

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

IX. MISCELLANEOUS PROJECTS AND CORRESPONDENCE WITH INDUSTRY

G. Samples of Miscellaneous Industry Correspondence

2. From James A. Graaskamp (Very limited - Few Originals Saved)

Landmark
Research
Inc.

October 5, 1987

James A. Graaskamp, Ph.D., S.R.E.A., C.R.E.
Jean B. Davis, M.S.

Ted Prophet, Jr., Vice President
First Republic Bank
1707 Pacific Avenue
Dallas, TX 75201

Dear Ted:

In response to your inquiry of September 9, I am forwarding my comments on appraisal guidelines for discounted cash flow analysis and on the nature of the functions of the review appraiser.

A. Relative to the Functions of the Review Appraiser

It is assumed that for outside appraisal sources, the bank would have a letter of engagement prescribing methods, appraisal standards, format, and the purpose for which the appraisal was required as a benchmark. For in-house appraisers, this is presumably a similar set of guidelines in written form. The review appraiser must see if the appraiser followed instructions and is internally consistent and logical.

If the appraisal is made for a loan, then the primary emphasis should be on forecasting cash available for debt service, not on market value. Since cash flow is a function of supply and demand for very specific types of space at very specific locations, that is the kind of market research to be emphasized. Lending should reflect cash break-even points and debt cover ratios and not market value assuming, that all assumptions are positive.

The primary emphasis should be on evaluating how well the appraiser supported the critical assumptions with empirical evidence rather than proof by assertion. If the review appraiser cannot find the assumptions, you cannot buy the report or the value conclusion. Review appraisers have to be retrained to analyze the potential variance in the critical estimates and assumptions and the sensitivity of loan repayments to these variables rather than the plausibility of the final value conclusion. See attached monograph by the Review Appraisers Association.

B. Relative to Discounted Cash Flow

I'll start with the easy questions first:

1. A good software package for bankers is the one produced by Robert S. Martin, MAI, at Martin and Associates, P.O. Box 5284, Winston-Salem, NC 27113-5284; Telephone (919)765-4201.

Mr. Ted Prophet, Jr. Vice President
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2. In addition, it would be useful to have a program developed by Gene Dilmore, which allocates return to first-year income held constant over the term, to an assumed increase in income, to the amortization of principal, to tax savings to other income, to change in net worth assuming resale at the original purchase price, and to change in net worth above that amount as a result of appreciation net of taxes on sale. It underscores how much the investor is depending of soft assumptions about the future trend and how much he can depend on income under contract or from other sources. You can contact Gene Dilmore at Realty Researchers, Realty Researchers Building, 586 Shades Crest Road, Birmingham, AL 35226; Telephone (205)823-5479.
3. If you have a good computer/analyst available, the more flexible but less user friendly programs of FINSIM II by Grant Systems in Dallas, Texas, should be considered. The Martinsystem could be used by anybody, but it is not as flexible nor as powerful for custom crafted deals.
4. Good publication sources for current market value can be had from the following:

"Quarterly Real Estate Investment Survey" (Excerpt enclosed)
REAL ESTATE REPORT
Real Estate Research Corporation
1700 Pacific Avenue, Suite 1620
Dallas, TX 75201
(214)969-0461

"Bottomline"
NATIONAL REAL ESTATE INDEX
Liquidity Fund Investment Corporation
1900 Powell Street, Suite 720
Emeryville, CA 94608-1831

Schedule M
"Income Property Loan Patterns by Quarter"
American Council of Life Insurance Companies
1850 K Street, N.W.
Washington, D.C. 20006

C. Relative to Discounted Cash Flow Valuation Guidelines

The objective of the bank's Income Approach to Value should be distributable cash available for debt service so that there is less dependence on elusive collateral sale prices as the source of security. Monthly and annual cash for debt service is the real security.

1. Therefore, John Ellis and Gerald McKim are quite right in requiring a deduction for leasing and retrofit costs before taking the present value of cash flow.

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2. An enclosure labeled Exhibit 4 is a suggested format for the income statement per planning period. Net operating income should be on an accrual basis with costs of leasing and tenant improvements allocated over the original lease term. For example, a five-year lease costing \$100,000 would have \$20,000 charged to the first year above net income and \$80,000 deducted below net income to arrive at distributable cash. This way, net income measures economic productivity and, when compared to total capital costs, indicates presence of positive or negative leverage. Moreover, net income is properly defined in the last year in order to capitalize resale price. The capitalization rate in the last year should always be 25 to 75 basis points higher than the first normalized year rate to reduce the sensitivity of the deal to a future resale price. The loan should be secured by an economic purchase price rather than an optimistic sales price.

3. Relative to the one page August 24th memo from John Ellis and Gerald McKim:

--Item 2 should require five-year forecasts for hotels, restaurants, and warehouses as well as land developments with conservative resale prices on the reversion.

--Item 4--Yields on current sales are not very relevant to bank appraisals because yield will be a function of timing of the original purchase sometime in the past. Terms of sale would be much more revealing of the relative bargaining power of buyers and sellers.

Item 5--I would be very wary of the M/PF Rental and Occupancy Survey as I told you earlier on the phone. Income properties are very sensitive to neighborhood location and physical design in Texas and do not operate according to market averages. We need to look carefully at employment by SIC Code and concentrations of that SIC Code in different areas of the community. Pass-through of expenses, which are subject to inflation, will push down base rents at the time of renewal where there are existing vacancies. I suspect there is a need to better focus the M/PF model.

D. Reference to Appraisal Guidelines in August 1 Memo:

1. An enclosure labeled Exhibit 5 is an example of the Income Approach from a good shopping center appraisal. Note the market value is stated as a range. The Income Approach establishes market rents by size class and lags recoveries of pass-throughs. DCF uses distributable cash before debt service after reinvesting in new leases and deferred maintenance. Distributable cash is like Graham's and Dodd's emphasis on dividends paid, while resale price is the lagged benefit of reinvested earnings. Compare Exhibit 4, pro forma format, with this commercial appraisal (which received the highest score in our study for PREA).

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2. Expenses should be reorganized so that they reflect the items contained by category in CAM, escalators, pass-throughs and other revenue items. It is easier to do the schedules and allocations by tenant than by the traditional fixed and variable expense line items. Management costs should be distinct from leasing costs. Property management is executing current business. Asset management is buying future business. Financial management is dealing with relationship of positive and negative cash flows to capital structure.
3. Bank appraisals should be less concerned with market expectations and more concerned with the long term economic models to avoid local euphoria, short term equity risk management attitudes, and short term cycles of both inflation and absorption. Buyer criteria for discount rates is less important than cost of capital for the bank plus a loading factor. The bank is selling a put when making a non-recourse loan so the bank will be the buyer, not some unknown buyer type. The question is what would the bank pay as an informed buyer. Do not base resale values on M/PF, but on real asset enhancement or on a conservative cap rate. Market expectations of the future are always wrong and self-serving.
4. I Am Confused by the Sentence in August 1 Memo:
"Existing leases are recognized at contract rents (as they should be) providing these leases meet the definition of current market rents."
Does this mean "net effective rents" after all concessions?

Hope these comments are useful. Call me for clarification on Thursday or Friday. Best regards.

FOR LANDMARK RESEARCH, INC.

James A. Graaskamp, CRE, SREA, Ph.D.
Urban Land Economist

Enclosures

JAG/mak

University of Wisconsin-Madison

1155 Observatory Drive
Madison, WI 53706
608/262-0391

November 4, 1987

Mr. Michael L. Robbins
Real Estate Dynamics, Inc.
6441 Enterprise Lane
Suite 215
Madison, WI 53719

RE: Letter of Endorsement for NASA proposal NRA-87-OSSA-6.

Dear Mike:

The Real Estate and Urban Land Economics Department, of the Graduate School of Business, at the University of Wisconsin-Madison agrees to participate in the Real Estate Dynamics, Inc. proposal to NASA, #NRA-87-OSSA-6, entitled Digital Image Processing and Real Estate Portfolio Management, for the purposes so specified. The participation of our faculty and graduate students in developing real estate analysis tools from advanced technology has always been an objective of our department. Beginning in the early 1970's the real estate department has been at the cutting edge of developing real estate analysis tools and I believe that your proposal is a continuation of that effort.

The funding of graduate students for three years, along with some faculty support is a direct benefit to our program. But, more importantly being able to position our faculty to make immediate application of new technology available to students through the classroom is a item of major interest. As you develop your proposed analysis tools I will support your endeavor to transfer them into the classroom and from there to the real estate industry as a whole. The magnitude of the problems facing real estate analysts has reached a critical threshold and it is only through techniques such as you are proposing that more informed decisions can be made.

Sincerely,

James A. Graaskamp, Ph.D., CRE, SREA
Chairman, Department of Real Estate and
Urban Land Economics

Real Estate Dynamics, inc.

COUNSELING

ECONOMIC ASSESSMENT

FEASIBILITY

LAND PLANNING

MARKET ANALYSIS

November 4, 1987

Mr. Ray J. Arnold
Code EPM-20 (NRA)
NASA Headquarters
Washington, D.C. 20546

RE: Letter of Endorsement for NASA proposal NRA-87-OSSA-6.

Mr. Arnold:

Real Estate Dynamics, Inc. agrees to act as general contractor as outlined in NASA proposal NRA-87-OSSA-6 entitled Digital Image Process and Real Estate Portfolio Management, for the purposes so specified.

Sincerely,

Michael L. Robbins, Ph.D., CRE
President

Salomon, WP

3-14-89

March 18, 1988

Ms. Andrea Lepcio
Salomon Brothers, Inc.
One New York Plaza
New York, NY 10004

Dear Andrea:

Enclosed is a revised manuscript on predevelopment land investment strategy. I tried to incorporate the emphasis of my presentation in New York and to remove the statistical sets demonstrating the theory on thirty major cities in the U.S. as you and Dave Shulman suggested.

Perhaps the paper needs more subtitles or quantitative illustrations.

Let me know if there are any other substantive changes you would like us to make. You are free to use your red pen as you wish. Hopefully this completes our obligation for two research papers per year on the first year of our contract.

Best regards,

James A. Graaskamp
Chairman, Real Estate & Urban Land Economics

JAG:bam

Enclosure

3. Executive Summary

Introduction

Urban land economics, in part, relates locational characteristics of a particular site to an economic context of relative importance. It is common knowledge that land and or structures, (real estate) has value because of its locational position in the urban landscape. Therefore, a real estate analyst must understand the location and locational quality characteristics of real estate in order to estimate the influence of spatial utility on value. Ratcliff described this relationship of location and value as follows:

The essence of location derives from one of the elemental physical facts of life, the reality of space. . . . As a result no two objects can be at the same place at the same time. Necessarily, then, all people, animals, and objects are distributed in a spatial pattern.. Our concern, being with real estate and cities, is to understand how this spatial pattern in cities influences the usefulness and value of particular parcels of land. Then we shall see how these spatial values, in their turn, play a part in the decisions of investors, in the development of urban land, and in the creation of a more or less orderly, consistent, and predictable spatial arrangement of urban land use....

The long term nature and financial consequences (both public and private) of real estate decisions necessitate a good understanding of potential future spatial changes that may influence value. Specifically, by using data from remote sensing technology in a GIS format a more efficient and systematic procedure can be developed that supports the understanding of the dynamics of urban land use change. As it stands now enormous amounts of data and information exists to help in the analysis of real estate. What is lacking is an efficient and effective way of making this information available to those making choices. Often important data is ignored because decisions must be made quickly.

Example

Currently there are major banks and savings and loan organizations over many parts of the U.S. which are failing financially. In most instances these organizations are failing because of bad real estate loans. And for each bad loan there is at least two bad appraisals, one for the borrower and one for the lender. Also, because most of the lending institutions are insured by the federal government the insurance programs have had to commit all of their reserve funds. The result is that for all practical purposes the federal insurance programs are bankrupt and it is only through legislative action that they have been kept in tact. The government has just recently approved an additional allocation of 25 billion dollars to the insurance programs.

To help counter the outflow of funds from the insurance programs, new appraisal legislation has recently been proposed which will have a significant impact on the content of real estate appraisals and how appraisals will be administered by lending institutions. Of significance to this proposal is the requirement that when an appraiser makes a determination of a subject properties "Highest and Best Use", specific information must be provided, in a understandable and reproducible form. That information is:

Historical market trends which impact on use selection of the subject property.

Current market forces which impact on the current short term use selection for the subject property.

Long term future market forces and trends that will impact on long term use selection for the subject property.

The intent of the focus on market forces is to attempt to provide information on the potential absorption of space being proposed for the subject property. Or stated differently, "what is the short and long term demand for the type of real estate (space) being proposed for the subject property".

This need for absorption inventory analysis has some very important relationships for our proposal. For some types of land use absorption results are expressed in visually noticeable imprints upon the landscape. For example the process of conversion from raw land to improved lots to finished residential units represents unique and recognizable signatures upon the landscape. The conversion from raw land to improved lots imprints upon the landscape such recognizable items as roads, grading, sewer lines, electrical services, etc. all of which are observable from current technology platforms. Also, the frequency per unit distance becomes a measure of density.

The conversion from improved lots to dwelling units also places on the landscape very recognizable signatures.

The monitoring of the inventory conversion process (land - lots - dwellings) provides an index of marketing success or failure. Being able to observe the rate of conversion provides insight into the market acceptance of the product. With the monitoring and inventory in place it is also possible to make inference into density and locational attributes of the products being marketed.

Indirect market factors can also be monitored when inventoried. Land use conversion from raw land to shopping centers, schools, infrastructures such as roads, sewer lines and electrical systems all impact upon the suitability of surrounding properties.

Objectives:

- A. The integration of remotely sensed data, (aircraft and satellite) into a geographic information base for real estate analysis and decision making.
- B. Development and enhancement of digital image processing techniques for land use classifications at a micro market level, i.e., land classification using remote sensing data by civil divisions such as Census Block level or traffic analysis zone level.

Real estate decisions are based on predicting future events and then quantifying those predictions over time to reflect and determine a course of action today. The ability of the real estate analyst to make reasonable projections is based on an understanding of the dynamics of land use change over time. However, before change can be detected the analyst must know what is there today. Until recently the ability to handle large amounts of spatial information was economically infeasible and the resolution of the data once organized into accessible formats was not particularly useful. However, with more refined data sources such as that provided by Spotimage, when used in a micro computer geographic information system such as TYDAC, make the application of such data a economically viable reality to more users.

Enhanced and new classification techniques can make the interpretation of satellite and high altitude images more meaningful and useful to the real estate user/analyst. The use of spatial data images in conjunction with other land based information such as assessor files and other GIS data systems can provide the information base necessary for micro-level or site specific real estate decisions.

We are proposing creating a spatial data system, incorporating satellite information that is classified and interrupted with advanced techniques, with in-house geo-coded data bases to assess the utility of these new resource tools to support real estate

decisions. A by-product of previous work in the study area is an inventory of economic performance of individual tenants in ten neighborhood shopping centers. This information covers every square foot of rentable space for each center for a five year period. We have revenue, expense and operating information for all space making up the centers. This data was combined with in-house spatial data bases derived from local, state and federal sources as well as commercial data vendors who provide population and economic data. The in-house system is currently being managed by in-house software and is passed to the commercial spatial display package known as "ATLAS*GRAPHICS". This data inventory was created to support the appraisal and management plan for the ten shopping centers. We are currently converting the entire data inventory to the TYDAC spatial analysis software package "SPANS". It was during our involvement with the appraisal of the shopping centers, and the difficulty of trying to project future economic performance, to support and document the assumptions upon which the real estate value was positions, that the idea for this proposal began to take form.

Building on our previous experience and data strengths we propose the evaluation of two business use types and will attempt to make projections about future economic performance to aid in their decision-making process.

The two business use types are:

- A. Retailer/developer
 - 1. Grocer
 - 2. Neighborhood shopping center developer

- B. Commercial Portfolio Manager
 - 1. Vacant land inventory
 - 2. Commercial properties
 - 3. Residential properties

The study site is located in the resource-based economy of Anchorage Alaska. The owner/managers of both business use types are seeking

ways to alleviate the financial burdens resulting from a major market downturn. The owner/managers of both business use types have distress properties (those experiencing marginal or break-even profitability) and defaulted properties (those properties that operate at a deficit or not at all). The owner/managers of these properties must determine a course of action for individual properties that can respond to the economic downturn that may last for the next five years. What would prove very useful to their decision process would be spatial organized information that identify market trends and opportunity areas in the near future.

Technical Approach:

Project concept: Integrate existing spatial data systems with new and enhanced image processing techniques that can be used with a microcomputer base GIS system.

Materials:

A. Data Sources

1. Aircraft photograph
2. SPOT Data
3. Existing land record GIS

B. Hardware

1. 80286 based micro computer
2. Hard disk system
3. EGA color graphics system
4. Digitizing tablet

C. Software

1. TYDAC GIS (SPANS)
2. Data base manager
3. Image processing programs
4. Real estate valuation and cashflow models

All hardware and Software will be provided by Real Estate Dynamics, Inc. and affiliates.

Technical Plan:

This project is to be developed in three phases over a three year time frame.

Year one

- A. First quarter: implementation of plan, securing necessary data from defined data sources, establishing the operational framework between organizations and staff for effect communication and interaction. An identification of the specific tasks for groups and individuals within each group.
- B. Second quarter: Developing new and enhanced image processing techniques. Integration of the spatial data with the GIS. Determine specific area(s) for the analysis focus. Site visit to study area(s).
- C. Third quarter: Refinement of efforts begun in the second quarter.
- D. fourth quarter: Application of the proposed process to two sites, one for each business use type.

Year two

- A. First quarter: Review of the results obtained in the prototype example of the preceding quarter. Identify areas of the process in need of refinement.
- B. Second quarter: Refinement of the process as set forth in the first quarter.

- C. Third and Fourth quarters: Application of the refined process to the same sites identified in phase one as well as at least two new sites identified previously within the study area of phase one.

Anticipated Results and Implementation Plan

A. Anticipated results

1. Development of advanced image processing techniques for the classification of land use types.
2. Development of image classification schemes that recognize discernible and significant land use pattern changes over time that have direct input to real estate market analysis.
3. Maintaining or enhancing property values is of prime concern to real estate managers. To accomplish that goal a manager must understand the local market economy of a particular parcel and/or business enterprise. The market, i.e., customer base, drive the process which generates value for the property. Markets or customers operate within defined spatial areas. If one has a better understanding of a particular properties market base then he/she can apply that knowledge to enhance the value of the property. In the examples proposed by this project the idea is not so much value enhancement but value preservation. A depressed economy, contrary to logic, is a very dynamic market. Those with the resources to do so will relocate to take advantage of opportunities. Being able to identify areas likely to change is extremely important. Therefore, by using the results anticipated in items 1 and 2 opportunities can be identified and a course of action defined for a property, i.e. to sell, to buy, to expand facilities, to remodel facilities, to maintain the status quo.

Management Plan

include a chart --all information for this section is contained in instaplan.

Cost Plan

--John

Examples:

1. Anchorage grocery retailer--The data needs specific to this user revolve around the customer. Typically questions asked are:
 - a. how many customers are there in my primary market area
 - b. Where are they located and where may new customers locate?
 - c. what are they willing to spend?

Typically there is not a single repository of information where one can get information to answer these questions. Public agencies, private consultants, demographic services to name a few have the information but the orchestration of combining it into a usable tool is time-consuming and expensive. Since markets are dynamic and change over time, at various rates due to micro economic forces, the information is out-of-date quickly and provides little to the decisions that must be made today. Using demographic sources of data as base information coupled with the ability to update this source by using classified spot data can give fast and accurate measures of population change and also the describe the new additions to the market by profiling the housing type. Housing type can be determined from the density of the area which in turn describes general profiles of customers in terms of income, and age, and expenditure patterns. Coupled with prior knowledge of the local area more accurate and timely estimates of the demographic characteristic of new customers are plausible.

Why is type of information so important to a retailer? Given that grocery retailing is intensely competitive and has an extremely small profit margin of 1 to 3%, any small advantage on better understanding

customer types is crucial. A retailer can target additional product types that would be of historic preference to these individuals. Thereby capturing these persons early in their search for supermarkets that meets their needs. In a business with fickle customer loyalties this knowledge can be crucial to survival of the store.

2. Commercial Bank Portfolio Manager--Anchorage is currently experiencing an economic depression that reviles any in Texas. Banks have failed. Many properties are financially bankrupt leaving banks and savings and loans with huge portfolios of real estate that can't pay back loans. The prognosis, in the near term, is bleak. However, the exacerbated situation is only unique in that the trade-offs of asset managers involve not is one course of action more advantageous or not but is one course of action likely to have any positive gain or not. In other words asset managers are making the same number of daily decisions but the circumstances may vary greatly. What would interest an asset manager would be answers to questions such as:

- a. When the economy does improve what areas will rebound more quickly and to what degree.
- b. Another concern could be If I refinance a property to more favorable terms to get through the current depression will the property be able to survive and eventually recover to pre depression performance?

What the decision maker requires in either information is quick access to important information relative to the physical dynamics of the market area around of specific property, i.e. land use, land type, density, developable area, etc. Decisions relative to these properties must be made quickly given the millions of dollars of mortgage defaults that are hanging in the balance. A 25 million dollar office building with typical financing could have monthly mortgage payments of \$150,000 that are not being paid. The manager must quickly decide if it is in the banks best interest to either hang on, refinance the mortgage to more favorable terms to the owner, of bail out and sell the property before things get worse. Currently these types of decisions are made with minimal information because it

is not available in a reasonably fast time frame. Poor decisions are the result. A spatial data system would in part solve this situation providing almost real time analysis of the problem.

3. Large scale residential developer-- a third plausible application of a GIS with SPOT data classified images involves a regional scale problems. Residential development at the most sophisticated level occurs on a regional basis with developers engaged in projects in a multi-state area. To be able to operate a such a grand scale these people use aerial photography to tract developing areas to look for new opportunity areas or locate developments that are having difficulty. A development that is overextended and in financial trouble can usually be purchase for a bargain. Nevertheless, this type of approach involves much field work to verify the often spotty information or aerial photography. From a single location development in multiple metropolitan areas could be monitored with much greater reliability at a much lower cost than sending people into the field to determine the current status a particular property.

4. Another example of regional data needs is an extension of the discussion in example 2. The largest potential user of the system we propose could easily be a group referred to as institutional investors or pension funds. Currently these funds own over 50 billion in real estate holdings. On a daily basis pension fund manager reviews 25-35 properties for potential acquisitions making buy or no buy decision based on a few pages of abbreviated description and possibly a photograph. These mangers must make decisions on properties all over the country involving billions of dollars with little to no information about the local area. What these people are looking for is a comfort factor relative to the magnitude of their decision. Again the system we are proposing would allow the analyst from a central location access to much need information that even given current costs would be perceived as a bargain when considering the large sums of money at risk.

April 1, 1988

Racster.WP

4-01-88

Professor Ronald L. Racster
Center for R.E. Ed. and Research
Ohio State University
1775 College Road
Columbus, OH 43210-1309

RE: Homer Hoyt Institute Research Grants

Dear Ron:

Maury Seldin and I have been discussing the 1989 High-Level Conference of the American Society of Real Estate Counselors. We outlined some general research opportunities relative to historical development of real estate property concepts and financing methods. He suggested that the University of Wisconsin School of Business Real Estate Department apply for two research assistantships of \$10,000 each. One assistantship would be for the forthcoming academic year 1988-89, beginning with the Summer School session in mid-June. The second research assistantship, if funding permits, would be for the Winter and Summer semester of 1989, so that the work product would be available for the CRE High-Level Conference in 1989.

Maury Seldin is sending me further materials that target the historical evolution subject areas more precisely together with the content theme desired for a consistent research program by the American Society of Real Estate Counselors. At the same time, I will be reviewing and selecting at least one of our current Ph.D. candidates for the research assistantship to facilitate a timely response and work product for the Counselors.

Let me know what other documentation might be required. We would deposit assistantship funds in our Homer Hoyt Institute Account at the University of Wisconsin Foundation for administration and release to the University as the research project progressed.

Yours truly,

Professor James A. Graaskamp
Chairman, Real Estate & Urban Land Economics

JAG:mjf

cc: Professor Maury Seldin