JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

A. Appraisal Organizations

6. 1974

d. "A Guide to Feasibility Analysis", sponsored by SREA Greater Detroit Chapter 13, Washtenaw County Chapter 167, April 15, 1974

Index

A GUIDE TO FEASIBILITY ANALYSIS

A Seminar at Holiday Inn
Sponsored by Society of Real Estate Appraisers
Greater Detroit Chapter #13
Washtenaw County Chapter #167
Farmington, Michigan
Monday, April 15, 1974

Instructed by Professor James A. Graaskamp
University of Wisconsin School of Business

MORNING SESSION: 9:00 A.M.

I. Real Estate as an Enterprise and the Management Process

II. Elements of a Total Feasibility Analysis

III. Elements of Financial Feasibility

COFFEE BREAK: 10:30

IV. The Concept of Risk

V. Determining Objectives and Criteria of the Client

VI. Structuring Market Date Analysis with Models

LUNCHEON: 12:00

AFTERNOON SESSION: 1:00 P.M.

I. Market Segmentation and Identification of Prospective Buyers or Tenants

II. Developing a Customer Profile with a Consumer Survey

III. Pre-Architectural Programming

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

FEASIBILITY ANALYSIS SEMINAR OUTLINE

I. 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.

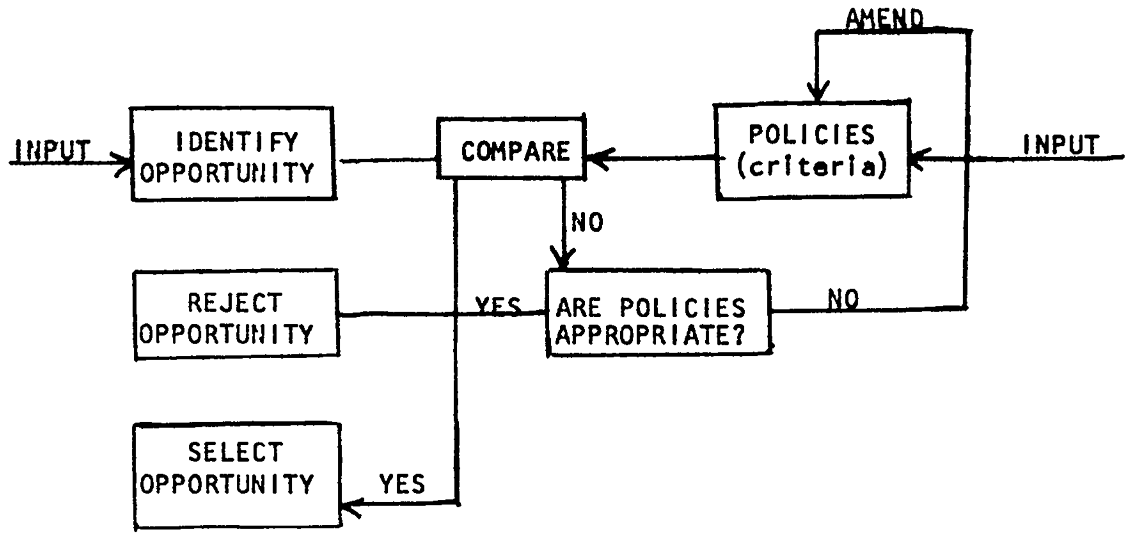
C. Traditional sequence of management function:

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 <u>systems</u> for capturing selected opportunities
6. Installing <u>systems</u> for capturing selected opportunites
7. operating the <u>systems</u> that have been installed
8. Maintaining and continously perfecting the operating <u>systems</u>

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



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 ob jectives 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.

1. 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.

III. Elements of Financial Feasibility

A. Identification of selected profit centers

B. Specification of the common denominator - a time line - schedule of outlays and receipts

C. The capital budget (source & application)

1. Construction costs
2. Carrying costs

D. Operating budgets (source & application)

1. Pattern of sales revenues
2. Fixed management costs
3. General sales costs and investment

E. Financing plan

1. Credit amounts and terms
2. Equity amounts and terms
3. Holding power

F. Profits classified as to type and tax

1. Cash from operations
2. Cash from capital gains
3. Cash surplus from financing
4. Cash from tax savings on other income
5. Cash from reduction or shift of fixed outlays
6. Indirect non-cash benefits

G. Selected measures of profitability

1. Definition of investment
2. Definition of profit

H. Selected measures of risk

1. Payback periods
2. Capacity for variance
3. Variance control

IV. Modern management defines risk as the potential variance between expectations and realizations, i.e., between pro forma prospects and balance sheet and P & L statements.

A. Dynamic risks can produce profit or loss and are best controlled by the finesse of management execution of a plan.

B. Static risks are those which can only cause a loss due to surprise upset of a plan.

C. Risk management has two objectives:

1. Conservation of existing enterprise assets despite surprise events
2. Realization of budgeted expectations despite surprise events

D. The process of risk management involves:

1. Identification of significant exposures to loss
2. Estimation of potential loss frequency and severity
3. Identification of alternative methods to avoid loss
4. Selection of a risk management method
5. Monitoring execution of risk management plan

E. Alternative methods for surviving potential risk losses:

1. Eliminate risk exposure
2. Reduce frequency or severity of accident
3. Combine risks to increase predictability (reserves for expenses)
4. Shift risk by contract (subcontracts or escape clauses)
5. Shift risk by combination by contract (insurance)
6. Limit maximum loss (corporate shell or limited partnership)
7. Hedging

V. Determining Objectives and Criteria of the Client

A. Feasibility consultant has three alternative situations:

1. A site or product in search of a user
2. A specific consumer in search of a site and a product
3. A specific client in search of an opportunity in real estate

B. Analytical point on the time line relative to fixed assumptions and viewpoint of report.

C. Establishing the viewpoint of the reader who will be making a decision on the basis of the report:

1. Strategy of equity vs credit
2. Strategy of owner vs user vs public interest
3. Value-objectives-criteria of viewpoint to be served
4. Profit centers defined within measures of profitability
5. Desirability of supplementary reports

D. The basic issue of any research methodology:

1. What is the question?
2. What data is available which is relevant?
3. What theory is available to focus data on the question?
4. How will the results be communicated?
5. What are the abilities of the analyst?
6. What's the cost benefit ratio between the method and the question?

E. A critical interview with the client should reveal:

1. His preferred method of meeting entrepreneurial risk
2. His preferred method of personnel compensation

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 - next page)

C. Conversion of highway traffic to historical exhibit admissions (See chart Flow Diagram, page 40)

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	= 203	rooms per average weekend day

BREAK FOR LUNCH

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

202A Breese Terrace, Madison, Wisconsin 53705 - 608 238-6873

Landmark Research Inc.

Thomas L. Turk
James A. Graaskamp

November 10, 1971

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?

No

Yes → For each season circle the number of weeks during which you vacation and indicate the most preferred location.

	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?

No

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? Yes No 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?

Yes

No → What is your main reason? ____________

If No, stop here and return the questionnaire. 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 <u>one</u> 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 Quadraminium)
( ) 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 everyones 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?

☐ Family seasonal
☐ Legal residence

( ) $20,000-24,999
( ) 25,000-29,999
( ) 30,000-34,999
( ) 35,000-39,999
( ) $40,000-44,999
( ) 45,000-49,999
( ) Could pay more for right house

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

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( ) 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)_______

Age of head of household_______
Occupation_______________
Hometown_______________

Children: Under 6_______
6-12_______
13-17_______
18 & over_______

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
Saint Paul, Minnesota
March 17, 1973

Traditional Income Appraisal	Ellwood Valuation	Modern Capital Theory
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

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

PART I. ANNUAL RETURNS TO INVESTOR

BASIC APPRAISAL A LA SRA 201

A. ESTIMATE POTENTIAL GROSS CASH INCOME: CASH INCOME FROM SPACE SALES

B. DEDUCTIONS FROM POTENTIAL GROSS
1. NORMAL VACANCY
2. SEASONAL INCOME LOSS
3. COLLECTION LOSSES
4. FRANCHISE FEES, DEPOSITS RETURNED, ETC.

C. ADD "OTHER" INCOME FROM SERVICE SALES

D. DERIVE EFFECTIVE GROSS INCOME

E. DEDUCT OPERATING EXPENSES (ON EXPECTED CASH OUTLAY WITHOUT ACCRUAL RESERVES)
1. FIXED EXPENSES
2. VARIABLE EXPENSES
3. REPAIRS AND MAINTENANCE
4. REPLACEMENTS

F. DERIVE NET OPERATING INCOME

MORTGAGE EQUITY APPROACH

G. DEDUCT ANNUAL DEBT SERVICE
1. CONTRACT INTEREST
2. SUPPLEMENTARY VARIABLE INTEREST
3. PRINCIPAL AMORTIZATION

H. DERIVE CASH THROW--OFF

PART I OF IMV INVESTMENT VALUE APPROACH

I. ADD BACK PRINCIPAL PAYMENTS AND REPLACEMENTS

J. DEDUCT TAX DEPRECIATION ALLOWANCE

K. DERIVE TAXABLE INCOME

L. DETERMINE MARGINAL INCOME TAX ON REAL ESTATE INCOME

M. DEDUCT INCOME TAX FROM CASH-THROW OFF (H)

N. DERIVE AFTER-TAX CASH FLOW

O. ADD TAX SAVINGS ON OTHER INCOME (IF K IS NEGATIVE)

P. ADD SURPLUS FROM REFINANCING

Q. DERIVE SPENDABLE AFTER-TAX CASH

PART II. RESALE RETURNS TO INVESTOR (OVER)

J. Graaskamp

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	3
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
LAND	.00	1	.	0	$ 40000.
BUILDING	1.00	1	35.	3	$ 165300.
PARKING	.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.
7TH YR REFURBISH	1.00	8	7.	1	$ 10000.
TOTAL INITIAL INVESTMENT					$ 240000.

GROSS RENT	$ 46080.
EXPENSES	$ 8400.
R E TAXES	$ 9000.
INCOME TAX RATE	.3000
VACANCY RATE	.0500
EQUITY DISCOUNT RATE	.1800
STAGING YR(0),FACTOR	.00

RATE OF GROWTH OF GROSS RENT	.0200
RATE OF GROWTH OF EXPENSES	.0200
RATE OF GROWTH OF R E TAXES	.0500
RATE OF GROWTH OF PROJECT VALUE	.0100
WORKING CAPITAL LOAN RATE	.0900
EXTRAORDINARY EXPENSES	$ 7625.
COST OF EQUITY CAPITAL	.1200

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

	1	2	3	4	5	6	7	8	9	10
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.	17082.	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 LOAN(CUM BALANCE)	1213.	.	.	.	.	.	.	.	.	.
SPENDABLE CASH AFTER TAXES	.	4911.	6014.	5794.	5570.	29365.	5227.	4268.	4104.	3930.
TAX SAVINGS ON OTHER INCOME	2330.	.	.	.	.	.	.	.	.	.

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	1	2	3	4	5	6	7	8	9	10
MARKET VALUE	242400.	244800.	247200.	249600.	252000.	254400.	256800.	269200.	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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	1	2	3	4	5	6	7	8	9	10
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

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	1	2	3	4	5	6	7	8	9	10
PRESENT VALUE OF PROJECT BEFORE TAXES	238306.	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.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			

COMPONENTS	PCT. DEPR	BEGIN USE	USEFUL LIFE	DEPR METHOD	COST
LAND	.00	1	.	0	$ 40000.
BUILDING	1.00	1	35.	3	$ 165300.
PARKING	.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.
7TH YR REFURBISH	1.00	8	7.	1	$ 10000.
TOTAL INITIAL INVESTMENT					$ 240000.

GROSS RENT	$ 46080.	RATE OF GROWTH OF GROSS RENT	.0200
EXPENSES	$ 8400.	RATE OF GROWTH OF EXPENSES	.0200
R E TAXES	$ 9000.	RATE OF GROWTH OF R E TAXES	.0500
INCOME TAX RATE	.3000	RATE OF GROWTH OF PROJECT VALUE	.0100
VACANCY RATE	.0500	WORKING CAPITAL LOAN RATE	.0900
EQUITY DISCOUNT RATE	.1800	EXTRAORDINARY EXPENSES	$ 7625.
STAGING YR(0),FACTOR	.00	COST OF EQUITY CAPITAL	.1200

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

	1	2	3	4	5	6	7	8	9	10
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.	17082.	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 LOAN(CUM BALANCE)	1213.	.	.	.	.	.	.	.	.	.
SPENDABLE CASH AFTER TAXES	.	4911.	6014.	5794.	5570.	29365.	5227.	4268.	4104.	3930.
TAX SAVINGS ON OTHER INCOME	2330.	.	.	.	.	.	.	.	.	.

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	1	2	3	4	5	6	7	8	9	10
MARKET VALUE	242400.	244800.	247200.	249600.	252000.	254400.	256800.	269200.	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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	1	2	3	4	5	6	7	8	9	10
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

* *

	1	2	3	4	5	6	7	8	9	10
PRESENT VALUE OF PROJECT BEFORE TAXES	238306.	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