

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

I. Other Presentations In Which Either The Date And /  
Or Sponsoring Organization Is Missing

2. Appraisal Topics

bb. "Direct Sales Comparison Approach",  
Session 13, no date

## SESSION 13

### DIRECT SALES COMPARISON APPROACH

#### I. RATIONALE OF THE DIRECT SALES COMPARISON APPROACH.

The purpose of any appraisal is to estimate value. Most commonly the value to be estimated is Market Value, especially in residential appraising. The components of the definition of Market Value indicate the factors to be considered in attempting to judge, from market data on sales of competitive properties, what the subject property is most likely to sell for under specified market conditions.

The elements of Market Value also establish the standards of information that must be obtained about competitive properties that are used as the basis for estimating the Market Value of the subject property. These elements include:

1. No undue pressure on either party to the transaction (an arm's length transaction).
2. Informed buyers and sellers.
3. Rational and prudent behavior on the part of buyers in particular, based on market information.
4. A reasonable time to "test the market".
5. Payment consistent with current market terms and conditions.

#### A. Basic Principle: Substitution.

The basic principle underlying the Direct Sales Comparison approach to residential property appraisal is the Principle of Substitution. In this context, it states that the informed purchaser will pay no more for a residential property than the cost to him of acquiring a satisfactory substitute property with the same utility as the subject property, on the current market. It will be recalled that Market Value is always considered through the eyes of the typically informed purchaser who acts rationally and prudently on the basis of his information.

As an application of the Principle of Substitution, the essence of the Direct Sales Comparison approach is to discover what competitive properties have sold for recently on the local market; and, through an appropriate adjustment process, to develop indications of what they would have sold for if they had possessed all of the basic and pertinent physical and economic characteristics of the subject property. Indications of such adjusted sales prices are developed for several "comparable sales". These indications hopefully fall into a pattern clustering around one figure which, when appropriately rounded, provides an indication of the Market Value of the subject property as of the date of the appraisal.

## B. Market Standards.

Especially since Market Value is most frequently sought, the Direct Sales Comparison approach is based upon an analysis of the market behavior of purchasers. The standards for comparing sales of competing properties with the subject property are those of the market. The Direct Sales Comparison approach therefore requires sufficient quantities of accurate, reliable, verified market data to be applied properly and effectively.

1. Typically Informed Purchaser. Market data are analyzed and evaluated as if through the eyes of the typically informed purchaser, who acts prudently on the basis of his information. The appraiser's personal viewpoint should not intrude into the analysis or the conclusions.
2. Local Market. The standards utilized in the Direct Sales Comparison approach are those of the local market in which the subject property is located. This market is identified and its characteristics evaluated through area and neighborhood analysis, which precedes the application of the Direct Sales Comparison approach.
3. Current Market. Market Value is estimated as of the date of the appraisal. The market conditions prevailing on that date are those which influence the value of the subject property. Therefore, comparable sales data should be as nearly current as possible for comparative purposes.
4. Highest and Best Use. In the definition of Market Value, the prudent purchaser acts on the basis of an awareness of the uses to which the property is capable of being put. Rational behavior requires that he plan to utilize the property at its highest and best use. Therefore, the value of improved property is always estimated in terms of its highest and best use. This may or may not be identical with the highest and best use of the site, as if vacant and available for use. It all depends whether the improvements are most appropriate for the site.

## C. Uses of the Direct Sales Comparison Approach.

1. Reflects Market Behavior. The Direct Sales Comparison approach comes closest of the alternative approaches to value estimation to the thinking and behavior of the typical purchaser of a residence. To a large extent, it simulates his market behavior. Generally speaking, when adequate data of sufficient quality are available, greatest reliance will be placed by the appraiser on an estimate of value via the Direct Sales Comparison approach.
2. Basis for Judgments in Other Approaches. The information developed through the Direct Sales Comparison approach provides both a basis and support for judgments in the application of other approaches to residential value estimation. For example, it establishes the basis for measuring estimated depreciation charges

in the Cost approach. It also establishes standards for estimating the Gross Rent Multiplier and market rental in the "income" approach.

3. Emphasized By the Courts. In most jurisdictions, the courts have placed greatest reliance and emphasis on evidence from *bona fide* market sales of comparable properties, in reaching judgments as to market value--and hence just compensation.
4. Includes Market Elements. The Direct Sales Comparison approach takes into account such important but frequently overlooked market elements as the effect of financing terms on sales prices, and sales commissions. Market price is the basic guide to Market Value in the Direct Sales Comparison approach. It includes whatever constitutes the cost to the typically informed purchaser.

#### D. Limitations of the Direct Sales Comparison Approach.

1. Inadequate Data. It is difficult to use the Direct Sales Comparison approach to estimate residential property value unless there are sufficient data of adequate quality to justify a Market Value conclusion. In the absence of market activity, or in the event that the property is so unique that there are no true comparisons, it may be impossible to apply this approach. Generally speaking, the further afield the appraiser must go for "comparable sales" properties (in terms of property characteristics, market, or time), the more suspect the value conclusion becomes. This is because a greater proportion of the value estimate is the *appraiser's* estimate of the market significance of differences among the properties.
2. Based On Historical Data. Of necessity, the estimate of value via the Direct Sales Comparison approach is based on transactions which have already occurred. It requires an assumption, therefore, that market behavior and market forces in the past will continue to have the same relationships in the future. Generally, the recent past can be accepted as the best guide to the immediate or near term future.
3. Conditions of Comparability. Mere similarity of use or physical appearance does not make for true comparability among residential properties. In applying the Direct Sales Comparison approach, the appraiser must look into market conditions and terms of sale as well as physical comparisons to judge true comparability or competitiveness.

*Single event  
may change  
attitudes or  
effective demand*

#### II. DATA REQUIREMENTS AND SOURCES.

The technique of the Direct Sales Comparison approach involves selecting a number of sales of comparable properties which have transferred recently on the local market. These are then adjusted to provide indications of the most probable selling price of the subject property under specified market conditions.

For comparisons to be made effectively, detailed information must be obtained about each of the comparable sales properties. This requires a systematic data program. The pertinent and salient characteristics of the subject property must be itemized. Those points should then be covered for each comparable sales property. Only in this way can any meaningful comparisons and adjustments be made.

Not every residential property which has reasonably sold on the local market is a comparable sale. Both physical characteristics and market conditions and terms of sale must be investigated. This is where judgment on the part of the appraiser is required. The basic test is whether the property selected as a comparable sale is in fact effectively competitive with the subject property *in the mind of the typically informed purchaser*, in the present market.

#### A. Sales Comparisons.

Data on sales comparisons must be obtained to indicate the basic characteristics of both the property and the transaction. This information should be assembled systematically, so that it can be presented in a standard format developed by the appraiser for ease of use and understanding by the client.

1. Transaction Data. The basic information about each comparable sales transaction that should be obtained by the appraiser includes:
  - a. Date of sale.
  - b. Volume and page of deed (in Recorder of Deeds' office, County Clerk's office, Town Clerk's office, etc.).
  - c. Type of deed.
  - d. Legal description of property.
  - e. Names of grantor (seller) and grantee (buyer).
  - f. Internal revenue stamps (or state documentary stamps after January 1, 1968). Federal stamps were affixed at the rate of \$.55 per \$500 (or fraction thereof) of consideration. These are often a useful *guide* to the consideration, but are not to be relied upon without verification.
  - g. Amount of consideration, if indicated.
  - h. Verified sales price (with principal or agent).
  - i. Motivating forces or conditions of sale. This is to make sure that the transaction is a *bona fide*, arm's length transfer. Transactions within a family, under duress, or as an accommodation should be identified as such, and usually discarded for purposes of comparative analysis.

- j. Terms of financing. Financing definitely can influence value, as well as sales price. Generally speaking, the more favorable the financing that can be obtained, the higher the price that the purchaser will pay. This is an important point of comparison. It should be carefully identified in the early data gathering stage.
- k. Items of personalty included. Frequently, a real estate transfer includes items of personalty in the consideration. These must be deducted before the transaction can be utilized as a comparable sale.

2. Property Data. The appraiser should develop information on:

- a. Type and style of architecture.
- b. Size: area, number of rooms.
- c. Type of rooms and layout.
- d. Age and condition; effective age.
- e. Number of baths and bedrooms.
- f. Special features: fireplaces, built-in equipment, cabinetry.
- g. Accessory buildings: type, size, age and condition.
- h. Site: size, topography, etc.
- i. Zoning and deed restrictions.
- j. Location: market and neighborhood influence.
- k. Taxes and assessment.
- l. Listing price and length of time on market.
- m. Unusual elements of functional or locational obsolescence.

B. Full Narrative Description and Detail.

In making a presentation for comparative analysis, detailed information about the comparable sales property with respect to both the property itself and the transaction should be provided in a systematic format. The reader of the report should be able to visualize the elements of comparability and of difference between the comparable sales property and the subject property.

All of the salient and pertinent elements of comparability and difference between the comparable sale property and the subject property should be listed; *only* the salient and pertinent features should be listed. Minor elements which have no influence on value or marketability should be omitted to avoid cluttering the presentation.

C. Verification.

All transactions data (especially sales price, date, terms of sale and financing, and motivating forces) should be verified with the buyer or the seller, or an authorized agent of either. Record data provide *indications* only. Because heavy reliance is to be placed on the facts of the transaction, the appraiser should verify them personally with a participant in the transaction.

1. Distortions. If the motivating force underlying the transaction is not verified with at least one of the major participants, distortions or misinterpretations by the appraiser can result. Common deviations from *bona fide*, arm's length transactions in residential sales include:

- a. Liquidation for inheritance tax or other pressing reasons.
- b. Purchase for immediate possession.
- c. Tax gain or tax considerations in the sale.
- d. Transactions between related or affiliated parties under non-market conditions.
- e. Highly superior bargaining power on the part of one party to the transaction.

D. Quality of Data.

In addition to being verified, transactions data should be as accurate and complete as possible. The appraiser must pay particular attention to the terms of sale and financing, and to the conditions of sale (motivating forces), in selecting and analyzing his comparable sales properties. Physical and locational characteristics should of course be carefully and accurately identified and analyzed. This is based on appropriate property inspection and analysis.

Minimum quality requirements for acceptable comparable sales data include:

1. Local Market Transactions.
2. Current Market Transactions.
3. Truly Comparable Properties. This means that the "comparable sales properties" must be competitive with the subject property in the mind of the typically informed purchaser.
4. Bona Fide Sales. This means that the transactions must be at arm's length without excessive pressure on either party.

E. Quantity of Data.

There is no set number of comparable sales about which information must be obtained by the appraiser in order to carry out appropriate analysis under the Direct Sales Comparison approach. It is generally agreed, however, that at least 3 closely comparable properties should be utilized in the analysis. At the other end of the scale, more than 8 or 10 tends to clutter up the analysis without adding a great deal to its quality.

There are usually too few transactions to apply statistical analysis appropriately or meaningfully. As a result, an optimum number is approximately 5 or 6 really good comparable sales. Additional data which add little to an indication of the Market Value of the subject property are worse than useless.

## F. Data Sources.

Data on comparable sales may be obtained from a variety of sources. The appraiser should exploit these sources effectively and continuously to obtain the necessary data (in terms of both quantity and quality) required for appropriate application of the Direct Sales Comparison approach.

### 1. Public Sources.

- a. Deed Recordings. These indicate transfers of properties, and may be found in the office of the Recorder of Deeds, the County Clerk, the Town Clerk or the appropriate local agency. Deeds contain information on the legal description, date of transfer, grantor, grantee, encumbrances, deed restrictions, and indicated consideration via revenue stamps.
- b. Mortgage Recordings. In conjunction with deeds recorded, these provide an indication of the volume of market activity, as well as terms of financing. The amount of mortgage, interest rate, and maturity of the loan are usually indicated.
- c. Assessment Records. Data in the local or county assessor's office usually provide information on transfers of properties in the near vicinity of the subject property. For both the subject property and comparable sales properties, detailed information about the property is usually available, as well as information about assessments and tax levies. The property data include such information as: age, condition, size, rooms, construction details, site size, and outbuildings.
- d. Transfer Tax Records. In areas in which real estate transfer taxes are levied, a good guide to both transactions and transaction prices can be provided from this source.
- e. Zoning Records and Maps. The office of the local planning and/or zoning commission frequently provides information about the uses to which property can be put. This also helps to identify the neighborhood.

2. Private Sources. Information on sales, listings, offers to buy and rentals may be obtained from a variety of private sources. Some of these might be regarded as "public" because they are published. They are not considered "public" here because they are not part of the official public or governmental record.

- a. Appraiser's Files. The most important single source of information usually is the appraiser's own files. Provided they are kept current and accurate, they can be an invaluable guide to the appraiser in subsequent assignments. The data should be effectively cross-indexed and cataloged. The staff of the appraisal office should gather information both



during appraisal assignments and during any slack periods to make sure that as much coverage of the local market as possible is maintained.

- b. FHA and VA Offices. In many jurisdictions, local FHA and VA offices provide important data on transactions which have actually occurred.
  - c. Multiple Listing Services. In areas in which the appraiser has access to the data in a multiple listing service, both listings and actual transactions are reported in detail.
  - d. Subscription Services. Information on deed recordings and other transactions is often obtained through private subscription services. These offer basic leads to transactions which the appraiser may then investigate in detail and verify.
  - e. Real Estate Brokers.
  - f. Other Appraisers.
  - g. Title Companies and Abstract Companies.
  - h. Local Real Estate Boards.
  - i. Local Appraisal Chapter Newsletters.
  - j. Builders. These can provide information on new construction, in particular.
  - k. Banks and Other Lenders. These organizations usually regard their information as confidential, but confirmation of sales prices and loan terms may possibly be obtained from them.
  - l. Newspaper Stories and Advertisements. These usually provide leads which can be investigated and verified by the appraiser.
  - m. Personal Tours. Investigation of the neighborhood often reveals "for sale" and "sold" signs. These are leads which can be investigated either with the broker or one of the principals involved.
3. Principals and Participants. Since all sales and transaction data must be verified, an important source of information is provided by the principals in every transaction investigated, or by one of the assisting participants: broker, attorney, or lender.

The alert appraiser will develop and cultivate data sources so that he may utilize them continuously and effectively in maintaining a current file of information for his appraisal practice.

#### G. Sales Data, Listings and Offers to Buy.

The most desirable information to obtain is data on recent transactions which have actually been completed on the local market. Listings

and offers to purchase may be utilized with care and discretion, however. Listing prices generally indicate the upper portion of the range of prices or values for properties in an area. Offers to purchase generally indicate the lower segment of the range. With sufficient data and careful analysis, the appraiser can adjust listing prices and offers to buy, to compensate for the "going" difference between them and actual transactions prices.

*Terms*  
*Time*  
*Location*  
*General*  
*physical*

### III. ELEMENTS OF COMPARISON.

It is possible but not probable that the appraiser may find data on sales of properties so current and so comparable with the subject property that direct comparisons can be made with no adjustments. This requires extremely good data indeed, and is usually restricted to sales in new developments of virtually identical houses.

In the normal course of events, the appraiser will have to consider the ingredients of the comparable properties on an item-by-item basis with the subject property, and make appropriate adjustments as necessary.

Through his analysis of the subject property, the appraiser will have identified its pertinent and salient features, in terms of which comparisons must be made. A similar identification must be undertaken for each comparable sale property. Since one definition of comparability is that the properties possess the same utility, some indication of the relative utility of both the subject property and the comparable properties should be developed. This requires an indication of their market acceptability and functional acceptability (or obsolescence).

Appropriate application of the Direct Sales Comparison approach requires knowledge of the standards of the local market, plus a detailed property inspection and keen observation. The ability to interpret structural quality is necessary, together with knowledge of typical buyer preferences and price reactions in the local market. Finally, application of sound judgment is required to produce reasonable results.

In identifying elements of comparability, the appraiser must recognize that items of deficiency or superadequacy considered in the Cost approach must also be included in the comparative analysis in the Direct Sales Comparison approach. Moreover, the true test of comparability is whether the "comparable property" is really in the same market with, and therefore competitive with, the subject property. The comparisons must be made in terms of *salient* characteristics of both the subject property and the comparable sales properties, and not in terms of unimportant minutiae.

#### A. Property Characteristics.

As indicated, the comparable sales properties must be competitive with the subject property. A comparison of physical characteristics is the first step in the process. This physical comparison takes into account both variables (which can be reduced to a unit basis: area, volume or number of rooms) and attributes. Functional utility

is an important ingredient in this comparison. The elements of *physical* comparison would include:

1. Style and Layout. An indication of market acceptability and conformity is important here.
  2. Size. This includes area or volume, or both.
  3. Rooms. This includes the number of rooms and types of rooms. Of particular note in residential appraising is the number of bedrooms, the number of bathrooms, the type of basement (if any) and a separate dining room.
  4. Age.
  5. Condition. This includes both an estimate of effective age and remaining economic life, and an indication of needed repairs or maintenance.
  6. Functional Adequacy. This must be related to any charges for functional obsolescence included in the Cost approach, and is based on the description of the improvements derived from field observation.
  7. Site and Site Improvements. This includes size, topography, drainage, and the like; as well as an indication of any site improvements which enter into the value estimate. The legal description is also an important guide to site comparisons.
  8. Structural Type and Quality. This is derived from field inspection and improvements analysis.
  9. Accessory Buildings: type, condition, function, size, age.
  10. Special Features. These include built-in equipment; electrical, plumbing, heating and cooling systems; fireplaces; and the like.
- B. Location.

The neighborhood environment and the zoning or deed restrictions on the properties in question are legal and market influences that determine whether properties are truly competitive and comparable. Included in a consideration of neighborhood (location) would be:

1. Age and condition of houses.
2. Type and size of houses.
3. Price range of houses.
4. Amenities and facilities in the area.
5. Zoning and other use restrictions.
6. Income range of residents.
7. Social and economic compatibility of residents.

C. Time (Date of Sale).

The date of sale identifies the market conditions under which a comparable sales transaction occurred, just as the date of the appraisal indicates the market conditions in terms of which the subject property is being appraised. Both must be identified so that an appropriate comparison may be made between the conditions prevailing for the comparable sales and those prevailing for the subject property. Trends and changes in such items as the volume of real estate market activity, the availability of money for mortgage purposes, employment and income should be accounted for if there is a difference in market conditions.

D. Terms of Sale.

This refers specifically to financing. Financing is probably the most important single influence on differences in residential sales prices in local markets. Terms of financing include:

1. Down payment requirements.
2. Interest rates.
3. Loan maturities.
4. Amortization requirements.

E. Conditions of Sale.

Comparisons must be made between the subject property and the comparable sales properties on the basis of:

1. Knowledge of market conditions by buyers and sellers.
2. Length of time on the market before sale.
3. Buyer and seller motivations: no undue pressures on either.
4. *Bona fide*, arm's length transactions: no close relationship between buyer and seller.

## IV. UNITS OF COMPARISON.

In order to bring comparable sales properties more nearly in line with the subject, it is possible to utilize units of comparison (or units of analysis) to account for differences in *size*. By reducing a property to a per-unit basis, it can be compared more closely with otherwise similar residential real estate. Care must be exercised, however, not to assume that *all* differences in size can be adjusted or compensated for through the use of units of comparison. The differences must be relatively small; otherwise, the properties are really in different markets.

Only meaningful units of comparison that make sense in the framework of the type of property being appraised should be used. In other words, only units that reflect the thinking and behavior of market participants are appropriate. What is appropriate as a unit of comparison for residential property tends to vary somewhat from one market area to another, and with the passage of time. Nevertheless, some standard units can be identified that have wide acceptability.

It is important that the typically informed purchaser in the market in question understand the unit of comparison that the appraiser employs. Because they are basic building blocks applied to individual properties to formulate value estimates, units of comparison in appraisal analysis should be those units in terms of which residential properties in the market in question are actually bought, sold, rented or built.

The most commonly employed units of comparison for improved residential properties are:

1. Sales price per square foot of living area.
2. Sales price per square foot of ground area covered (foundation area).
3. Sales price per cubic foot.
4. Sales price per room. This is usually less satisfactory, because the definition or nature of a "room" can vary so much from one property to another.

#### V. THE ADJUSTMENT PROCESS.

After each comparable sales property has been identified and described in sufficient detail so that both the appraiser and the reader of his report adequately understand the major characteristics of the comparable properties, the appraiser must then adjust each comparable sale property for differences between it and the subject property. The final result, an indication of Adjusted Sales Price (whether for the total property or on a unit basis), is the appraiser's estimate of what the property would have sold for if it had possessed all of the salient characteristics of the subject property.

The appraiser should consider the differences between the comparable property and the subject property for each significant, pertinent characteristic; but for significant, pertinent characteristics *only*. Too detailed a listing of adjustment factors and adjustments can convey an impression of accuracy and precision that is simply not possible in a judgment art such as appraising. Each adjustment for differentials between the subject property and the comparable property should be defended and justified from the evidence of the market.

The underlying principle in terms of which adjustments are made or measured is the Principle of Contribution (Marginal Productivity). The appraiser must always answer the question: What difference does the presence or absence of the factor being considered make in the probable sales price or value of the property in the present local market?

In assembling his list of factors for which adjustments should be made, the appraiser should take special care to include all those elements for which deductions are made in the subject property in estimating accrued depreciation in the Cost approach, and in estimating rent differentials in Gross Rent Multiplier analysis.

A. Subject Property Is The Standard.

The objective of appraisal analysis is to estimate the value (most frequently Market Value) of the subject property. Guides to that value are provided by the sales of comparable properties which have recently sold on the local market. The adjustment process is undertaken in order to account for differences between the comparable sales properties and the subject property. The sales prices of the comparable properties are known. The element being sought in each adjustment process is the estimated price at which the comparable sales property would most probably have sold if it had possessed all of the salient characteristics of the subject property.

Therefore, all adjustments are made *from* the comparable sales property *to* the subject property. This means that if the subject property has a one-car garage, and the comparable property in question has a two-car garage, the comparable property is superior to the subject property in this respect. A downward adjustment in the sales price of the comparable property is required (based on market evidence of the difference that an extra stall in the garage would make), to reach an indication of what the comparable property would have sold for if it had had a one-car garage, rather than a two-car garage.

Similarly, if the subject property has two full baths, while the comparable property has one full bath and one two-unit lavatory, the sales price of the comparable property should be adjusted upward by an amount reflecting the difference that this lack on the part of the part of the comparable property would make in its sale price. The resulting adjustment provides an indication of what the comparable property would have sold for if it had had two full baths instead of one full bath and a two-unit washroom.

In the adjustment process, the subject property is therefore taken as "one hundred per cent!". The comparable properties are treated as deviations from this norm.

B. Market Justification Required.

In estimating the amount of adjustment to make for the presence or lack of any salient factor in the comparable sales property as compared with the subject property, the only valid measure is evidence of the market reactions of buyers to such a difference. These are reflected in varying sales prices of otherwise identical properties, with and without the factor in question.

1. The principle is that of the *contribution* made by the factor or element being considered.
2. Cost is *not* the appropriate measure of the difference. Cost may or may not equal the sales price differential reflected in market behavior of buyers. This applies to both cost new and cost to cure.

3. Every adjustment should be justified by market evidence. Examination of market behavior of typical buyers may reveal that a particular deficiency or superiority is *not* reflected in a sales price differential, even though the appraiser believes that it "should be."

C. Types of Adjustments: Mechanics.

The appraiser must identify and select the technique of adjustment that he will employ. He should utilize the same technique throughout the adjustment process. Whichever technique is employed, it should reflect market reactions appropriately, both in direction and in size of adjustment.

As previously indicated in Session II, there are essentially three types of adjustments which can be made:

1. Plus and Minus Dollar Adjustments. If the appraiser can substantiate dollar differentials, he may add for deficiencies in the comparable property as opposed to the subject property, and subtract for elements in terms of which the comparable property is superior to the subject. If it can be justified, this is generally superior because the market thinks and acts in terms of dollars. In addition, the *sequence* of adjustments is less significant if plus and minus amounts are employed.
2. Plus and Minus Percentage Adjustments. This is often necessary because precise dollar amounts cannot be estimated from market evidence. This represents something of a hedge, but is still translated into dollars eventually.
  - a. Time and location adjustments are usually made first. Then the other adjustments are made, based on the sales price of the comparable property adjusted for time and location. The other adjustments should be made in terms of the current local market. Therefore, the base used for them should be adjusted to the current market first.
  - b. Plus and minus percentage adjustments are employed if the appraiser believes that the adjustment factors are essentially independent of one another.
  - c. Divide by Percentage Adjustment Factor. Since the subject property is the base, it should be the denominator in any adjustment process. It is a common mistake to multiply by the percentage figure, rather than dividing.

For example, if the comparable sales property is 10 per cent superior to the subject property, the adjustment process would call for *dividing* by 1.10, *not multiplying* by .90. A slight differential results:  $1.00 \div 1.10 = .909$ ;  $1.00 \times .90 = .90$ .

Exhibit 22 A

RECONCILIATION OF ACCRUAL ACCOUNTING FOR PROPERTY PERFORMANCE AND  
CASH AVAILABLE FOR DISTRIBUTION AND DISCOUNTED CASH FLOW VALUES

Year	1	2	3	4	5
Base Rents (Accrual)	20	20	20	20	20
Index	0	1	2	3	4
Operating Expense	(4)	(4.20)	(4.40)	(4.60)	(4.80)
Tenant Improvements	(4)	(4)	(4)	(4)	(4)
Taxes	(1)	(1.10)	(1.20)	(1.30)	(1.40)
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Net Income	11	11.70	13.40	13.10	13.80

Unrecognized Assets  
and Amortized Expenses

Rent Receivable	(20)	(20)	0	0	0
Rent Receivables Collected	0	0	13.33	13.33	13.33
Expense Escalator Receivable	0	0	.20	.40	.80
Tenant Improvements	(16)	4	4	4	4
Lease Commissions	(10)	0	0	0	0
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Cash Distribution	-35	-4.30	+29.93	+30.83	+31.93



Exhibit 22B

PREFERRED APPRAISAL ACCOUNTING  
FOR PROPERTY OPERATIONS  
AND DISCOUNTED CASH FLOWS

Year	1	2	3	4	5
Base Rents Collected	0	0	33.33	33.33	33.33
Index (5% on \$20 Annual Base)	0	1	2	3	4
Operating Expenses	(4)	(4.20)	(4.40)	(4.60)	(4.80)
Taxes	(1)	(1.10)	(1.20)	(1.30)	(1.40)
Reimbursements			.30	.60	.90
<b>*Net Income from Operations (5)</b>		<b>(4.30)</b>	<b>30.03</b>	<b>31.03</b>	<b>32.03</b>
<b>Amortized Investments Financed from Cash Flow</b>					
Tenant Improvements	(20)				(5)
Leasing Commissions	(10)				
Refurbishments					(5)
<b>*Net Cash Available For Distribution</b>	<b>(35)</b>	<b>(4.30)</b>	<b>25.03</b>	<b>31.03</b>	<b>27.03</b>
Mortgage Interest	0	0	0	0	0
Mortgage Principal	0	0	0	0	0
<b>*Net Cash Available For Equity</b>	<b>(35)</b>	<b>(4.30)</b>	<b>25.03</b>	<b>31.03</b>	<b>27.03</b>