application of the economic tools (i.e., sales comparison approach, cost approach, income approach, statistical analysis, etc.) employed in the valuation of real property. Consequently, what we hope to see in a published peer reviewed article is research on a topic that directly relates to the economic tools that are used or could be used by appraisers in the valuation of real property. The logic being that if the goal is to see if the Candidate has mastered the use of those economic tools by which the industry at large values real property than a Candidate who has published research on those economic tools that are employed in the valuation of real property is an indication of his or her mastery of the discipline itself.

The published peer reviewed article is research on a topic that directly relates to the economic tools that are used or could be used by appraisers in the valuation of real property.

Preliminary Screening

Before applying, a Candidate must submit either abstracts or summaries of each of his/her three peer reviewed publications to the Demo Panel Chair for preliminary review to determine if the articles qualify per submission guidelines.

Summaries or abstracts of these peer-reviewed publications must demonstrate how they:

- are quantitatively rigorous;
- deal with a topic of valuation or economic issues relevant to real property appraising and/or real property analysis;
- directly apply to valuation issues and/or real property economic issues; and
- contain sufficient scope and complexity to demonstrate that the Candidate has a thorough understanding of the principles, theories, techniques and applications of real estate economics.

Submission Requirements

1. The peer reviewed publications must be submitted to the Appraisal Institute for credit within five (5) years from date of publication and may only be submitted by one author. Additional co-authors will not be permitted to submit the same publication for consideration.
2. The submission must include at least three (3) peer reviewed publications (in accredited journals and/or periodicals) and must reflect original research, in a field related to real property economics.
3. Must submit an electronic copy of the publications.
4. Must include a statement of contribution for each publication submitted for consideration.

For grading, refer to [Grading Processes for Demonstration of Knowledge Options](#).

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Master's Thesis or Doctoral Dissertation Option

A Candidate may satisfy the Demonstration of Knowledge Requirement by receiving credit for a master's thesis or doctoral dissertation (in a field related to real property economics) approved by the Admissions Committee, or its designee.

Submission Requirements

- The submission must have received credit toward a graduate or doctoral diploma or degree.
- The submission must reflect original research.
- The submission must be quantitatively rigorous, and deal with valuation or economic issues relevant to real property appraising and/or real property analysis. The submissions must be directly applicable to valuation issues and/or real property economic issues. There must be a nexus between real property appraising.
- The master's thesis or doctoral dissertation must be submitted to Appraisal Institute for credit within ten (10) years from date of submission to the college or university.
- Must submit an electronic copy of the thesis or dissertation, and a signed and dated letter from the college or university that the master's thesis or doctoral dissertation was approved.

For grading, refer to [Grading Processes for Demonstration of Knowledge Options](#).

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Without Assistance

A Candidate is required to certify that he/she personally and without assistance assembled all the data used in preparing the appraisal, analyzed the data, formed the conclusions, and prepared the appraisal report. The Candidate must also certify that the appraisal and the appraisal report comply with the requirements of Regulation No. 1., policies and procedures further implementing Regulation No. 1, the Standards of Professional Practice of Appraisal Institute, and the Code of Professional Ethics.

If the demonstration appraisal report is found to be nonfactual or not the Candidate's own work, it will not receive credit (a failing grade) and become ineligible for further revision. The Candidate will then be required to submit another demonstration appraisal report on another subject or pursue another Demonstration of Knowledge requirement option.

In preparing the demonstration appraisal report, the general Candidate may receive assistance in matters such as photography, drawings, and word processing.

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Grading Processes for Demonstration of Knowledge Options

The Appraisal Institute policy is that numerical grades cannot be given.

Demonstration of Knowledge submissions will become the property of the Appraisal Institute and will not be returned to you.

Traditional Demonstration Appraisal Report Submission

Grading Process

If eligible for grading the report will be graded. After the grading is completed, the Candidate will receive a notice that the report either passed or failed the technical grading process along with a critique.

If the report passes the technical grading process it will then go through a verification process. Demonstration of Knowledge credit will not be awarded unless the report passes both the grading process and the verification process.

If a report fails the technical grading process, the Candidate may at that point either request a re-grade or prepare and submit a revised report within the allotted timeframe for revisions. Any section of the report that receives a correlated **rating of less than three (3) must be revised** to meet the criteria for that section **described** in this guidebook.

Ungradable/Incomplete Report

If a report **does not contain the components** listed under the section, Grading Eligibility Requirements, it is considered incomplete/ungradable, thus ineligible for grading. If a Candidate believes his/her report is gradable, he/she may request (in writing), within 15 days of the date of their ungradable report letter, that the Demo Panel Chair reconsider the initial determination. The request must detail the reasons for contesting the initial determination.

Requesting a Re-Grade of an Initial Submission

If an initial grader determines that the submission fails to meet the technical requirements, the Candidate may file a Demonstration of Knowledge Re-Grade Request Application **within sixty (60) days** of the date of the notice advising the Candidate that the submission did not meet the technical requirements. The Application must include an attachment detailing the reasons for contesting the initial grading, and a filing fee. If a request for re-grading is granted the re-grading shall not be performed by the initial grader and the re-grader will determine whether the initial grading should be revised.

Upon written request and for good cause shown, the Chair of the Demonstration of Knowledge Grading Panel may grant an extension of the **60-day period** for filing a Demonstration of Knowledge Re-Grade Request Application.

If re-grading results in a determination that a submission still fails to meet technical requirements and the submission is eligible for revision, the Candidate may revise and re-submit the submission as set forth in the following section.

Revising a Report

If a traditional report fails to meet the technical requirements at the initial grading stage, the Candidate may revise the traditional report and submit it for grading along with the appropriate fee.

Prior to submitting a revised report, the general Candidate must attend the *General Demonstration Appraisal Report Writing* seminar, as specified by the Admissions Committee, unless the Candidate previously attended an approved offering or unless, for good cause shown, the Chair of the Admissions Committee, with input from the Chair of the Demonstration of Knowledge Grading Panel, grants an exception to this policy.

The revised report must be filed **within one (1) year** of the date on which notice was sent to the Candidate that the initial report did not meet the technical requirements. Only one revised report concerning the same subject property may be filed. The Chair of the Demonstration of Knowledge Grading Panel may grant a request for extension of this one (1) year period for good cause shown. After the period expires, the Candidate may not use the same subject property for a future report.

Re-Grading of a Revised Traditional Demonstration Appraisal Report

If the revision grader determines that the revised submission still fails to meet the technical requirements, the Candidate may file a Demonstration of Knowledge Re-Grade Request Application **within sixty (60) days** of the date of the notice advising the Candidate that the submission did not meet the technical requirements. The application must include an attachment detailing the reasons for contesting the revised grading, and a filing fee.

The report will be re-graded by the Chair of the Demonstration of Knowledge Grading Panel, or a member of the Panel selected by the Chair who is other than a member who previously graded or re-graded the report. If a re-grading results in a determination that the revised report fails to meet technical requirements the Candidate may not use the same subject property for a future report.

Upon written request and for good cause, the Chair of the Demonstration of Knowledge Grading Panel may grant an extension of the **60-day period** for filing a Demonstration of Knowledge Re-Grade Request Application.

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Capstone Program Submission

Grading Process

The Capstone report must meet the same technical requirements as the traditional demonstration report option. The Capstone report will be graded to determine whether the general Candidate has demonstrated the requisite level of knowledge, understanding, and application of appraisal principles, practices, and procedures required in the demonstration appraisal report.

If eligible for grading the report will be graded. After grading is completed, the Candidate will receive an official pass or fail letter along with a critique.

Ungradable/Incomplete Report

If a report **does not contain the components** listed under the section, Capstone Grading Eligibility Requirements, or violates the Without Assistance section, it is considered incomplete/ungradable, thus ineligible for grading and, by extension, ineligible for revision. If a Candidate believes his/her report is gradable, he/she may request (in writing), within fifteen (15) days of the date of their ungradable report letter, that the Demo Panel Chair reconsider the initial determination. The request must detail the reasons for contesting the initial determination.

Revising a Capstone Report

A Demonstration Report completed through the Capstone that receives a failing grade can be revised and resubmitted *one time only*. Reports that receive a failing grade will be permitted to be revised and resubmitted within sixty (60) days from the date of the fail letter (the revision must be submitted by **Noon Central Time on Month/Day/Year**).

Any section of the report that receives a correlated **rating of less than three (3) must be revised** to meet the criteria for that section described in this guidebook.

Requesting a Re-Grade of a Revised Capstone Report

If the revision grader determines that the revised submission still fails to meet the technical requirements, the Candidate may submit a written request detailing the reasons for contesting the determination that the revised report failed to meet the technical requirements—**within thirty (30) days** of the date that the Candidate was notified that his or her revised report did not meet the technical requirements.

The report will be re-graded by the Chair of the Demonstration of Knowledge Grading Panel, or a member of the Panel selected by the Chair who is other than a member who previously graded or re-graded the report. If a re-grading results in a determination that the revised report fails to meet technical requirements the Candidate may not use the same case study for a future report.

Upon written request and for good cause, the Chair of the Demonstration of Knowledge Grading Panel may grant an extension of the **thirty (30) day period** for filing a Demonstration of Knowledge Re-Grade Request Application.

Research Project Submissions

Grading Process

If eligible for grading, the research project will be graded. After the grading is completed, the Candidate will receive a notice that the report either passed or failed the technical grading process. If the research project fails, the grader will provide a written summary of issues and deficiencies to be addressed in the revision. The Candidate may at that point either request a re-grade or prepare and submit a revised research project.

Ungradable/Incomplete Research Project

If a Research Project is considered incomplete/ungradable, thus ineligible for grading. If a Candidate believes his/her report is gradable, he/she may request (in writing), within fifteen (15) days of the date of their ungradable report letter, that the Demo Panel Chair reconsider the initial determination. The request must detail the reasons for contesting the initial determination.

Requesting a Re-Grade of an Initial Research Project

If the grader determines that the submission fails to meet the submission requirements, the Candidate may file a Demonstration of Knowledge Re-Grade Request Application within sixty (60) days of the date of the notice advising the Candidate that the submission did not meet the requirements. The application must include an attachment detailing the reasons for contesting the initial grading and a filing fee. If a request for re-grading is granted the re-grading shall not be performed by the initial grader and the grader will determine whether the initial grading should be revised.

Upon written request and for good cause shown, the Chair of the Demonstration of Knowledge Grading Panel may grant an extension of the 60-day period for filing a Demonstration of Knowledge Re-Grade Request Application.

Revising a Research Project

If a research project fails to meet the technical requirements at the initial grading stage, the Candidate may revise the research project and submit it for grading along with the appropriate fee. Any section of the report that receives a correlated rating of **less than three (3) must be revised** to meet the criteria for that section described in this guidebook.

The revision must be filed within one (1) year of the date on which notice was sent to the Candidate that the initial research project did not meet the technical requirements. Only one revision concerning the same topic may be filed. The Chair of the Demonstration of Knowledge Grading Panel may grant a request for extension of this one (1) year period for good cause shown. After the period expires, the Candidate may not use the same topic for a future research project.

Requesting a Re-Grade of a Revised Research Project

If the revision grader determines that the revised submission still fails to meet the technical requirements, the Candidate may submit a written request, within sixty (60) days of the date that the Candidate was notified that his or her revised research project did not meet the technical requirements, which includes the

Candidate's reasons for contesting the determination that the revised research project failed to meet the technical requirements.

The research project will be re-graded by the Chair of the Demonstration of Knowledge Grading Panel or a member of the Panel selected by the Chair who is other than a member who previously graded or re-graded the research project. If a re-grading results in a determination that the revised research project fails to meet technical requirements the Candidate may not use the same topic for a future submission.

Upon written request and for good cause shown, the Chair of the Demonstration of Knowledge Grading Panel may grant an extension of the 60-day period for filing a Demonstration of Knowledge Re-Grade Request Application.

Peer Reviewed Publications and Master's Thesis or Doctoral Dissertation Submissions

Requesting a Re-Grade

If the grader determines that the submission fails to meet the submission requirements, the Candidate may file a Demonstration of Knowledge Re-Grade Request Application **within sixty (60) days** of the date of the notice advising the Candidate that the submission did not meet the requirements. The Application must include an attachment detailing the reasons for contesting the initial grading and a filing fee. If a request for re-grading is granted the re-grading shall not be performed by the initial grader and the grader will determine whether the initial grading should be revised.

Upon written request and for good cause shown, the Chair of the Demonstration of Knowledge Grading Panel may grant an extension of the 60-day period for filing a Demonstration of Knowledge Re-Grade Request Application.

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Verification of Demonstration Appraisal Reports

If a report does not receive credit because the report or application for credit contains data that is not factual, the general Candidate may not submit the report for re-grading, may not revise the report and submit it for grading and may not use the same subject property for a future report.

Verification Process

Factual data in the applications and submissions for the Traditional Demonstration Appraisal Report option must undergo a verification process. The following procedures shall be followed for each Demonstration of Knowledge application and submission that requires verification:

- A. Upon being notified by the Membership Department that a general Candidate's Demonstration of Knowledge submission meets the technical requirements, the Chair of the Demonstration Appraisal Grading Panel (or designee) shall assign a Representative:
 1. to verify the factual data in the submission and the statements in the application for credit; and/or
 2. to make a recommendation, as appropriate, whether the submission and the statements in the application for credit should be accepted as factual or be rejected as being non-factual.
- B. If a Representative determines that he or she has a conflict of interest or a personal bias for or against the general Candidate, he or she must decline serving as a Representative with respect to that general Candidate and the Chair of the Demonstration of Knowledge Grading Panel (or designee) shall assign a replacement.
- C. If at any time the Chair of the Demonstration of Knowledge Grading Panel (or designee) determines that a Representative is not conducting the verification process adequately, the Chair (or designee) may order further investigation and/or rescind the appointment of the Representative and appoint a replacement.
- D. If at any point in the verification process the Representative is able to verify the factual data in the submission and the statements in the application for credit, the Representative shall notify the Membership Department in writing. If all the requirements of the Demonstration of Knowledge requirement are met, the Membership Department shall then post credit for the Demonstration of Knowledge requirement on the general Candidate's record and notify the general Candidate that credit has been awarded.
- E. Unless there is a recommendation by the Representative that credit not be given, the verification process should not exceed twenty (20) days. This period of time may be extended by the Chair of the Demonstration of Knowledge Grading Panel.

- F. If the Representative fails to file a recommendation within twenty (20) days of the date the Representative received the Demonstration of Knowledge submission and application for credit (or any extension thereto), the Chair of the Demonstration of Knowledge Grading Panel shall determine whether additional time should be granted for the Representative to file a recommendation, whether a replacement Representative should be appointed, or whether the general Candidate should receive credit for the submission without any further review .
- G. At the request of the Representative, the Chair of the Demonstration of Knowledge Grading Panel (or designee) may appoint one or two additional Representatives to assist in conducting an interview and/or investigation.
- H. At an interview, the general Candidate shall be allowed to explain how the factual data in the submission was obtained and/or to furnish information to show that the factual data in the submission and/or the statements in the application for credit are factual. The applicant may request additional time to obtain information or to assemble documentation in support of his or her position.
- I. If, after completing his or her investigation the Representative concludes, by the greater weight of the evidence, that the data in the submission and/or the statements in the application for credit are not factual, the Representative shall prepare a formal written recommendation ("Recommendation") which recommends that the submission not receive credit. The Recommendation shall set forth in detail the relevant factual information relied on as the basis for the Representative's conclusion. Before completing the Recommendation, the Representative shall make a reasonable effort to verify and substantiate all factual data relied on as the basis for the Recommendation and include with the Recommendation a brief statement describing such efforts.
- J. The Representative shall submit the Recommendation to the Membership Department. If the Membership Department determines that the Representative's Recommendation is not in compliance with the requirements of this guidebook, the Membership Department shall return the Recommendation to the Representative with instructions to take such further steps as may be required to bring the Recommendation into compliance with the requirements of this guidebook. On determination by the Membership Department that the Representative's Recommendation is in compliance with the requirements of this guidebook, the Membership Department shall submit a copy of the Recommendation to the Chair of the Demonstration of Knowledge Grading Panel.
- K. If after reviewing the Chair of the Demonstration of Knowledge Grading Panel determines that the Recommendation that the submission not receive credit is without a reasonable basis in fact, he or she shall instruct the Membership Department to post credit for the submission. If after review, the Chair of the Demonstration of Knowledge Grading Panel determines that there may be a reasonable basis in fact for the Recommendation, the Membership Department shall send a copy of the Recommendation to the general Candidate.
- L. A general Candidate who has received an unfavorable Recommendation by the Representative shall have the right to request a Conference. This right may be exercised only by filing a Request for Conference by traceable carrier, with the Membership Department, within thirty (30) days after the date of the notice from the Membership Department advising the general Candidate of the

unfavorable Recommendation. A Request for Conference must state the general Candidate's reason(s) for requesting a Conference. If no timely and complete Request for Conference is filed, the unfavorable Recommendation shall be final, and the general Candidate shall have no further right of review or appeal.

- M. If a general Candidate files a timely Request for Conference, the Chair or Vice Chair of the Admissions Committee shall appoint a Conference Board. The general Candidate shall have the right to appear at the Conference in person, individually or with legal counsel or a personal representative. By advance request, a general Candidate may participate by telephone.

At the Conference, the general Candidate shall have the right to present evidence, both testimony and documents, with respect to the unfavorable Recommendation. The Representative shall present evidence and respond to questions of the Conference Board. The Representative shall have the burden to prove, by the greater weight of the evidence, that the data in the report and/or the statements in the application for credit are not factual.

If the Conference Board finds, by the greater weight of the evidence, that the data in the submission and/or that the statements in the application for credit were not factual, the Conference Board shall prepare and submit a written decision concluding that the report not receive credit.

If the Conference Board determines that the data in the general Candidate's report and the statements in the general Candidate's application for credit are factual, the Membership Department shall post credit for the report.

- N. A general Candidate who receives an adverse decision from a Conference Board with respect to verification of a report and/or statements in an application for credit shall have the right to appeal the adverse decision. This right may be exercised only by filing a Notice of Appeal, by traceable carrier, with the Membership Department, within sixty (60) days after the date of the notice from the Membership Department advising the general Candidate of the adverse decision of the Conference Board. The Notice of Appeal must state the general Candidate's reason(s) for contesting the decision. If the general Candidate fails to file a timely and complete Notice of Appeal, the right of such general Candidate to appeal shall terminate, and the decision of the Conference Board shall become final. Procedures governing formal appeals and Appeal Hearings regarding verification of demonstration appraisal reports are contained in the Admissions Appeals Procedure Manual.

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Agricultural Properties

This information will only address areas that are unique to agricultural properties that are not covered in the material above. Candidates should also reference *Rural Property Valuation* by the Appraisal Institute and American Farm Managers and Rural Appraisers.

The Candidate can either perform a fundamental market analysis or an obsolescence option. Please refer to the material above for further explanation.

Introduction

An Agricultural Property type would follow the section in this guidebook called Traditional Demonstration Appraisal Report option.

I. Descriptions, Analysis, and Value Conclusions

This section will be addressed below.

A. Property Description and Productivity Analysis

Site Data and Analysis

Agricultural properties have various soils and/or range sites. A full description of the soil types and/or range sites is to be discussed. Soil layers or horizons, soil texture, soil structure, soil consistency, fertility, color, and pH are to be described and analyzed within the report.

Topography, drainage, and climate are all relevant to agricultural properties. These items must be included and discussed fully for the subject property.

It is advisable that USDA-Natural Resource Conservation Service (NRCS) be contacted for a soil inventory on the subject property. Many counties across the US have been mapped by NRCS. USDA gives the soil inventory, soil maps, soil series, and soil productivity ratings for these areas. NRCS also has range site analysis for areas in the western portion of the US.

Soil types are very important in agricultural properties and must be discussed fully within the demonstration report. This is in addition to what is required within *The Official Guide to the Demonstration of Knowledge Requirement: General* under Site Data and Analysis.

Improvement Analysis

The improvements will be handled the same as stated in *The Official Guide to the Demonstration of Knowledge Requirement: General*. Site improvements are different with agricultural properties but need to be described. Typical site improvements include fencing, wells, septic tanks & drain fields, roads, drainage systems, irrigation systems, timber, livestock handling facilities, etc. These site improvements, if on the subject property, must be described fully and depreciated. All forms of depreciation must be discussed.

Many farms have intensified facilities. Examples are swine, poultry, dairy, feedlots, grain elevators, cotton gins, processing facilities, packing facilities, and cold storage facilities. These specialized agricultural properties require the same analysis as required for a regular demonstration report.

B. Zoning and Land Use Plans

This section of the Demonstration Appraisal Report is covered under section Traditional Demonstration Appraisal Report option above. An Agricultural Property type would follow the Official Guide on all this section.

C. Taxes and Assessment Analysis

This section of the Demonstration Appraisal Report is covered under section Traditional Demonstration Appraisal Report option above. An Agricultural Property type would follow the Official Guide on all this section.

D. Fundamental Market Analysis

The fundamental market analysis or the six-step process is different and more complex for an agricultural property. *The Official Guide to the Demonstration of Knowledge Requirement: General* is to be used in conjunction with this supplement for the Fundamental Market Analysis. In the following paragraphs, the six-step process will be addressed specifically for agricultural properties.

Step 1. Define the property (Property Productivity Analysis)

This has already been covered within the site description and analysis, improvement description and analysis, zoning, and taxes.

Step 2. Define the User of the Property (Market Delineation)

Agricultural properties tend to compete across larger distances than most commercial properties. Market areas may be a County, Region of the State, State or possibly Multiple States. The product of the user will typically define the market area. If a poultry or swine producer has contracts with processors, then the processor typically defines the market area. For example, a poultry processor will only contract with producers within a 50-mile radius. Therefore, all the competitive poultry operators will be within a 50-mile radius of the processor. Dairy farms may be required to be within a certain distance of milk processing plants. Therefore, dairy farms may be clustered in certain localities. Boundaries must be defined. The user will be a farmer or rancher who gravitates toward the type of agricultural products being produced on the subject.

Step 3. Forecast demand factors

Demand for agricultural products can be analyzed Statewide, Region wide, Nationwide, and/or Worldwide. This is more difficult to determine demand since the market is much larger than a normal commercial property. But, there are a lot of USDA statistics and Census data that can be utilized within the report. The Economic Research Service and the National Agricultural Statistics Service are two agencies within USDA that have a lot of data about

agricultural products. Also, Agricultural Agencies within each State may have data that would be useful with certain agricultural commodities.

Agricultural commodities can be quantified with all the data that is available via USDA. Demand can be segmented within the population of the market area.

Step 4. Inventory and forecast competitive supply

Agricultural property types can be found on a nationwide, statewide, and/or area wide basis. The various USDA and State Agricultural Agencies have data on various types of agricultural type operations. For instance, there are vineyard statistics on a Nationwide and Statewide basis. And many states have this broken down on a regional basis. Competitive properties can be found within each state. Potential completion can also be found from these agencies along with County or Regional information sources. USDA Extension Service can provide data on costs of producing certain commodities along with costs of establishing an agricultural enterprise. For instance, some extension specialists have data on what it costs to establish a vineyard. They also have information on herd milk production averages. All this information is useful in calculating and forecasting competitive supply.

Step 5. Analyze the interaction of supply and demand

Sales prices of farms, rental rates of cropland, and capitalization rates of farms are all information that needs to be discussed within this section. Vacant farms or types of operations will be analyzed. Occupancy of farms will be discussed in detail for each property type. Again, information is available through USDA and State Agencies. Supply and demand is discussed here which will lead into the capture.

Step 6. Forecast Subject capture

The capture and absorption of this property into the market place will be fully discussed in this section. The subject operation should give an indication as to whether the market is in balance or out of balance. In other words, if the subject farm is struggling due to a lack of demand for that product, then supply would exceed demand. If a farm is successful and there are other similar operations being built in the area, then this would indicate that demand exceeds supply. A final conclusion and reconciliation of the data needs to be fully discussed.

II. Area Analysis

The regional analysis is pertinent to the appraisal of rural property; therefore, it is necessary to provide a complete description of the region. The region may include one or more counties within a state and may include parts of one or more states.

The regional analysis should consider that purchasers of agricultural properties typically consider a larger market area in identifying competing properties than do the purchasers of residential or commercial properties.

The regional analysis should contain a general description of the soils, topography, climate, and transportation. This section should include a description of agricultural trends in the region.

Specifically, it should address any change in the number or size of farms, -types of farming (commercial, part time, or retirement), and types of ownership (proprietorship, partnership or corporation). These might affect changes in farm population, farm production and efficiency with reference to the technology involved. Crop yields, livestock production (if pertinent) and farm operating costs per acre with detailed component costs for seed, fertilizer, labor, irrigation etc., should be addressed.

Trends or changes in type of feeding operation, predominate livestock type etc., should be considered if the property is primarily a livestock operation.

This analysis will include discussion of market trends, types of tenancy and changes in real estate value and consider prevailing mortgage financing, rates and terms, mortgage foreclosures and predominant type of sale (e.g., cash land contact, cash to mortgage or other).

An overall analysis of prices received for products sold and cost incurred is important to establish trends and to assist in stabilizing income and operating statements. This analysis should be for three to five years.

Regional analysis should consider the length or period of ownership as this has a direct relationship on the development of a capitalization rate and whether the rate would be in perpetuity or for a finite period. This would include an indication of whether the properties are family-owned or corporate enterprises.

The final summary should relate the regional analysis to the specific location of and effect on the subject property.

III. Market Area Trends

Analysis in this section may include parts of a county or several counties within a state or sub-market area. It is an analysis of an area where properties are "competitive" and comparable to the property being appraised.

Particularly important is the analysis of the transportation system, including roads and railroads, ease of marketability of farm products and the availability of farm supplies. Pertinent to the analysis would be the available markets for the farm products including relative transportation cost to the marketing source.

The effect of governmental units on the property should be analyzed. This could include units such as water, fire protection, drainage or irrigation districts, pest control, planning and zoning agencies and highway departments.

Trends are important and may have an immediate effect on agricultural property. Changes or trends in the type of ownership farm operations, (i.e., the number of farms, size, crop selection and or rotation, etc.) Rural versus urban/suburban population, and opportunities for farm employment should be addressed and related to the property being appraised. Consideration of trends or changes in technology may be the basis for external obsolescence affecting the property.

Climate, rainfall, length of growing season(s) and adequacy and costs of available utilities are of particular importance to agricultural operations and should be carefully analyzed.

IV. Tax and Assessment Analysis

Data should be presented relative to the assessment methodology, tax rates and amount of taxes.

A history of the assessments and taxes of the property should be included and analyzed. An analysis of future tax trends and their effect on the property should be included in this section.

It is suggested that the assessment and taxes for the property be compared to competing properties.

V. Highest and Best Use

A complete discussion of Highest and Best Use should be included with emphasis on changing use patterns of the land and buildings, zoning and planning regulations and changes in cropping conditions in the area. The comments in *The Official Guide to the Demonstration of Knowledge Requirement: General* apply here.

VI. Appraisal Process

A brief discussion of the three approaches to value and their application in valuing the property should be included.

VII. Sales Comparison Approach

Sufficient sales should be utilized to provide a basis for the analysis of the market in which the property is located. In addition to the sale price and terms, the analysis of each sale should include such pertinent factors as the type of farm, date of sale, size, location, soil type(s) and their productive capacity, land use, type of improvements and their contributory value, and the type and contribution of land improvements, if any.

Sufficient detail for the comparables must be included to support adjustments for each dissimilar factor found in the market. The adjustments should consider, but not be limited to, financing terms, time, location, size, improvement contribution, productivity, soil types, land use variation, and any other market recognized difference which would affect value. The sales data must then be reconciled into an opinion of value via this approach.

VIII. Income Approach

The discussion should include the type of farm operation and whether it is owner or tenant operated. If it is tenant operated, an analysis of typical tenant operations in the area should be thoroughly discussed and include an analysis and determination of the division of expenses between the tenant and owner and/or the amount of cash rent the owner receives for the property or facilities which may be provided.

The income analysis must include consideration of all farm income and expenses. The analysis is based upon the farming operations of the subject property in comparison to the typical operations

in the immediate and/or competing area. The Candidate needs to be careful and handle this section on a rental income and expense basis. In other words, the farm business should not be appraised. We are only interested in the real estate. With that in mind, we need to concentrate on rentals of similar properties and who pays what in each case. Then a reconstructed income and expense statement for the subject needs to be performed. If the subject is a rental farm, then a three-year operating statement would be quite useful. The NOI would then be capitalized into value using the direct capitalization approach. A complete analysis of the capitalization rate and methodology utilized must be included with support provided for the rate selected. The capitalization rate should be based upon overall rates found in the market place.

IX. Cost Approach to Value

The land as unimproved must be valued. Support must be provided if there are various soil types which are valued separately. Typically, the Sales Comparison Approach is utilized in this analysis. There should be a sufficient number of sales to support the land value opinion.

Each land sale should be fully described and analyzed to make appropriate adjustments. Particular consideration should be given to the soil type, productive capacity, farm configuration and topography as well as land uses with an analysis of the various factors. Each adjustment must be fully supported in the market.

For the improvement analysis, Reproduction Cost New must be developed, supported and the sources indicated. If cost services are used, they should be verified with local costs. Soft costs and entrepreneurial incentive is to be considered and supported.

Depreciation is developed in a manner like any improved property. Consideration should be given to physical curable, physical incurable short-lived and physical incurable long-lived depreciation. Functional obsolescence should be considered, particularly in terms of deficiency, defect or superadequacy. These should be identified and discussed in the neighborhood and improvements analysis sections.

External obsolescence should also be discussed in the neighborhood and improvements analysis section. This form of obsolescence is frequently found in a rural area and may be caused by a changing pattern of development and land use or types of farming.

X. Reconciliation and Final Opinion

Each of the three approaches are reconciled as they are developed. The Reconciliation and Final Value Opinion includes an overview of each approach with particular emphasis given to a brief review of the developed data. Consideration of the strengths and weaknesses of each approach and an analysis of the quantity and quality of data available in each approach must be provided.

The appraiser's thought processes resulting in the final value opinion should be described in sufficient detail to support the final value opinion.

This section would typically indicate which approach was given the most weight and consideration and provide the rationale for the conclusion. The date of the effective date of valuation as well as the final opinion of value must be included.

It would be appropriate for the appraiser to allocate the final value opinion between the land and the building improvements.

XI. Certification

The applicant should refer to the comments and suggestions contained in the section of this guidebook related to Certification.

XII. Special Limiting Conditions

It is recommended that special limiting conditions adhere to the applicable section in this guidebook related to limiting conditions.

XIII. Exhibits

Exhibits typically included in this section would be regional maps, aerial photographs of the property, a plot of the property showing the location of the building improvements, soil maps indicating the location of the various soil types, photographs of the various building improvements, floor plan sketches of the major buildings and various comparable sales and rental maps.

It is appropriate and recommended that the various exhibits be included throughout the report in the pertinent section.

AI Membership

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