

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

A. Appraisal Organizations

8. 1976

- a. "A Guide to Feasibility Analysis",
jointly sponsored by Wichita Chapter 69
and Topeka Chapter 159 SREA, AIREA
Kansas Chapter 45, and Wichita State
University, January 13, 1976

A GUIDE TO FEASIBILITY ANALYSIS

Center for Management Development
Wichita State University
January 13, 1976

Sponsored by:

Wichita Chapter #69 of the Society of Real Estate Appraisers
Topeka Chapter #159 of the Society of Real Estate Appraisers
American Institute of Real Estate Appraisers Kansas Chapter #45
Professorship of Real Estate and Land Use Economics, Wichita State University

MORNING SESSION: 9:00 A.M.

- I. Real Estate as an Enterprise and the Management Process
- II. Elements of a Total Feasibility Analysis
- III. Alternative Specialists to Input Facts *missing*
- IV. Elements of Financial Feasibility *missing*

COFFEE BREAK: 10:30

- V. The Concept of Risk *missing*
- VI. Determining Objectives and Criteria of the Client *missing*
- VII. Structuring Market Data Analysis With Models ✓ (VI)

LUNCHEON: 12:00

AFTERNOON SESSION: 1:00 P.M.

- I. Market Segmentation and Identification of Prospective Buyers or Tenants ✓
- II. Pre-Architectural Programming ✓
- III. Developing a Customer Profile with a Consumer Survey ✓

COFFEE BREAK: 2:30

- IV. Structuring and Modeling Cash Flows for Rental Properties ✓
- V. Modeling Cash Flows for Land Development ✓
- VI. Modeling Cash Flows and Other Measures of Economic Impact on a Community ✓
- VII. Risk Evaluation ✓

EXHIBIT ONE

F **E** **A** **S** **I** **B** **I** **L** **I** **T** **Y** **R** **E** **S** **E** **A** **R** **C** **H** **G** **R** **O** **U** **P**

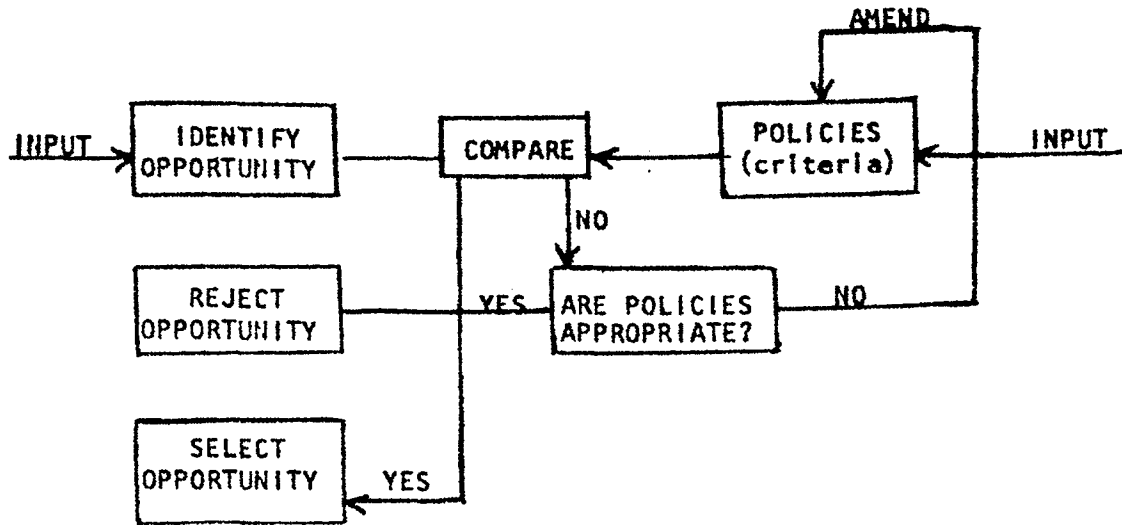
Accountability

Accountability rests with the individual (s) firm (s) or sources as indicated below:

1. Statement of Objectives by _____
2. Satisfaction Criteria by _____
3. Alternative Research by _____
4. Market Research by _____
5. Market Analysis by _____
6. Space User Profile by _____
7. Consumer Preference Survey by _____
8. Market Forecast by _____
9. Absorption Rate Forecast by _____
10. Land Development Cost Estimate by _____
11. Building Improvement (s) Cost Estimate by _____
12. Indirect Cost Estimate by _____
13. Producer Cash Flow Forecast by _____
14. Tax Liability Projection by _____
15. Investor Cash Flow Forecast by _____
16. Environmental Impact by _____
17. School District Impact by _____

FEASIBILITY ANALYSIS SEMINAR OUTLINE

1. Concepts and definitions basic to real estate enterprise
 - A. Real estate is a dynamic space-time interface of land (public resource), people (cultural preference) and artifacts (improvements). These forces can be reduced to specific decision makers - a consumer, a producer, and a political agency. The planner is an arbitrator.
 - B. Each of the three decision makers represents an enterprise. An Enterprise is an organized undertaking and some enterprises are cash cycle enterprises constrained by a need for solvency, short term and long term.
 1. The interface occurs where the consumer, producer, and governmental cash cycle each achieve solvency.
 2. The business of real estate is the process of converting space-time to money-time.
 3. The business of real estate is a service industry using manufactured products to create profit opportunities for services.
 - C. Traditional sequence of management function:
 1. Planning
 2. Organizing
 3. Directing
 4. Controlling
 - D. Modern Management Theory treats any undertaking which is organized to accomplish a purpose as an enterprise. The functional steps in a systematic enterprise are:
 1. Goal-setting
 2. Forming policies
 3. Searching for opportunities which are consistent with policies
 4. Selecting opportunities which are consistent with policies
 5. Designing systems for capturing selected opportunities
 6. Installing systems for capturing selected opportunities
 7. Operating the systems that have been installed
 8. Maintaining and continuously perfecting the operating systems
 - E. The systems engineer sees the eventual form of an enterprise, in terms of both its configuration and behavior, as representing a negotiated concensus between two general sources of power - the power of the environment to dictate form and behavior of the organization on one hand and the power of the organization to decide for itself what its characteristics and behavior will be on the other hand.



F. The general theory of the management process for any enterprise can be converted to real estate semantics:

Values, objectives, policy	Strategic format
Search for opportunity alternatives	Market trend analysis
Selection of an opportunity	Merchandising target with monopoly character
Program to capture opportunity	Legal-political constraints
	Ethical -aesthetic constraints
	Physical-technical constraints
	Financial constraints
Construction of program	Project Development
Operation of program	Property Management
Monitoring and feedback	Real Estate Research

G. Real estate is a special case of the cash cycle enterprise because:

1. The length of the time cycle is so long
2. The enterprise and the tools are so interdependent
3. A real estate project as an assembly of mechanical sub-systems
4. Operationally a real estate project is a social system

H. To judge an artifact such as a vase one must first understand the functions it was to serve, the constraints inherent in the material, and the variables within the control of the designer before one can judge the success of the ensemble

1. Objectives or functions must be defined in given priorities.
2. Context is that part of the environment which will not change and to which one must adapt or one must achieve. A firm objective is as much a constraint as unchangeable zoning.
3. Form is concerned with those elements of the environment which can be molded, adapted, or assembled to fit the critical requirements and objectives of the context

4. Success is evaluated by the fit of form to the critical elements of context - an ensemble which first requires identification of the context or problem to be solved.
5. The systems concept of the firm as a concensus between forces and the artists idea of form in context then leads to this definition of feasibility:

"A real estate project is 'feasible' when the real estate analyst determines that there is a reasonable likelihood of satisfying explicit objectives when a selected course of action is tested for fit to a context of specific constraints and limited resources--
James A. Graaskamp.

II. Elements of a Total Feasibility Analysis

The basic forces or elements of context which make a feasibility problem manageable also lead to understanding of the proper report titles as it is seldom that one does a complete feasibility study as a single report.

A. The subject matter can be classified as:

1. Strategic objectives and tactics (policies)
2. Market trends and opportunity areas
3. Merchandising targets with monopoly characteristics
4. Legal-political constraints
5. Ethical-esthetic constraints
6. Physical-technical constraints
7. Financial constraints

B. These elements also name the report type:

1. Strategy study: selection of objectives, tactics, and decision criteria.
2. Market analysis: economic base studies or other related aggregate data review.
3. Merchandising studies: consumer surveys, competitive property analysis, marketability evaluation, etc.
4. Legal studies: opinion on potential legal constraints, model contracts or forms of organization, and political briefs.
5. Compatability studies of project to community planning, conservation standards, or other public policies.
6. Engineering, land planning, and architectural studies.
7. Financial studies: economic modeling, capital budgets, present value and discounted cash flow forecasts, rate of return analysis, financial packages.

C. The report types also suggest the potential contribution by other specialties and the basic character of a statement of limiting conditions.

11. The analyst as an expert on experts
2. Synthesis of all reports in the financial report
3. Real estate as a set of assumptions and permission of the client as to which set of assumptions are acceptable as provided by others.

pp. 4+5 are missing

- 3. His style of value decision trade-offs between qualitative and quantitative issues
- 4. His perception of his risk position and his risk utility "curve"
- 5. His personal non-business objective

VI. Structuring Market Data Analysis with Models

- A. Creating devices which will discard most data and logically relate the rest.
 - 1. Models explain what you are going to do
 - 2. Models explain relationships and key assumptions
 - 3. Models permit client to test his own assumptions for a range of alternative outcomes
- B. Demonstration of converting weekend skiing demand to motel room quantities at a specific resort (See illustration)
- C. Conversion of highway traffic to historical exhibit admissions (See chart Flow Diagram)

EXHIBIT TWO

SKIER MOTEL ROOM DEMAND MODEL

$P \times R \times T \times D \div PR \times MS = \text{Rooms per Average Weekend Day where:}$

P = Total population for counties in the overnight trade area.

R = Skier Participation rate on the average Winter Sunday.

T = For All skiers the average number of overnight skiing trips.

D = Average length (days) of overnight skiing trips.

MS = Market Share (%) of weekend skiers that the Wintergreen Motel can capture.

PR = Number of people staying in each room of motel.

Total population for surrounding counties	x .0046	Average Sunday participation rate	x .9	trips per year	1.86	days per trip
Three people per room	x 2.5%	conservative market share	= 208	rooms per average weekend day		

BREAK FOR LUNCH

EXHIBIT THREE

DEMAND FOR ELDERLY RESIDENTIAL CARE UNITS

Persons in County age 65 and over in 1970		21,914
Adjustment 1970-1974 to reflect the number of persons moving into the 65+ bracket and the application of mortality rates by age and sex		<u>245</u>
Estimated persons in County age 65 and over in 1974		22,159
Less persons 65+ presently in nursing and residential care facilities in County	1,792	
Less persons 65+ presently in government subsidized housing for the elderly	<u>638</u>	<u>2,430</u>
Persons age 65+ in the conventional housing market in County in 1974		19,729
Estimated number of persons financially qualified for and seriously interested in moving into the proposed residential care development		4,270
Household equivalent (+ 1.519 persons per household)		2,811
Less estimated number who will not convert serious interest into any form of action (50%)		1,406
Less the percentage who, while seriously interested, said (before they heard the hypothesis) that their next home would probably be outside County (13.3% from survey questionnaire)	187	
Less those disqualified because their current health status necessitates care beyond the scope of services to be provided in the residential care units (5.4% (from survey)	<u>76</u>	<u>263</u>
Elderly households in County qualified for and seriously interested in moving into the proposed development		1,142
Plus an allowance for those elderly households coming from outside County to enter the proposed development (10%)		<u>127</u>
Elderly households qualified for and seriously interested in moving into the proposed development		1,269
Share of market opportunity area who stated in survey that for their next dwelling unit their first preference would be an apartment, in a highrise, midrise, or garden building:		
Highrise or midrise	28.0%	
Garden	<u>49.1</u>	
	77.1%	978
Less estimated numbers of households who might move into competitive developments available supply of units		<u>270</u>
Households that can be considered candidates for the proposed development		708
That share of households who said they would be willing to move:		
Within 1 year from now	15.6% - 110 households	

EXHIBIT THREE CONTINUED

Households that can be considered candidates for the
proposed development

that share of households who said they would be willing to
move:

Within 1 year from now	15.6% - 110 households	
Within 2 years	31.2% - 220	"
Within 5 years	53.4% - 378	"

708

A project of 100 units requires a capture rate of:

91% for a 1 - year absorption rate		
90% for a 2 year	"	"
14% for a 5 year	"	"

FEASIBILITY ANALYSIS - AFTERNOON SESSION

I. Market Segmentation and Identification

- A. Real estate enterprise uses small micro markets and the merchandising assumptions are the critical elements of feasibility.
- B. First name the typical revenue unit or method of measuring profit per sales unit
 - 1. Per acre
 - 2. Per apartment
 - 3. Per event
- C. Then identify the customer units - who signs the check - the doctor or the clinic? The ticket buyer or the promoter? The salesman or the firm? The manager or the vice president?
- D. Devices for generating a prospect list or spotting customers

II. The Customer Profile and Consumer Survey

- A. Scaling the market with a body count and opportunity gaps
- B. Classifying the body count by preferences
- C. Study of the competition to define the competitive standard and supply gaps
- D. Surveying the consumer to identify a competitive differential
- E. The objective is to define a product and price with monopoly characteristics in order to control variance in absorption rates
- F. Refer to Consumer Survey Questionnaire (Landmark Research)
- G. Direct mail and phone call techniques

III. Pre-Architectural Programming

- A. The theme and market target
- B. Product size mix and price
- C. Product features by competitive standard and competitive edge
- D. Negative market factors to be neutralized by design
- E. Marketing-investment trade-offs

IV. Structuring the Financial Analysis

- A. Comparison of critical income valuation assumptions for three viewpoints in real estate (See chart)
- B. Assumptions for a time line of analysis

- C. Assumptions for profit centers
- D. The back door approach as a preliminary analysis
- E. The front door approach

V. Modeling Cash Flow Simulation

- A. Refer to chart of Systematic Estimation of Annual Income
- B. Refer to suggested outline of cash analysis for land development project
- C. Review basic elements of mini-mod output

VI. Measuring Rate of Return

- A. "Going-in" equity or liquidating equity?
- B. What to include in financial returns?
- C. What is the reinvestment assumption?
 1. Inwood discounting
 2. The internal rate of return
 3. The modified internal rate of return
- D. Total dollars vs rate - reader viewpoint

VII. Risk Evaluation

- A. Equity payback period
- B. Default ratio or cash break-even point
- C. Sensitivity point for cost over-run or under-absorption
- D. Required market segment as percent of total market opportunity

November 10, 1971

Landmark
Research
Inc.

Thomas L. Turk
James A. Graaskamp

Dear Resident:

One of our clients is considering the development of several recreational "second home" projects in the form of condominium units set among recreational complexes which include golfing, marina, and winter sport facilities. A key element of each plan is a resort-inn with complete facilities, which would make available grounds maintenance, maid service, catering, and year round indoor sports facilities to condominium owners.

These resort-inns are already established summer resorts and popular off-season centers for business meetings and seminars. The key question is whether families are thinking about the four-season recreational pattern that is developing in Wisconsin and whether sophisticated family planners are thinking in terms of purchase of a recreational home in their favorite summer vacation area.

Wisconsin may be thought of as the place for inexpensive summer vacations while winter outings are in the South. However, investment in a second home would suggest year round use and enjoyment and a mix of seasonal activities. To survey attitudes about vacations, Wisconsin recreation centers and condominiums we have constructed a mailing list of selected people of means, who have demonstrated sophisticated tastes in recreation. Would you please answer the following brief questions? There is no way to identify a response and this letter is not a sales promotion.

Professor James A. Graaskamp

1. Does your family generally vacation each year in Wisconsin?

<input type="checkbox"/> No	<input type="checkbox"/> Yes → For each season circle the number of weeks during which you vacation and indicate the most preferred location.																																								
	<table border="1"> <thead> <tr> <th></th> <th colspan="6">Circle</th> <th>Most Preferred Location</th> </tr> </thead> <tbody> <tr> <td>Winter</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6+</td> <td>_____</td> </tr> <tr> <td>Spring</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6+</td> <td>_____</td> </tr> <tr> <td>Summer</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6+</td> <td>_____</td> </tr> <tr> <td>Fall</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6+</td> <td>_____</td> </tr> </tbody> </table>		Circle						Most Preferred Location	Winter	1	2	3	4	5	6+	_____	Spring	1	2	3	4	5	6+	_____	Summer	1	2	3	4	5	6+	_____	Fall	1	2	3	4	5	6+	_____
	Circle						Most Preferred Location																																		
Winter	1	2	3	4	5	6+	_____																																		
Spring	1	2	3	4	5	6+	_____																																		
Summer	1	2	3	4	5	6+	_____																																		
Fall	1	2	3	4	5	6+	_____																																		

2. Do you presently own a summer home or cabin site?

<input type="checkbox"/> No	<input type="checkbox"/> Yes → County _____ State _____
	Would you trade your present summer home or cabin site for a recreation condominium to avoid maintenance work or the bother of building your own vacation home? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Maybe

3. Would you prefer a secluded informal "get away from it all" weekend retreat to a better equipped more active social center? Yes No

4. Would you ever consider purchase of a carefree condominium in the heart of a recreational complex?

<input type="checkbox"/> Yes	<input type="checkbox"/> No → What is your main reason? _____
------------------------------	---------------------------------------------------------------

Please return this form to Landmark Research, Inc. Thank you.

5. If you would consider purchase of a carefree recreational home or weekend retreat, which of the following locations would you most prefer and least prefer? Check only one in each column:

	Most Preferred Location	Most Disliked Location
1. Lake Geneva	()	()
2. Green Lake	()	()
3. Lake Winnebago	()	()
4. Lake Minocqua-Tomahawk	()	()
5. Sturgeon Bay-Door County	()	()
6. Telemark-Hayward County	()	()
7. Spring Green-Iowa County	()	()
8. Other (please specify)	()	()

The best use of a recreational home is possible if the family enjoys a variety of activities during the off seasons, that is, during parts of the year other than the summer months of June, July, and August.

6. One type of relaxation at the recreation home might be outdoor activities such as: (check preferences)

- Tennis
- Sail boating
- Power boating
- Fall and spring golfing
- Fall and spring lake fishing
- Fall and spring fishing in stocked ponds
- Winter skiing on beginner and intermediate slopes
- Snowmobiling on an extensive trail system
- Ice boating
- Ice skating on an outdoor rink
- Skeet shooting
- Trail system for walking
- Trail system for biking

7. Indoor recreation facilities for the seasonal homeowner might include: (check preferences)

- Ice skating on an indoor rink
- Indoor tennis court
- Indoor swimming
- Sauna and whirlpool bath
- Handball and paddle ball courts
- Pool tables
- Card rooms with bar service
- Indoor golf driving range

8. Have you ever visited a recreational condominium in the United States?

No

Yes → Which one? _____
 → What impressed you most? _____

9. Do you now own or were you a former owner of a condominium?

No

Yes → Would you buy one again: Yes No

No → Why not? _____

10. Since not everyone wants to use or to pay maintenance for all facilities, would you prefer: (check one preference)

- () To reduce costs of maintaining facilities to a minimum by sharing major facilities such as a golf course or indoor tennis court with guests of the nearby exclusive resort inn, each user paying a low green fee or similar user charge only if, and when he uses it.
- () To maximize convenience of user by reserving major facilities exclusively for condominium owners only but only the user would be assessed for maintenance cost by means of annual subscriptions or memberships.
- () To compromise between low cost of first plan or high cost of exclusive facilities, maintenance charges could be shared with resort inn and all members of the condominium group, with condominium owners given preference for prime time in the evening and weekend afternoons with a reservation system.
- () Your ideas _____

11. If you were to consider purchase of a condominium, within a recreational complex, what type of unit would you prefer? (check one)

- () Single family detached unit
- () Small clustered groups of two-four units (the Quadraminum)
- () Larger clusters of low rise townhouses in 8-20 units
- () High rise apartment style unit secluded from resort inn
- () High rise apartment style unit (8 stories) with all weather connection to resort-inn
- () Have another idea? Please describe _____

12. What features of a site do you think are most important for a condominium? (check one for each of the features below)

	Very Important	Desirable	Not Necessary
View of the lake	()	()	()
View of the countryside	()	()	()
Seclusion from traffic noise	()	()	()
View of boat channel or lagoon	()	()	()
Seclusion from strollers	()	()	()
Isolation from lots of people	()	()	()
Walking distance to shops	()	()	()
Walking distance to social centers at resort-inn	()	()	()
Boat tie-up at back door	()	()	()
Private garden area	()	()	()
Lighted and paved walking trails	()	()	()
Heavy woods	()	()	()
Extensive lawns	()	()	()
No steps or stairways between car & home entrance	()	()	()

13. Since everyone's preference must yield to their budget, what price range do you feel would be justified for a condominium as sketched by this questionnaire? Indicate what use of the condominium you would have in mind?

<input type="checkbox"/> Family seasonal	() \$ 20,000-24,999	() \$ 40,000-44,999
<input type="checkbox"/> Legal residence	() 25,000-29,999	() 45,000-49,999
	() 30,000-34,999	() Could pay more

14. What type of building features would you prefer in the layout of the condominium unit? (choose only one of each of the following sets of alternatives)

Two bedrooms with larger living area or/

Three bedrooms

Three bedrooms, or/

Four bedrooms, or/

Large master bedroom and two 4-bed bunk rooms

Two-story living room with inside balcony, or/

Living room with beamed cathedral ceiling

Full dining room, or

Dining "L" plus family-sized kitchen

Sundeck balcony for living room or/

Outdoor patio at ground level

Walk-in closets in each room or/

Large work room plus laundry room in each unit & standard closets

One car garage attached to unit or/

Two car garage in group parking complex, or/

Carport and lower price

Central air conditioning or/

Woodburning masonry fireplace or/

Gas-log fireplace and window air conditioning unit

Contemporary natural decor with wood and rock materials, or/

Maintenance-free modern masonry and aluminum exteriors, or/

Well styled colonial detailing

Extensive outside landscaping, or/

More floor space in each room

15. Please indicate the number of adults and children who presently live in your household?

Adults (number) _____

Children: Under 6 _____

6-12 _____

Age of head of household _____

13-17 _____

Occupation _____

18 & over _____

Hometown _____

Number of dogs and cats _____

16. Your comments and suggestions _____

Thank you.

COMPARISON OF CRITICAL VALUATION ASSUMPTIONS FOR THREE PRESENT VALUE VIEWPOINTS IN REAL ESTATE

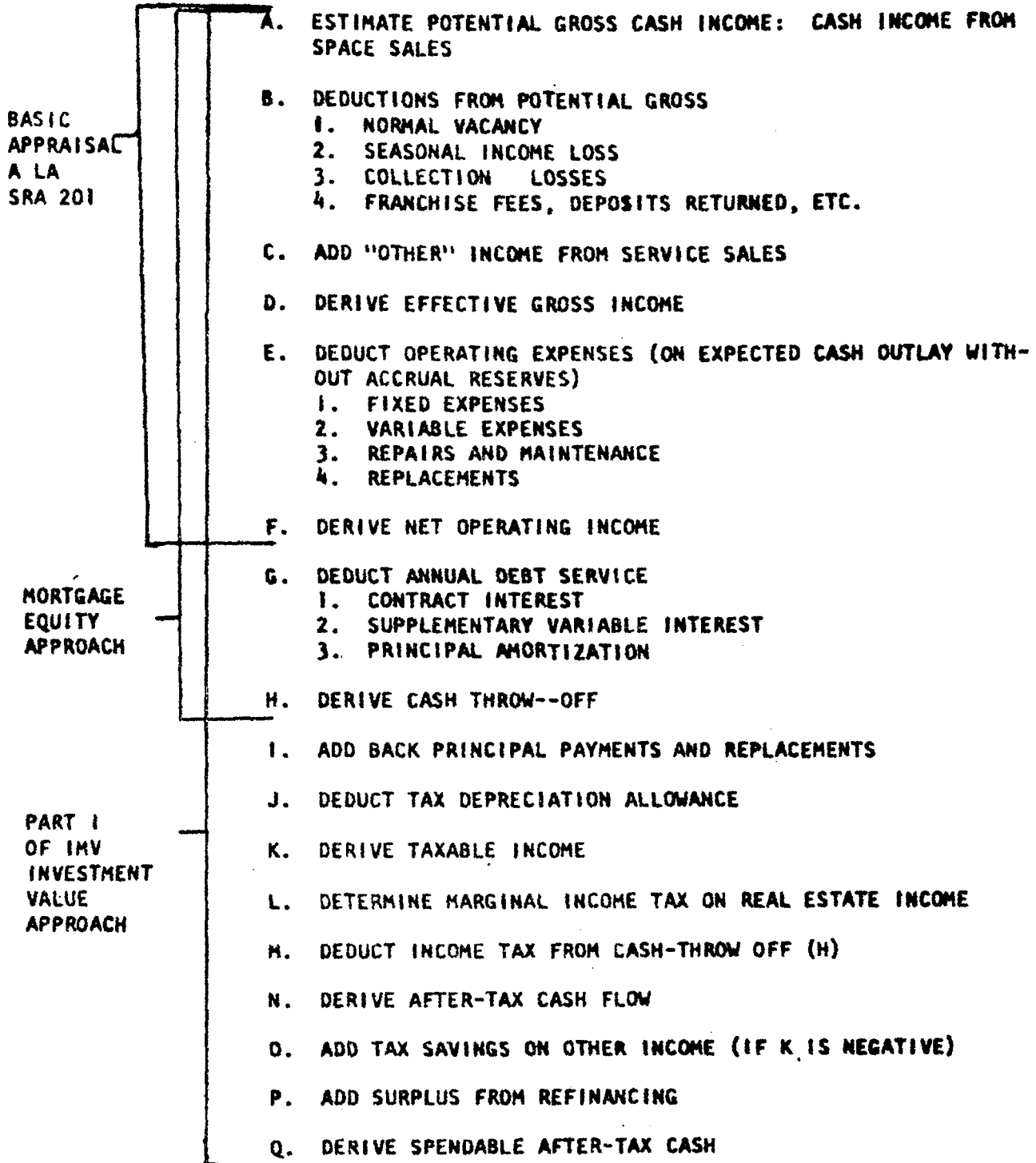
Prepared for Discussion at Feasibility Seminar

<u>Traditional Income Appraisal</u>	<u>Ellwood Valuation</u>	<u>Modern Capital Theory</u>
1. Instant investment	1. Instant investment	1. discontinuous series of outlays
2. Productivity limited to net income from parcel before debt and income tax.	2. Productivity limited to parcel after debt but before income tax.	2. Productivity is net change in spendable cash from all sources after debt and income tax traced to real estate.
3. Continuous income function	3. Continuous income function	3. Discontinuous series of tax classified receipts
4. Recapture from income	4. Recapture from income & resale	4. Payback of equity from spendable cash and debt from net revenue & resale.
5. Projected for full useful life of improvements	5. Projected for normal turnover period 5-10 years of typical investor	5. Projected for elapsed time of outlays and receipts for specific investor time line horizon.
6. Arbitrary discount factor	6. Weighted average Inwood discounting	6. Selected present value discounting based on characteristics of investor and property revenue pattern

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SYSTEMATIC ESTIMATION OF FORECAST ANNUAL INCOME FOR AN INCOME-
PRODUCING PROPERTY

PART I. ANNUAL RETURNS TO INVESTOR



May 1, 1971

PART II. RESALE RETURNS TO INVESTOR

- A. ESTIMATED RESALE PRICE (EOY)**
- B. DEDUCT BROKER'S COMMISSION AND OTHER TRANSACTION COSTS**
- C. DERIVE EFFECTIVE GROSS PROCEEDS FROM SALE**
- D. DEDUCT ALL CREDIT CLAIMS (EOY) OUTSTANDING**
 - 1. SHORT AND LONG TERM NOTE BALANCES DUE**
 - 2. PREPAYMENT PENALTIES**
 - 3. DEDUCT EQUITY SHARES TO NON-OWNER INTEREST**
- E. DERIVE PRE-TAX REVERSION TO EQUITY**
- F. DEDUCT TAX CLAIMS ON OWNERSHIP INTEREST**
 - 1. DEDUCT CAPITAL GAINS TAX**
 - 2. DEDUCT INCOME TAX ON DISALLOWED ACCELERATED DEPRECIATION**
 - 3. DEDUCT SURTAX ON TAXABLE PREFERENTIAL INCOME**
- G. DERIVE AFTER TAX RESALE PROCEEDS TO INVESTOR**

SUGGESTED OUTLINE OF CASH ANALYSIS FOR LAND DEVELOPMENT PROJECT

DEVELOPMENT PERIOD

1

2

PRODUCTION STARTS
PRODUCTION COMPLETIONS

1. BEGINNING INVENTORY
2. SALES IN UNITS
 - UNITS SOLD FOR CASH
 - PRICE PER UNIT
 - REVENUE FROM CASH SALES
 - UNITS SOLD ON LAND CONTRACTS
 - DOWN PAYMENT RECEIVED
 - ACCOUNTS RECEIVABLE ADDED
3. SALES COSTS
 - COMMISSIONS PAID
 - CLOSING COSTS
4. RUNOFF OF LAND CONTRACT SALES
 - INTEREST
 - PRINCIPAL
 - PERIOD END ACCOUNTS RECEIVABLE
5. NET CASH GENERATED FROM SALES
6. OPERATING COSTS
 - CARRYING COSTS--RAW LAND
 - CARRYING COSTS--INVENTORY
 - REAL ESTATE TAX--RAW LAND
 - REAL ESTATE TAX--INVENTORY
 - MANAGEMENT + ADMINIST. COSTS
7. NEW ALLOCATED CAPITAL OUTLAYS
8. NEW GENERAL CAPITAL OUTLAYS
9. PROJECT DEBT STRUCTURE
 - TOTAL INITIAL CASH
 - DEBT BALANCE END OF PERIOD
 - TOTAL PRINCIPAL PAYMENTS
 - TOTAL INTEREST PAID ON PROJ.
 - INTEREST ADDED TO LOAN BAL.
10. NET CASH FROM DEBT INCURRED
11. CASH AVAILABLE BEFORE TAXES

COMPONENTS	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD	COST	GROSS RENT	EXPENSES	R E TAXES	INCOME TAX RATE	VACANCY RATE	EQUITY DISCOUNT RATE	STAGING YR(0), FACTOR	RATE OF GROWTH OF GROSS RENT	RATE OF GROWTH OF EXPENSES	RATE OF GROWTH OF R E TAXES	RATE OF GROWTH OF PROJECT VALUE	WORKING CAPITAL LOAN RATE	EXTRAORDINARY EXPENSES	COST OF EQUITY CAPITAL	
LAND	.00	1	.	0	\$ 40000.	\$ 46080.	\$ 8400.	\$ 9000.	.3000	.0500	.1800	.00	.0200	.0200	.0500	.0100	.0900	\$ 7625.	.1200	
BUILDING	1.00	1	35.	3	\$ 165300.															
WORKING	.50	1	10.	3	\$ 7200.															
FURNISHINGS	1.00	1	7.	1	\$ 13200.															
ELEVATOR	.80	1	12.	3	\$ 12500.															
TRANSACTION COST	1.00	1	35.	3	\$ 1800.															
5 YR REFURBISH	1.00	8	7.	1	\$ 10000.															
TOTAL INITIAL INVESTMENT					\$ 240000.															

EQUITY REQUIRED	1	2	3	4	5	6	7	8	9	10
	45000.	45000.	45000.	45000.	45000.	50000.	50000.	50000.	50000.	50000.

FINANCING PLAN

FIRST ASSUMED MORTG. \$ 180000.

MONTHLY PAYMENT \$ 1477.	INTEREST RATE .0775	STARTS 1	ENDS 5	BONUS INTEREST .0000	OF GROSS RENT				
1	2	3	4	5	6	7	8	9	10
PRINCIPAL	3919.	4234.	4574.	4942.	5339.	.	.	.	.
INTEREST	13812.	13497.	13157.	12790.	12393.	.	.	.	.
BALANCE	176080.	171845.	167270.	162328.	156989.	.	.	.	.

SELLERS 2ND MORTG \$ 15000.

MONTHLY PAYMENT \$ 185.	INTEREST RATE .0850	STARTS 1	ENDS 5	BONUS INTEREST .0000	OF GROSS RENT				
1	2	3	4	5	6	7	8	9	10
PRINCIPAL	994.	1082.	1178.	1282.	1396.	.	.	.	.
INTEREST	1236.	1148.	1053.	948.	835.	.	.	.	.
BALANCE	14005.	12922.	11743.	10460.	9064.	.	.	.	.

REFINANCED FIRST \$ 190000.

MONTHLY PAYMENT \$ 1589.	INTEREST RATE .0800	STARTS 6	ENDS 10	BONUS INTEREST .0400	OF GROSS RENT					
1	2	3	4	5	6	7	8	9	10	
PRINCIPAL	4016.	4349.	4710.	5101.	5524.
INTEREST	15054.	14721.	14360.	13969.	13546.
BALANCE	185983.	181634.	176924.	171822.	166297.

REFURBISH CHATTEL \$ 10000.

MONTHLY PAYMENT \$ 150.	INTEREST RATE .0900	STARTS 8	ENDS 10	BONUS INTEREST .0000	OF GROSS RENT				
1	2	3	4	5	6	7	8	9	10
PRINCIPAL	938.	1026.	1122.
INTEREST	861.	773.	677.
BALANCE	9061.	8035.	6913.

GROSS RENT	46080.	47001.	47923.	48844.	49766.	50688.	51609.	52531.	53452.	54374.
LESS VACANCY ALLOWANCE	2304.	2350.	2396.	2442.	2488.	2534.	2580.	2626.	2672.	2718.
EFFECTIVE GROSS INCOME	43776.	44651.	45527.	46402.	47278.	48153.	49029.	49904.	50780.	51655.
LESS REAL ESTATE TAXES	9000.	9450.	9900.	10350.	10800.	11250.	11700.	12150.	12600.	13050.
LESS EXPENSES	16025.	8568.	8736.	8904.	9072.	9240.	9408.	9576.	9744.	9912.
NET INCOME	18751.	26633.	26891.	27148.	27406.	27663.	27921.	28178.	28436.	28693.
LESS DEPRECIATION	11469.	10537.	9640.	8775.	7940.	6762.	5942.	7729.	7144.	6571.
LESS INTEREST	15049.	14646.	14210.	13739.	13229.	12082.	16785.	17323.	16881.	16398.
TAXABLE INCOME	-7768.	1449.	3039.	4633.	6236.	3818.	5192.	3125.	4410.	5723.
PLUS DEPRECIATION	11469.	10537.	9640.	8775.	7940.	6762.	5942.	7729.	7144.	6571.
LESS PRINCIPAL PAYMENTS	4914.	5317.	5753.	6224.	6735.	4016.	4349.	5648.	6127.	6647.
CASH THROW-OFF	-1213.	6669.	6926.	7184.	7441.	30510.	6785.	15206.	5427.	5647.
LESS TAXES	.	434.	911.	1390.	1870.	1145.	1557.	937.	1323.	1716.
CASH FROM OPERATIONS	-1213.	6234.	6014.	5794.	5570.	29365.	5227.	14268.	4104.	3930.
WORKING CAPITAL LOANICUM BALANCE	1213.	.	.	.	.	.	.	.	.	.
SPENDABLE CASH AFTER TAXES	.	4911.	6014.	5794.	5570.	29365.	5227.	4268.	4104.	3930.
TAX SAVINGS ON OTHER INCOME	2330.	.	.	.	.	.	.	.	.	.
MARKET VALUE	242400.	244800.	247200.	249600.	252000.	254400.	256800.	259200.	271600.	274000.
BALANCE OF LOANS	191298.	184767.	179014.	172789.	166054.	185983.	181634.	185985.	179858.	173211.
NET WORTH OF PROPERTY	51101.	60032.	68185.	76810.	85945.	68416.	75165.	83214.	91741.	100788.
CAPITAL GAIN	10253.	20506.	30759.	41013.	51266.	61519.	71773.	83455.	95329.	106757.
CAPITAL GAINS TAX	1537.	3075.	4613.	6151.	7689.	9227.	10765.	12518.	14299.	16013.
INCOME TAX ON EXCESS DEPRECIATION	1084.	1890.	2426.	2702.	2729.	2401.	1828.	1362.	663.	.
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PERCENT INITIAL EQUITY PAYBACK AFTER TAX	.0517	.1609	.2946	.4233	.5471	1.0797	1.1843	1.2696	1.3517	1.4303
NET INCOME-MARKET VALUE RATIO	.0773	.1087	.1087	.1087	.1087	.1087	.1087	.1046	.1046	.1047
RETURN ON NET WORTH BEFORE TAXES	.1086	.3052	.2511	.2318	.2158	.1510	.1978	.3093	.1676	.1601
RETURN ON NET WORTH AFTER TAXES	.1290	.2372	.2196	.2061	.1933	.1406	.1939	.1762	.1665	.1553
CASH RETURN ON ORIG CASH EQUITY BEF TAX	-.0269	.1482	.1539	.1596	.1653	.6102	.1357	.3041	.1085	.1129
CASH RETURN ON ORIG CASH EQUITY AFT TAX	.0517	.1091	.1336	.1287	.1237	.5873	.1045	.0853	.0820	.0786
DEFAULT RATIO	.9763	.8339	.8054	.8029	.8004	.8204	.8185	.8508	.8484	.8461
LENDER BONUS INTEREST RATE	.0000	.0000	.0000	.0000	.0000	.0122	.0110	.0115	.0114	.0120
PRESENT VALUE OF PROJECT BEFORE TAXES	239306.	242903.	245505.	247329.	248531.	247609.	247992.	255579.	255349.	255001.
PRESENT VALUE OF PROJECT AFTER TAXES	238058.	240050.	241378.	242202.	242600.	241500.	241748.	246686.	246477.	246115.
EQUITY RATE W/ COST OF CAPITAL AT .120	.1290	.1793	.1887	.1889	.1862	.1775	.1742	.1706	.1672	.1639