TEAM Consulting LLC

Valuation of Self-Storage Properties

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Workshop Table of Contents:

Section 1 – Introduction, Workshop Overview, and Objectives

1.1. Introductions

Presenter and class introductions.

1.2. Workshop Overview and Agenda

Almost every assessment jurisdiction has some type of self-storage property on their assessment roll. Purpose of this workshop is to provide guidance and suggestions on the valuation process of self-storage properties. The workshop will look at the different classifications of self-storage and how all three approaches to value can be used to value these types of properties. Month-to-month leasing, the impact of new supply, reliance on external demand generators and management intensity all make analysis and valuation of these properties difficult. Also, included is some information on what authorities in the field say lies ahead for the industry.

The workshop is not designed to value the jurisdictions properties but will help establish processes, procedures and resources for the valuation cycle.

1.3. Workshop Objectives

- General background and summary of the Uniform Standard for Professional Appraisal Practice (USPAP);
- Identify the USPAP standards relating to mass appraisal;
- Describe additional noteworthy sections of USPAP;
- Recognize current trends in the Self-Storage industry;
- Understand the distinction between market value, value in use, investment value and going-concern value;
- Identify market data used in determining the highest and best use conclusion;
- Identify the key elements of the cost approach when valuing Self-Storage properties;
- Understand how to collect and analyze income/expense information;
- Develop capitalization rates from market transactions;
- Properly incorporate investor surveys and secondary data sources; and
- Identify resources to obtain Self-Storage market data.

Section 2 – USPAP Review

2. General USPAP Background

Although this is not a course on appraisal standards, there should be some discussion on USPAP. The outline below shows the topics of discussion and how they apply to our appraisal practice.

2.1. What is USPAP and what does the acronym stand for?

A. USPAP stands for the *Uniform Standards of Professional Appraisal Practice*.

B. The standards were developed for appraisers and users of appraisal services. It will also assist to maintain a high level of public trust in professional appraisal practice.

2.2. Why USPAP was developed?

A. USPAP was developed as a result of unethical appraisal and loan practices in conjunction with a large number of savings and loan closures or bail-outs.

2.3. The Appraisal Foundation (TAF)

A. Consists of three separate boards.

1. The Board of Trustees is the administrative body of the Appraisal Foundation.
2. Appraisal Standards Board (ASB) develops, publishes, interprets and amends the USPAP.
3. Appraisal Qualifications Board (AQB) sets the requirements for education and experience in order to be qualified as a certified appraiser.

2.4. Who must comply with USPAP?

A. An appraiser must comply with USPAP when either the service or the appraiser is required by law, regulation, or agreement with the client. Individuals may also choose to comply with USPAP any time the individual is performing the service as an appraiser.

2.5. Five Rules

A. *Ethics Rule* is divided into three sections:

1. **Conduct** – Assignments must be performed ethically with impartiality, objectivity and independence.
2. **Management** – Cannot have undisclosed fees or commissions.
3. **Confidentiality** – Protect the confidential nature of the appraiser-client relationship.

B. *Record Keeping Rule* – Work file must be kept for at least five (5) years or at least two (2) years after final disposition of any judicial proceeding and also file retrieval agreements.

C. *Competency Rule* – No assignment should be accepted if you do not have the knowledge and experience to complete the appraisal competently.

D. *Scope of Work Rule* – For each appraisal and appraisal review:

1. Identify the problem to be solved
2. Determine and perform the scope of work necessary to develop credible assignment results, and
3. Disclose the scope of work in the report

E. *Jurisdictional Exception* – Public law/regulation supersedes USPAP.

2.6. Ten Standards

Standard 1 – Real Property Appraisal, Development

Standard 2 – Real Property Appraisal, Reporting

Standard 3 – Appraisal Review, Development

Standard 4 – Appraisal Review, Reporting

Standard 5 - Mass Appraisal, Development

Standard 6 – Mass Appraisal, Reporting

Standard 7 – Personal Property Appraisal, Development

Standard 8 - Personal Property Appraisal, Reporting

Standard 9 – Business Appraisal, Development

Standard 10 – Business Appraisal, Reporting

2.7. **Statements on Appraisal Standards** – The ASB retired all Statements, and transferred valuable guidance from each Statement into new Advisory Opinions.

2.8. **Advisory Opinions** – These do not establish new standards or interpret existing standards. The Opinions illustrate the applicability of appraisal standards in specific situations and offer advice. Some of the Advisory Opinions of particular interest to Assessors are:

A. **Advisory Opinion 32 (AO-32)**[1] - This advisory opinion looks at ad valorem property and mass appraisal assignments, with an emphasis on the communication of assignment results and what USPAP standard applies in a given situation. AO-32 confirms that the elements, results, opinions, and value conclusions of the mass appraisal report must be developed under Standard 5 and clearly communicated as required by Standards 6-1 and 6-2.

The Advisory Opinion also states "An appraiser may be asked to communicate the assignment results for a single property that was appraised as part of a mass appraisal assignment. USPAP does not address this specific circumstance. The reporting requirements of Standard 2 apply to appraisal assignments developed under Standard 1 and do not apply to mass appraisal assignments prepared under Standard 6. However, the second sentence of the Preamble states: *It is essential that appraisers develop and communicated their analyses, opinions and conclusions to intended users of their services in a manner that is meaningful and not misleading.*

Additionally, the Ethics Rule states: An appraiser must not communicate assignment results with the intent to mislead or defraud. The ETHICS RULE also states: An appraiser must not use or communicate a report that is known by the appraiser to be misleading or fraudulent. Therefore, if an appraiser communicates mass appraisal or assignment results for a single property, the communication must be meaningful and must not be misleading."[2]

[1] USPAP Advisory Opinions 2020-2021 Edition, The Appraisal Foundation, page 150
[2] Ibid. pages 150-151

B. Advisory Opinion 32 also offers the following illustrations:[3]

1. An appraiser is in the process of developing appraisals for the next year's tax roll. The residential properties, condominiums and general commercial and major commercial properties will be valued with a mass appraisal model. Which development standards apply?

   Because the subject of the appraisal is a universe of properties, and because they are being appraised with a mass appraisal model, STANDARDS 5 and 6 apply.

2. An appraiser has completed a mass appraisal for ad valorem taxation using a mass appraisal model. There is a special use property for which it has been determined that the mass appraisal model is not appropriate. The property will be appraised as an individual property. Which standard applies to the appraisal of the special use property?

   Even though the special use property is being appraised for ad valorem taxation, STANDARD 1 would apply because the subject property is an individual property, not a universe of properties.

3. An assessment appeal is in process and an appraisal of an individual property is being conducted as part of that appeal. Which development standards apply?

   If the property under appeal is reanalyzed on an individual basis with a new value conclusion, STANDARDS 1 and 2 apply. If the improper mass appraisal model was applied and the issue was remedied during the appeal process, STANDARDS 5 and 6 apply.

4. An appraiser is conducting a mass appraisal for ad valorem taxation. A property record card is produced for each property. Is each property record card considered a report under Standard 6?

   No. The property record card is not the mass appraisal report; it is only a portion of the information and analysis supporting the mass appraisal.

[3] Ibid., pages 152-153

– New in 2020-2021 USPAP –

5. The Comment to Standards Rule 5-5(a)(v) requires an appraiser conducting a mass appraisal assignment to take reasonable steps to ensure that the quantity and quality of the factual data that are collected are sufficient to produce credible appraisals. What are some examples of these steps?

In real property, where applicable and feasible, systems for routinely collecting and maintaining ownership, geographic, sales, income and expense, cost, and property characteristics data must be established.

Geographic data must be contained in as complete a set of cadastral maps as possible, compiled according to current standards of detail and accuracy.

Sales data must be collected, confirmed, screened, adjusted, and filed according to current standards of practice. The sales file must contain, for each sale, property characteristics data that are contemporaneous with the date of sale.

Property characteristics data must be appropriate and relevant to the mass appraisal models being used. The property characteristics data file must contain data contemporaneous with the date of the appraisal including historical data on sales, where appropriate and available.

The data collection program must incorporate a quality control program, including checks and audits of the data to ensure current and consistent records.

C. Additional Advisory Opinions

- ADVISORY OPINION 33, Discounted Cash Flow Analysis
- ADVISORY OPINION 34, Retrospective and Prospective Value Opinions
- ADVISORY OPINION 35, Reasonable Exposure Time in Real and Personal Property Opinions of Value

- ADVISORY OPINION 36, Identification and Disclosure of Client, Intended Use, and Intended Users
- ADVISORY OPINION 7, Marketing Time Opinions
- ADVISORY OPINION 37, Computer Assisted Valuation Tools. If we use process that uses Computer Assisted Tools then we must understand the definitions, process and output of these tools. Otherwise, we may develop inaccurate values and/or misinform our client and intended users of the mass appraisal.

2.9. Frequently Asked Questions (FAQ)

The FAQ section is a form of guidance issued by the ASB in response to questions raised by users of USPAP and the public to illustrate the applicability of USPAP in particular situations and to offer advice from the ASB for the resolution of specific appraisal issues and problems.

The advice presented may not represent the only possible solution to the issues discussed and the advice provided may not be applied equally to seemingly similar situations. USPAP FAQ does not establish new standards or interpret existing standards. USPAP FAQ is not part of USPAP and is approved by the ASB without public exposure and comment.

2.10. Additional Noteworthy Sections

A. Definitions

CREDIBLE: worthy of belief.[4]

Comment: Credible assignment results require support, by relevant evidence and logic, to the degree necessary for the intended use.

EFFECTIVE DATE: the date to which an appraiser's analysis, opinions, and conclusions apply; also referred to as date of value.[5]

[4] Ibid., page 4
[5] Ibid., page 4

INTENDED USE: the use(s) of an appraiser's reported appraisal or appraisal review assignment results, as identified by the appraiser based on communication with the client at the time of the assignment.[6]

JURISDICTIONAL EXCEPTION: an assignment condition established by applicable law or regulation, which precludes an appraiser from complying with a part of USPAP.

MISLEADING: Intentionally or unintentionally misrepresenting, misstating, or concealing relevant facts or conclusions.[7]

RELEVANT CHARACTERISTICS: features that may affect a property's value or marketability such as legal, economic, or physical characteristics.[8]

WORKFILE: data, information, and documentation necessary to support the appraiser's opinions and conclusions and to show compliance with USPAP.[9]

B. Competency Rule

An appraiser must: (1) be competent to perform the assignment; (2) acquire the necessary competency to perform the assignment; or (3) decline or withdraw from the assignment. In all cases, the appraiser must perform competently when completing the assignment.

Perfection is impossible to attain, and competence does not require perfection. However, an appraiser must not render appraisal services in a careless or negligent manner. This Rule requires an appraiser to use due diligence and due care.

The appraiser must determine, prior to accepting an assignment, that he or she can perform the assignment competently.

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[6] Ibid., page 4
[7] Ibid., page 5
[8] Ibid., page 5
[9] Ibid., page 6

Competency requires:

1) the ability to properly identify the problem to be addressed;
2) the knowledge and experience to complete the assignment competently; and
3) recognition of, and compliance with, laws and regulations that apply to the appraiser or to the assignment.

Comment: Competency may apply to factors such as, but not limited to, an appraiser's familiarity with a specific type of property or asset, a market, a geographic area, an intended use, specific laws and regulations, or an analytical method. If such a factor is necessary for an appraiser to develop credible assignment results, the appraiser is responsible for having the competency to address that factor or for following the steps outlined below to satisfy this COMPETENCY RULE.[10]

Standards Rule 5-1

In developing a mass appraisal, an appraiser must:

(a) be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce a credible mass appraisal.

[10] Ibid., page 11

Section 3 – General Self-storage Information

3.1. History

The first self-storage projects were developed in Texas in the late 1950s to meet the needs of migrant oil workers During the 1960s and 1970s the industry migrated to the Sunbelt regions. Over the next 40 years the amount of self-storage properties in the United States quadrupled. Between 1996 and 2002 more than 300 million square feet of new storage supply with an aggregate value of $12 billion was added to the self-storage market which increased the total supply in the United States to nearly 1.3 billion square feet. In 2013 there is 2.3 billion of self-storage rentable space in the U.S.

According to the Self-storage Almanac, self-storage facilities, although usually falling under industrial zoning, are more like neighborhood shopping centers in that they must draw customers from within a relatively small radius to be competitive. The self-storage industry has been one of the fastest-growing sectors of the United States commercial real estate industry over the period of the last 40 years. It took the self-storage industry more than 25 years to build its first billion square feet of space, it added the second billion square feet in the eight years of 1998 – 2005.

3.2. Self Storage Labels

Over the years the self-storage industry has been referenced with different labels. The industry has gone through a variety of names such as:

- Mini-warehouses
- Mini-storage
- Mini-storage warehouses
- Self-service storage
- Self-storage (the most widely used term today)
- Self-storage mini-warehouses

3.3. Types of Self Storage

Typically the industry categories for self-storage facilities are:

Traditional (Non-Climate Controlled)
Typically all single story with outside access.

Climate Controlled
Can be either single or multi-story buildings with interior access.

Hybrid
A mix of single and multi-story warehouses, and/or a mix of climate and non-climate controlled storage units.

Big Box
Multi-level facility built from scratch.

Conversion
Converted from another use. Examples below are from a strip center, where the owner had difficulty leasing the section that had poor visibility from the primary roadway, so he converted it to climate controlled storage, then added free-standing non-climate controlled buildings on the rear elevation of the property.

Conversion from motel…

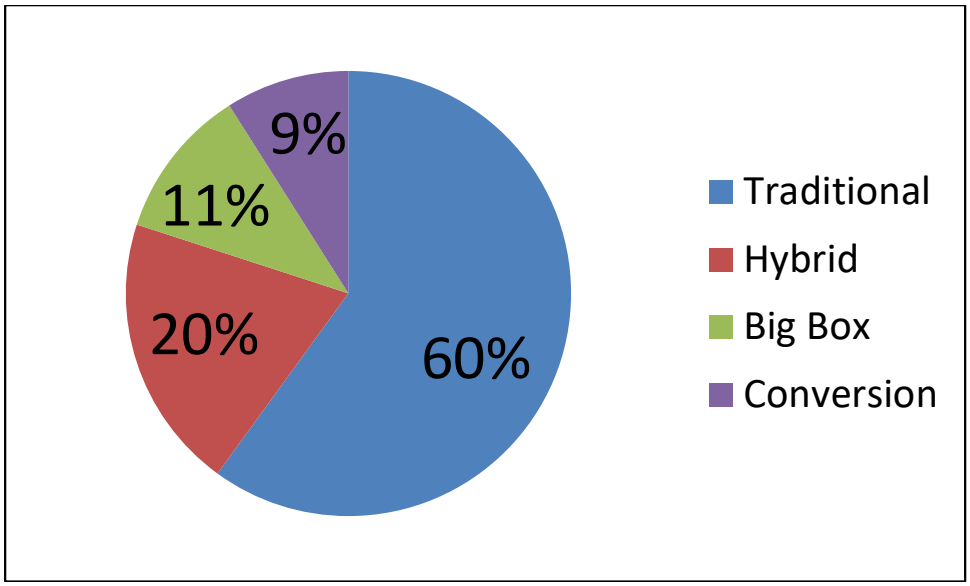
…to self storage.

3.4. Self-Storage Conversions

A 2013 article by Ramey Jackson discusses three points of view on conversions: Manufacturers, Architects and Developers. A few pros and cons from each are shown.

- Manufacturers:
    - Permitting process can be very slow
    - Sellers could be very anxious
    - Buildings with a large number of posts or columns create large problems
- Architects
    - Access and design
    - Existing elevator capacity or amount of elevators needed
    - Exiting foundation and load-bearing capacity
    - Conversion can be done to warehouses, office space, retail buildings, supermarkets and hotels
- Developers
    - Timing
    - No site development risk
    - Hard-cost savings
    - Rentable square foot constraints
    - Unknown building conditions
    - Access limitations

Traditional facilities represent approximately 60% of the market followed by hybrid (20%), big box (11%) and conversion (9%).[11]



3.5. Relocatable Storage Units

A new development in the self-storage industry is "relocatable storage units". These are free-standing external units that are manufactured to the same specifications as a traditional storage facility and they can be placed on unbuildable lots along fence or property lines and in unused parking areas.

The demand for these units has risen from the recent economic downturn which a slowdown in the construction of new self-storage units, odd sized lots or areas of land that are unsuitable for a traditional storage unit and the storage's owner's need for more storage space.

[11] Self-storage Association, *Financial and Operational Characteristics of Self-storage Facilities,* 2007 Edition, page 89

Some of the features of these units are:

- Easily movable by a forklift.
- Can be built onsite or delivered erected and ready to generate immediate income.
- Easy to expand to accommodate growth.
- Adaptable to odd-sized lots or slightly sloping land/driveways.
- Retains the look of the existing storage units without the construction costs.
- Often times allowed where containers are restricted due to design and aesthetics.
- Increased rental income with minimal investment.
- May not need a building permit.

These units are classified by the manufactures as equipment and can be depreciated over seven years. This would tend to indicate that they might be personal property. Questions for the jurisdiction could be:

- Is the structures personal property as defined by statute?
- Is personal property taxable?
- If taxable, does it have to be reported by the property owner and if so, has that been done?
- If not taxable, then the only assessment would be for land, site improvements and any other permanently attached structures?


Yale

3.6. Self-Storage Demand

Why do people use self-storage? According to a Self-storage Demand Study the two main reasons are temporary storage while changing residences and lack of storage space at current residence. The top ten features most important to consumers are:

- Anytime access to unit
- Drive-up parking to unit
- Pest control
- Close to place of residence
- Discount rates for long term rental
- Electronic gates at entrance
- Flexible contracts
- Fire sprinkler in storage unit
- Flexible means of payment
- Humidity of unit is controlled

The most typical population density measure used in the self-storage industry is the number of households within a certain radius of a facility. The majority of self-storage customers seek facilities within a three to five mile radius of their main location.

It is reported that 39% of the self-storage consumers are less than 10 minutes from the facility and 36% are 10 to19 minutes from the facility.

Another way to measure population density is by zip code. A guideline chart developed for self-storage development based on population density is shown below:

- Rural – 0 to 43.58 persons per square mile
- Suburban – 43.59 to 999.99 persons per square mile
- Urban – 1,000 persons per square mile[12]

3.7. Self-Storage Market Segmentation

The self-storage market is roughly divided into small, medium and large segments. Following is a description of each market segment:

- The small market includes properties that cost less than $1 million. These are typically mom and pop properties that have less than 25,000 square feet. Participants in small markets are usually small local investors and this type of property has the least liquidity.
- The medium sized market is composed of properties that range in price from $1 million to $5 million. The market is active and will attract local, regional and some institutional investors.
- Properties valued at $5 million to $10 million make up the large self-storage market. The highest quality properties include all the newer multistory and climate control assets. They attract national and regional private investors and a limited number of institutional investors.[13]

“Self-storage is a unique asset class. It provides relatively high returns in terms of capitalization and yield rates compared to other types of real estate. However, it has also proven to be resistant to recession due to its lower declines and default rates as compared to other types of real estate.”[14]

[12] Ibid, page 8
[13] Correll, Richard B., *Market Analysis and Valuation of Self-Storage Facilities,* The Appraisal Institute, 2003, page 36
[14] Christian, Sonne, R. MAI, Self Storage Economics and Appraisal, Appraisal Institute, 2012

3.8. Self-Storage Discussion Questions

1) *What is the most common type of self-storage in your jurisdiction?*

2) *What is the most unique self-storage conversion you have seen that was an adaptive reuse of an existing commercial building?*

3) *Would portable storage units be considered real or personal property in your jurisdiction? If personal property, would they be taxable in your jurisdiction?*

4) *What are the sources for demand in your jurisdiction?*

There are no right or wrong answers to these discussion questions. They are intended to be thought provoking and encourage you to plan for the next valuation cycle.

Section 4 – Market Trends

4. General

The self-storage market has traditionally been referred to as “recession resistant” by those active the storage industry. Since 2012, the popularity of self-storage as a development and investment has skyrocketed, which has put upward pressure on prices and downward pressure on cap rates.

4.1. Current Market Trends

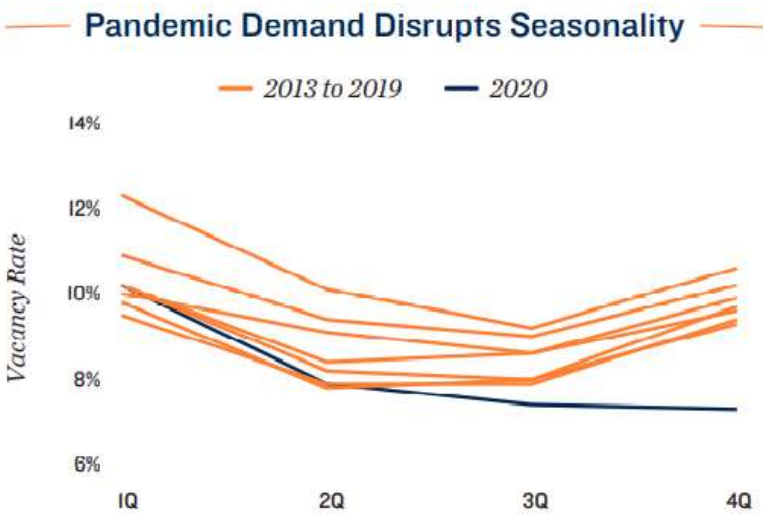
Although not exempt to the challenges posed by the health crisis, self-storage proves to be durable through pandemic. Before the pandemic arrived, the sector was contending with the detrimental effects of record construction activity on fundamentals, especially rents.

The sudden shift to remote learning and working, as well as a greater emphasis on outdoor activities and migration to less dense areas, created new needs for storage units. An increase in move-ins, paired with fewer move-outs, pushed the national vacancy rate down to a multidecade low of 7.2 percent last year. The drop in availability, aided by a slight slowdown in deliveries, applied upward pressure to asking rents on a countrywide level for the first time since late 2017.

While e-commerce captures a greater share of these dollars, consumers are also venturing out more, fueling job creation across a range of sectors, including retail trade, leisure, and hospitality. These trends will in turn foster new household formation in the long term. All of these factors drive new consumer activity that ultimately leads to more items needing to be stored.

Improving economy to aid sector as some short-term needs end. As the economy reopens, some pandemic-specific demand drivers for self-storage are dissipating. College students who had placed belongings into storage when campuses closed will retrieve their supplies as they return to classrooms.

As the broader economy recovers, other traditional demand drivers will return as well. Open offices will again prompt people to relocate for work, while an overall decline in unemployment will foster new household formation and consumer spending that eventually drives storage use. During this period of transition from short- to long-term demand drivers, property fundamental improvement may lose momentum. Both vacancies and rents are expected to be positive over the next cycle, though, as development activity continues to moderate.[15]



*Forecast

Sources: Radius+; Yardi Matrix

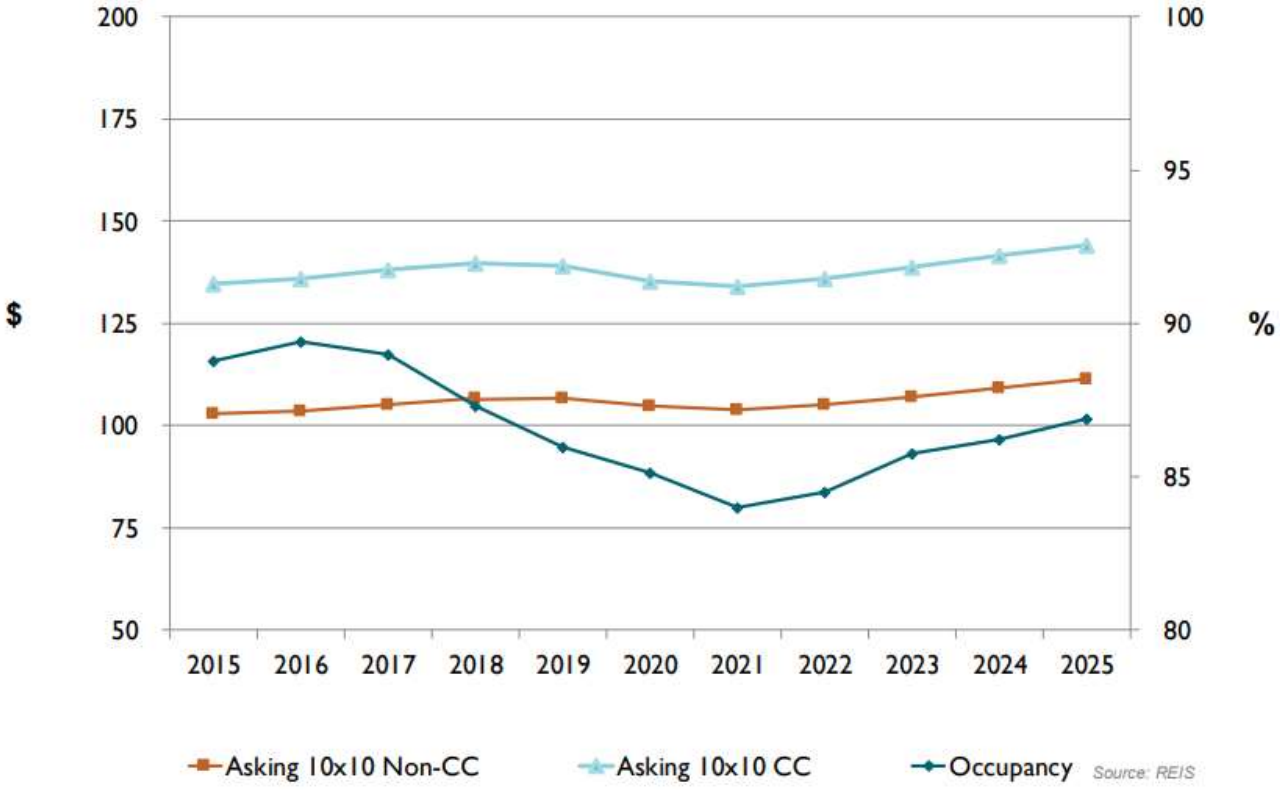
[15] The Outlook: Self-Storage, Midyear 2021, Marcus & Millichap

4.2. Rent, Occupancy and Sale Trends

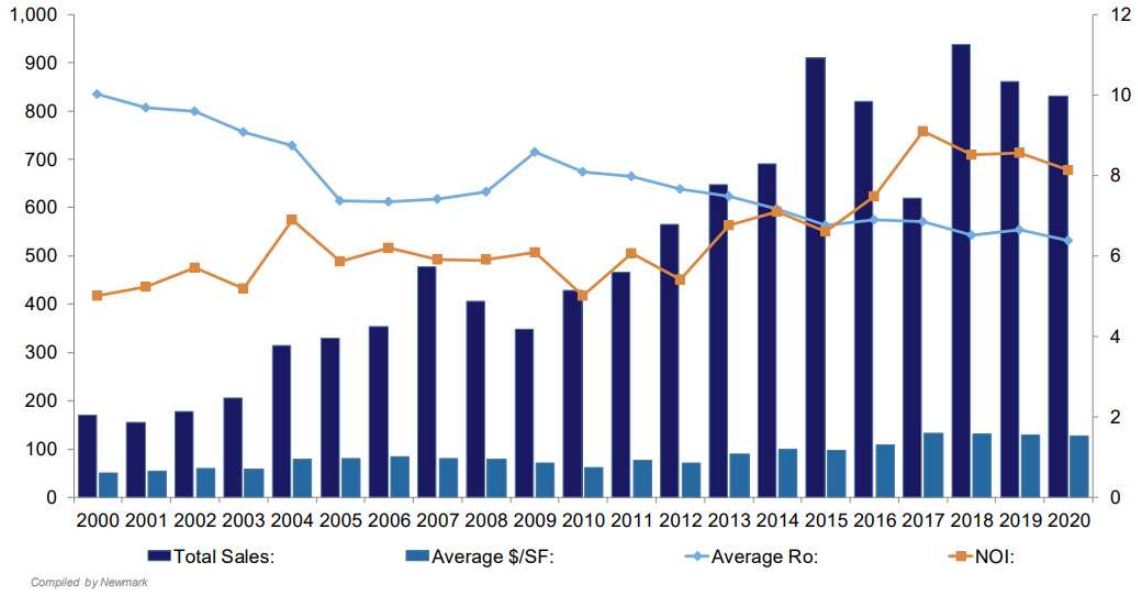
The following information was obtained from a *Self Storage Market Overview* presentation provided by Christian Sonne, MAI, of Newmark, Knight & Frank (NKF) on June 23, 2021.

The following graph contains actual data through the year 2020, plus the five-year forecast through the year 2025.

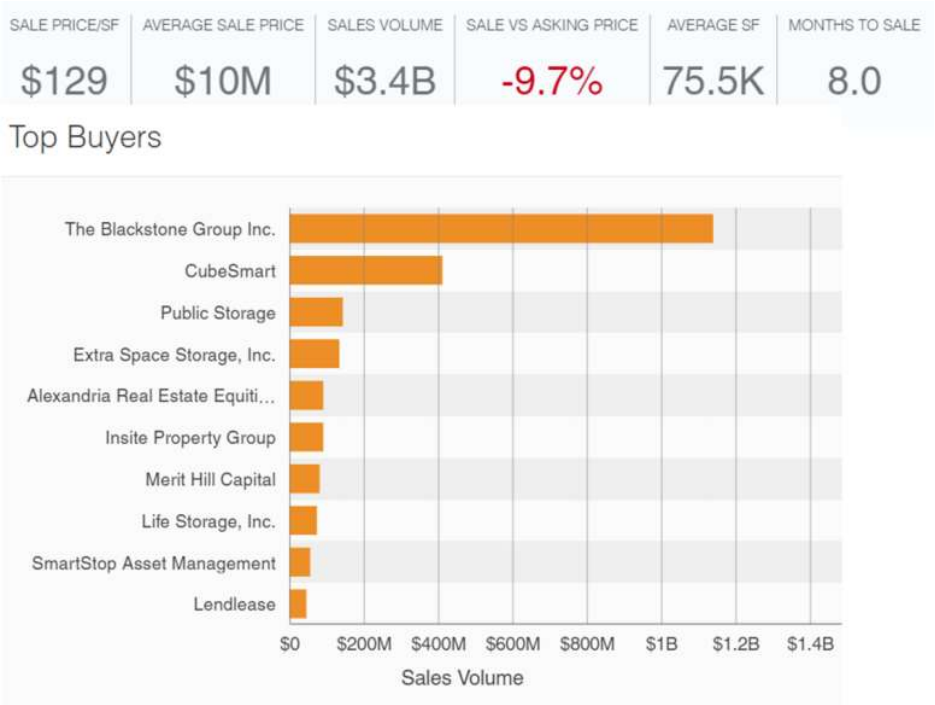
National Rent and Occupancy Trends – Self-Storage



National Sale Trends – Self-Storage



Top Buyers in Self-Storage



Self-Storage Portfolio Sales Performance

	Sales Price	NRA	Price/SF	Pro Forma Cap Rate	TTM Cap Rate
		2020			
Low	$ 31,000,000	$ 322,404	$ 74.54	4.85%	3.98%
High	$ 1,200,000,000	$ 8,000,000	$ 234.68	6.25%	5.80%
Average	$ 299,365,000	$ 2,027,874	$ 120.92	5.54%	4.81%
		2019			
Low	$ 89,620,000	$ 367,088	$ 81.46	5.50%	5.54%
High	$ 295,000,000	$ 2,560,290	$ 244.14	6.50%	5.54%
Average	$ 166,504,000	$ 1,447,378	$ 138.90	5.85%	5.54%
		2018			
Low	$ 204,000,000	$ 1,109,371	$ 151.37	4.89%	4.55%
High	$ 1,325,000,000	$ 8,700,000	$ 188.67	5.60%	5.50%
Average	$ 765,825,000	$ 4,964,269	$ 161.16	5.41%	5.01%
		2017			
Low	$ 126,000,000	$ 1,378,726	$ 75.45	4.75%	4.51%
High	$ 330,000,000	$ 2,300,756	$ 216.49	6.40%	5.90%
Average	$ 248,400,000	$ 1,718,445	$ 149.03	5.43%	5.23%
		2016			
Low	$ 77,788,000	$ 435,000	$ 87.34	4.62%	4.00%
High	$ 1,229,900,000	$ 6,851,703	$ 246.96	6.00%	6.10%
Average	$ 340,472,207	$ 2,277,377	$ 148.69	5.45%	5.19%
		2015			
Low	$ 61,300,000	$ 580,661	$ 81.79	5.00%	4.85%
High	$ 1,400,000,000	$ 9,027,785	$ 158.59	6.50%	6.00%
Average	$ 351,133,333	$ 2,402,448	$ 117.51	5.82%	5.45%

Compiled by Newmark

Self-Storage Capitalization Rates

Investment Type	Cap Rate Range	Average
PwC Real Estate Investor Survey: 1st Qtr. 2018	4.50% - 7.00%	5.65%
PwC Real Estate Investor Survey: 3rd Qtr. 2018	4.50% - 7.00%	5.66%
PwC Real Estate Investor Survey: 1st Qtr. 2019	4.50% - 7.00%	5.66%
PwC Real Estate Investor Survey: 3rd Qtr. 2019	4.50% - 7.00%	5.75%
NKF Self Storage Investor Survey: 3rd Qtr. 2019	4.50% - 8.50%	5.60%
PwC Real Estate Investor Survey: 1st Qtr. 2020	4.50% - 7.00%	5.67%
PwC Real Estate Investor Survey: 3rd Qtr. 2020	4.50% - 7.00%	5.68%
NKF Self Storage Investor Survey: 3rd Qtr. 2020	4.50% - 8.50%	5.50%
NKF Self Storage Investor Survey: 1st Qtr. 2021	4.25% - 8.00%	5.37%

Compiled by Newmark

Self-Storage – Rent and Expense Growth

	Rent Growth		Expense Growth	
Investor Surveys	Rate Range	Average	Rate Range	Average
PwC Real Estate Investor Survey: 1st Qtr. 2018	0.00% - 15.00%	4.29%	2.00% - 5.00%	3.00%
PwC Real Estate Investor Survey: 3rd Qtr. 2018	0.00% - 15.00%	4.29%	2.00% - 5.00%	3.00%
PwC Real Estate Investor Survey: 1st Qtr. 2019	0.00% - 15.00%	4.29%	2.00% - 5.00%	3.00%
PwC Real Estate Investor Survey: 3rd Qtr. 2019	0.00% - 7.00%	3.58%	2.00% - 5.00%	3.00%
NKF Self Storage Investor Survey: 3rd Qtr. 2019	3.00% - 6.00%	3.40%	2.00% - 5.00%	3.10%
PwC Real Estate Investor Survey: 1st Qtr. 2020	2.00% - 7.00%	3.71%	2.00% - 4.00%	2.83%
PwC Real Estate Investor Survey: 3rd Qtr. 2020	2.00% - 8.00%	3.75%	2.00% - 5.00%	2.92%
NKF Self Storage Investor Survey: 3rd Qtr. 2020	3.00% - 6.00%	3.25%	2.00% - 5.00%	3.05%
NKF Self Storage Investor Survey: 1st Qtr. 2021	3.00% - 6.00%	3.50%	2.00% - 5.00%	3.00%

Compiled by Newmark

4.2.1. Self-Storage Market Trends Discussion Questions

1) *What have been the national rent trends for the past five years?*

2) *What have been the national occupancy trends for the past five years?*

3) *What have been the national cap rate trends for the past five years?*

4) *Have the expectations changed much for expenses according to the PwC and NKF Investor Survey data?*

See **Appendix 1** in back of this manual for discussion question answers.

Section 5 – Market Value and Highest/Best Use

5. Market Value

Most valuations prepared by assessment offices are premised on *fair market value*.

5.1. Value Definition

While the specific definition can vary from jurisdiction to jurisdiction, the definition from the International Association of Assessing Officers is:

> **Market Value**—Market value is the major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. A current economic definition agreed upon by agencies that regulate federal financial institutions in the United States is:
>
> The most probable price (in terms of money) which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus.
>
> Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
>
> - The buyer and seller are typically motivated.
> - Both parties are well informed or well advised, and acting in what they consider their best interests.
> - A reasonable time is allowed for exposure in the open market. Payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto.
> - The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.[16]

[16] Glossary for Property Appraisal and Assessment, Second Edition, International Association of Assessing Officers, 2013, page 101

Market conditions are not static. There are inefficiencies associated with the real estate market. Net operating income is affected by change in supply and demand and in commercial properties, supply does not respond quickly to changes in demand.

5.1.1. Investment Value

The worth of an investment property to a particular investor. Investment value may or may not coincide with market value depending on the requirements of the specific investor.[17]

5.1.2. Liquidation Value

The estimated gross dollar amount that could be typically realized at properly conducted public auction held under forced conditions and under present-day economic trends.[18]

Following are some characteristics of liquidation value:

1) Unwilling seller, facing foreclosure or bankruptcy.

2) Seller under extreme pressure to sell.

3) Limited time to adequately market and sell self-storage facility.

5.2. Highest and Best Use

One of the first steps in the appraisal process is to look at the highest and best use of the property. In the mass appraisal process most assessors do not spend a lot of time on this step. Typically in mass appraisal the current use is considered to be the highest and best use unless there are obvious facts about the property that prove otherwise.

[17] Ibid., page 86
[18] Ibid., page 94

Highest and Best Use
A principle of appraisal and assessment requiring that each property be appraised as though it were being put to its most profitable use (highest possible present net worth), given probable legal, physical, and financial constraints. The principle entails first identifying the most appropriate market and, second, the most profitable use within that market. The concept is most commonly discussed in connection with underutilized land.[19]

"Most profitable" in commercial real estate appraisal typically means the highest annual net income, the highest return (capitalization rate), or the highest residual land value (upon completion and sale of the property).

5.2.1. Highest and Best Use Criteria

The four criteria that must be analyzed in the highest and best use process are:

1) Legally permissible
2) Physically possible
3) Financially feasible
4) Maximum profitability

The highest and best use is applied to property

1) As vacant (assuming no improvements)
2) As improved (analysis of what to do with existing improvements)

The highest and best use analysis will determine what comparables are used in the analysis.

[19] Ibid., page 78

5.2.2. HBU As Vacant

For mass appraisal, zoning will typically determine the most probable use of the site and determine what time of comparable data will be used in the land valuation. Additional insight of the most likely use for a site can be found by looking at the type of surrounding uses and what has recently been developed in the market area, which can also help if no zoning regulations are in place.

5.2.3. HBU As Improved

With improved properties, the appraiser has to determine whether continuing the current use is likely or whether changes are necessary. Changes to the property may involve curing deferred maintenance or moving to an alternative use.

In mass appraisal, addressing alternative uses can be difficult in the normal valuation process. Properties that have highest/best use issues can be identified in the vacancy (supply/demand) study for a particular property type. Highest/best use is then determined by reconciling market value metrics for the jurisdiction's different commercial uses with market trends and the situation for the parcel in question.

One instance where a more detailed highest and best use analysis may be warranted is when a first generation retail building is vacant and waiting for a second generation user of the property. Generally the deciding factors are location and market conditions.

5.2.4. Appraisal Principles

There are several appraisal principles that should be considered with looking at the highest and best use. They would include supply and demand, substitution, contribution, competition and balance. Following is an example of how two of the appraisal principles can be considered:

> **Principle of Competition:** Consider the competition in the area where the self-storage facility is located.
>
> **Principle of Balance:** Consider complimentary businesses/residential areas and try to be located close to them.

5.2.5. Market Based Demand

The most important concept of highest and best use is market based demand. This involves a detailed analysis of self-storage market trends with specific analyses of supply, demand and a conclusion of market equilibrium, oversupply and undersupply.

Self-storage demand is measured in terms of square feet per person. *Self-storage Almanac* in 2009 indicated demand nationwide was 7.03 square feet per person compared to 3.31 square feet per person in 1996.

Market analysis begins with a measure of the total self-storage supply per person in the trade area, benchmarked to national, state, and core-based statistical area (CBSA) data. A Core Based Statistical Area (CBSA) is a U.S. geographic area defined by the Office of Management and Budget (OMB) based around an urban center of at least 10,000 people and adjacent areas that are socioeconomically tied to the urban center by commuting.

Market equilibrium analyses will help to determine if there is an oversupply or undersupply of self-storage facilities. The authors do not know how the industry calculates the Current demand (absorption) but believe the appraiser should be aware of its use. For larger jurisdictions we recommend you look at annual reports by Cushman & Wakefield at http://www.selfstorageeconomics.com/cityfocus.htm.

Following is an example of a form that could be used to estimate market equilibrium as shown in the Self-storage Almanac valuation 2010.

	Square Feet
Existing Supply of Self-Storage Space	
Less: Self-Storage Razed Past Year	
Plus: New Construction of Self-storage	
Total Supply of Self-Storage Space	
Less: Current Occupied Space	
Available Supply of Self-Storage Space	
Less: Stabilized Vacancy (10%)	
Remaining Available Supply	
Current Demand (Absorption)	
Less: Remaining Available Supply	
Difference Between Supply and Demand	
Equilibrium Forecast	

Following is example of how the form would look completed.

	Square Feet
Existing Supply of Self-Storage Space	895,000
Less: Self-Storage Razed Past Year	-0-
Plus: New Construction of Self-storage	75,500
Total Supply of Self-Storage Space	970,500
Less: Current Occupied Space	-805,000
Available Supply of Self-Storage Space	**165,500**
Less: Stabilized Vacancy (10%)	-89,500
Remaining Available Supply	**76,000**
Current Demand (Absorption)	280,000
Less: Remaining Available Supply	**-76,000**
Difference Between Supply and Demand	204,000
Equilibrium Forecast	**Under Supplied**

5.3. Additional Highest and Best Use Thoughts

Implied in the definition is that the determination of highest and best use takes into account the contribution of a specific use to the community and community development goals as well as the benefits of that use to the individual property owners. It is recognized that in some cases where a site has existing improvements on it, the highest and best use may very well be determined to be different from the existing use. The existing use will continue, however, unless and until land value in its highest and best use exceeds the total value of the property in the existing use.

5.4. Highest and Best Use Discussion Question

Based on the market trends previously shown in this workshop, do you think self-storage development is financially feasible at present?

See **Appendix 1** in back of this manual for discussion question answers.

Section 6 – Land Valuation

6. General

A site is a tract of land that has been developed to the extent that it is ready to be built on. The site analysis process involves the collection of site-specific data and the analysis of that data to see how it affects market value. The appraiser should look at the appropriate appraisal principles, the land classifications and the regional, city, and neighborhood trends that have an effect on value.

6.1. Site Characteristics

It is not uncommon for self-storage projects to be located along retail corridors and adjacent to residential districts. Sites may be along a major road, on a frontage road or may be off the road in what is referred to as a flag-shaped site. A flag-shaped site has access off the main or frontage road but the buildable area is similar to a back-lot.

Benefits to a flag-shaped site may consist of:

1) Adequate exposure

2) Lower land cost

3) Ability to sell the out lot for a higher price because of the street exposure desired by most commercial property types

Additional considerations:

A. Most new suburban projects are located on sites with good access and visibility that are convenient to users.

B. A typical suburban or rural storage site may be very deep with minimal frontage for access.

C. Visibility is essential because more than 50% of self-storage business is generated by drive-by traffic. The remainder results from advertising.

D. Topography is typically not a problem. It is not uncommon to see a project with ground level access and an elevation variance of 20 to 40 feet.

E. Convenience is also important. Based on industry statistics most users will not drive more than 10 to 15 minutes to reach a self-storage facility.

F. Sites that have a good balance of accessibility, visibility and convenience are a key factor in the lease up time for self-storage facilities.

G. As self-storage projects move closer to retail and residential districts, better landscaping, fencing and building facades are generally being required.

H. Typical zoning requirements will allow a maximum building coverage of 50% of the site area.

I. The optimal facility size is 80,000 square feet. An 80,000 square foot project built at 50% building coverage would require 3.67 acres (160,000 ÷ 43,560 square feet).

J. Rural self-storage projects tend to be smaller than self-storage facilities in urban or suburban locations.

K. Most projects require that buildings be spaced 30 feet apart to allow for loading and access.

6.2. Unit of Comparison

The typical unit of comparison for a self-storage site is price per square foot. Typical site size varies, but two to five acres is common with the building covering 40 to 50 percent of the site area.

6.3. On-Site Improvements and Off-Site Improvements

On-Site Improvements – Items such as grading, paving, driveways, landscaping, fencing, street lights, water lines, etc.

Off-Site Improvements – Items such as streets, sidewalks, street lighting, utilities, etc.

Signage – In some areas this may be a taxable item. The question that needs to be determined is: “Is the signage personal property or real property?”

6.4. Trends that Influence Land Value

A. **Physical factors** – These factors are both natural and man-made. Examples of physical factors include location, climate, utilities, size, topography, etc. The most significant physical factor is location. For example, most customers come from a three-mile trade area.

The physical factors that are common to both rural and commercial land parcels such as soil type have a different effect on the two classes of property. Soil type for agricultural class properties affect the type of crops that can be grown on the land or the amount of livestock that can be grazed. Soil type for commercial class would affect the drainage or ability of the land to support certain type of structures. Another term for physical factors is environmental factors.

B. **Economic factors** – These factors influence supply and demand. These factors have an impact on all classifications of land. Examples of economic factors include interest rates, land use patterns, family income and wages, etc. A factor such as population density and nearby development will have a positive impact on the number of customers which cause the market value to be higher.

C. **Social factors** – These factors are demographic attitudes, characteristics and trends. Examples of social factors include crime rates, income levels, education levels, etc.

D. **Governmental factors** – These are policies and regulations adopted by local governmental units that affect how land can be used and how land is zoned. Governmental factors tend to affect all the different classes of properties. Examples of governmental factors include building codes, zoning codes, property taxes, development regulations, etc.

6.5. Land Valuation Methods

A. **Sales Comparison Method**:

The sales comparison approach is the preferred method to use to develop a value estimate for the land. The sales of vacant land comparable to the subject property are gathered and analyzed. These comparable, if possible, should be tracts of land that were purchased for self-storage properties The sale prices of the comparable are adjusted where necessary for financing, market conditions, location and other physical differences.

The adjusted sale prices are reduced to a common unit of comparison, such as price per square foot or acre. The appraiser analyzes this information and derives a unit applicable to the subject property. The price per unit is then multiplied by the size of the subject property's land.

B. **Comparative Unit Method**:

This method in mass appraisal is similar to the comparable sales approach. This method is appropriate in neighborhoods where parcels vary in size but have other characteristics in common. It is probably used more often in finding the value of residential land values but can also be used to value commercial land parcels. The first step in this process is to stratify the data. Using sale properties, a value per unit (unit of comparison) for each grouping of data is determined. If the comparative unit method is used the typical method used to determine the appropriate value per unit is the median value per unit. Since this method is using sales data it is important to remember that the sales will need to be adjusted for market conditions if the sales are not current sales. Once the typical value per unit is developed, then that value per unit is applied to all the parcels in a neighborhood. Adjustments may need to be made if individual properties have different physical characteristics other than size. Statistical analysis can be used to test how reliable or equitable the value per unit developed is in predicting land values. The statistic used in mass appraisal to test reliability of the data is the coefficient of dispersion (COD).

C. **Market Condition Adjustment**:

Both the comparable sales approach and the comparative unit method may require a market condition adjustment if the sale date is not current. Two methods to find the time adjustment is resale analysis and paired sale analysis. Resale analysis is used if a property has sold twice within a given time frame.

The formula to calculate a market conditions adjustment is:

(Current Sale Price – First Sale Price) ÷ First Sale Price

= Total Percent of Change

To find the monthly time trend the formula would be:

Total Percent of Change
÷ Number of Months Between the Two Sales

= Monthly Market Conditions Adjustment
(Carry the Monthly Time Trend to Four Decimals)

The annual time trend would then be calculated by multiplying the monthly time trend by 12.

For example, if a vacant lot recently sold for $45,000 and it sold nine months ago for $42,000 the time trend would be calculated as follows:

$45,000 - $42,000 = $3,000

$3,000 ÷ $42,000 = 0.0714

0.0714 ÷ 9 month = 0.0079 per month

or 9.5% per year (0.0079 x 12).

Paired sale analysis uses the same basic formula. This type of analysis looks at two different properties that have sold and are identical except for the sale date.

Section 7 – The Cost Approach

7. General

The cost approach to value provides a value indication that is the sum of the estimated land value and the estimated depreciated cost of the building and other improvements. The cost approach is often thought of as an upper limit of value.

The economic principle that provides the foundation for the cost approach is the principle of substitution. The principle of substitution states that a rational, informed purchaser will pay no more for a property than the cost of acquiring the land and constructing an acceptable substitute with like utility, assuming that no costly delay will be encountered in making the substitution.

The cost approach is sometimes considered a good approach because it is not necessary to deal with personal property. It is best applied to new properties competing in a healthy market. In theory, this approach will also eliminate the need to address intangible business value.

Market extracted depreciation can be misleading because there may be items other than real estate included in the sale prices, on which depreciation is based.

The cost approach is applied to self-storage properties in the same manner as most any other property type. It is important to have reliable cost figures to estimate the replacement cost new.

Commercial cost manuals are a good source. Sometimes, it is also possible to get actual costs from self-storage developers.

7.1. Steps in the Cost Approach Value

Steps in developing the Cost Approach to value:

1) Estimate the land (site) value as if vacant and available for development to its highest and best use.

2) Estimate the total cost new of improvements.

3) Estimate the total amount of depreciation from all causes.

4) Subtract the total dollar amount of depreciation from the total cost new of the primary improvements.

5) Estimate the total cost new of any accessory improvements and site improvements.

6) Add site value to the depreciated cost of the primary improvements, accessory improvements, and site improvements, to arrive at a value indication by the cost approach.

Expanded Cost Approach formula:

Value (V) =	Replacement Cost New	(RCN)
	- Depreciation	(Depr)
	= Replacement Cost New Less Depreciation	(RCNLD)
	+ Depreciated Value of Other Improvements	(OtherImps)
	+ Land Value	

7.2. Types of Costs

A. **Direct Costs** – costs usually incurred on the site (labor, materials, supervision, building permit fees). Direct costs are also referred to as hard costs.

B. **Indirect Costs** – costs usually incurred off the site (insurance, architect fees, interest, taxes, etc.). Indirect costs are also referred to as soft costs.

C. **Entrepreneurial profit** – this is a market derived number that reflects the amount developers expect to receive for their contribution to the improvement.

Entrepreneurial profit is not typically included in most cost manuals.

7.3. Concept of Costs

A. **Reproduction Cost** – this is the cost of constructing a building identical to the subject property in floor plan, style and all aspects, using the same type of construction materials. This method includes the added cost of obsolete design, building techniques and materials.

B. **Replacement Cost** – this is the construction of a building having the same utility as the subject, as well as the same general amenities, although the building may differ in architectural design, materials of construction and floor plan. This method will be typical costs and it is the method most often used by appraisers. It is the cost that is used to develop costing manuals. This method will also tend to eliminate functional obsolescence.

C. **Original Cost** – this is the original cost to construct the subject property.

7.4. Estimating Replacement Cost New

Replacement cost new can be determined using a national or local costing manual or actual construction costs. The appraiser must make sure that the costs you are using for the cost approach include both the direct and indirect costs. Direct costs include costs incurred on the work site like labor, material and supervision. Indirect costs are those costs incurred off the work site like engineering fees, taxes, etc. The costs should also include overhead and profit.

If using actual construction costs from your local market it is also a good idea to compare the cost to your costing manual. This process helps you determine how close the costs in your costing manual reflect the actual local market. One good source for the comparison is Marshall Valuation Service. Cost information on storage properties in Marshall can be found in Section 14 or if using Segregated Cost, Section 44. Marshall Valuation Service allowed for the use of their material

from these sections as is included as a supplement to the workshop. The first step in using any costing manual is to determine the quality rating or as Marshall Valuation refers to it as the Class and then the Type. As a large number of the facilities have office space, you can price that area out with the Marshall Valuation Service in Sections 12 or 17 if desired.

The cost estimate does not include entrepreneurial incentive for overhead or compensation for the time and effort invested in the project. Self-storage developers anecdotally indicate that a minimum profit range of 10% to 25% is typical in the market.[20]

Any high-rise facility would then fall into the Marshall Valuation ratings for High-Rise Mini-Warehouses.

7.5. Estimating Replacement Cost New

Following is a form that can be used to make a comparison between costing manual costs and actual costs.

Direct Cost per Square Foot	Cost Manual	Actual Cost
Reference	(Section and page from manual)	Developer
Base Cost per square foot		
Elevators		
Sprinklers per square foot		
Current Multiplier (CCM)		
Local Cost Multiplier (LCM)		
New cost per square foot		
Gross Building Area		
Direct Cost for Building		

An example of calculating the RCN by Marshall Valuation for a facility that the actual cost was known is shown below.

[20] Christian, Sonne, R. MAI, Self Storage Economics and Appraisal, Appraisal Institute, 2012

Direct Cost per Square Foot	Cost Manual	Actual Cost
Reference	(Section and page from manual) Section 14 Page 28	Developer
Base Cost per SF Elevators Sprinklers per square foot	Traditional-Metal S Good $37.37	
Adj'd Cost per SF		
Current Multiplier (CCM) Local Cost Multiplier	x 0.91 x 1.02	
RCN per SF Gross Building Area	$34.69 x 41,224	
RCN for Building	$1,430,060	$1,506,061

The EXCEL spreadsheet below shows this example and others and how the spreadsheet can be used to calculate any cost adjustment factor needed to make the CAMA system more reflective of the market.

It is unusual that the jurisdiction will receive all the segregated cost, so an example of setting a cost comparison on an EXCEL spreadsheet follows. The data is shown only as a format to analysis the data. **This data can be found in the EXCEL spreadsheet Self-storage Cost Analysis.xls file w the name of New Const.** Information provided on this worksheet is an example of how data can be collected, stored and analyzed.

State	Type of Facility	Y-Built	Cost	Size	Price/SF
KS	Traditional - Metal	2011	$50,000	3,000	$16.67
KS	Traditional - Metal	2009	$43,650	2,100	$20.79
TX	Big Box	2008	$4,154,138	100,126	$39.33
TX	Traditional - Metal	2009	$2,129,576	86,700	$24.56
TX	Traditional - Metal	2009	$1,506,161	41,224	$36.54

Quality	M&S/SF	LCM	CCM	Adj M&S	Modifier
S Low Cost	$20.87	0.95	1.02	$20.22	0.82
S Average	$27.93	0.91	1.02	$25.92	0.80
C Avg High Rise	$39.33	0.91	1.02	$36.51	1.08
S Average	$27.93	0.91	1.02	$25.92	0.95
S Good	$37.37	0.91	1.02	$34.69	1.05

If the cost manual does not account for all the costs most CAMA Systems (Computer Assisted Mass Appraisal) often will have a field with a title similar to "cost and design" or "cost factor" that allows the appraiser to make an addition or subtraction from the estimated cost new from the cost manual. If the appraiser only uses appraisal judgment, supporting documentation is not available to justify the resulting RCN. Instead, an attempt must be made to find the adjustment in the market.

There is recognition that all self-storage properties are not created equal. If the appraiser can find some actual costs of this type of property in their or other jurisdictions, then that can be used as a basis for the adjustment factor. Example: An adjoining jurisdiction had a new Class C 24,500 square foot storage facility built and the owner provided the actual cost of $1,250,000.

The property is not exactly like the subject property you are appraising, but it is very similar in size and complexity although a different brand name. The adjoining county had estimated an RCN from their cost manual of $1,160,000. By using this information a cost and design factor could be calculated as follows:

$$\$1,250,000 \div \$1,160,000 = 1.078$$

You could then apply a factor, for example, 1.08 to your manual cost as an estimate of RCN for your self-storage property. An example of how the modified cost was calculated with actual data was shown above in the spreadsheet.

Marshall Valuation Services describes this property type as follows: "Mini-warehouses are warehouses subdivided into a mixture of cubicles of generally small size, designed primarily to be rented for small self-storage or noncommercial storage and may include some office-living space."

The following was previously mentioned but bears repeating when discussing the most typical total square foot.

The total square foot of facilities breaks down evenly into the following groups.

- 49,000 and less square foot – 25%
- 49,000 – 62,000 square foot – 25%
- Over 62,000 – 76,000 square foot – 25%
- Over 76,000 square foot – 25%

“Many industry participants believe that a maximum project size of 80,000 square feet has the best operational return. According to the principle of decreasing returns, adding more square footage to this optimal size will lead to decreasing returns. Although 80,000 square feet is considered the threshold amount for a single-story suburban facility, plenty of projects that are much larger will do well, especially if they are multi-story facilities.”[21]

A great tool to assure that you have accounted for all the buildings and to make a good reference for valuation and appeal basis is to have a plot plan. The preferred plot plan would be an aerial photo. You would be able to label each of the buildings to match the building listings and assure that all buildings are accounted for. A sample aerial is shown below.

[21] Correll, Richard R., *Market Analysis and Valuation of Self-Storage Facilities,* Appraisal Institute, 2003

7.6. Depreciation

One of the most difficult aspects of the cost approach is estimating depreciation. Depreciation can be defined as the loss in value, from all causes, of property having a limited economic life. In valuing property by the cost approach, depreciation is the difference between replacement or reproduction cost new (RCN) of a property and its market value (less site value) as of the date of the appraisal.

The best way to determine depreciation is to use open market sales. However, the determination of depreciation of the real estate is made even more difficult because there may not be any sales from which depreciation can be extracted with any degree of certainty. When extracting depreciation from sales it can either be calculated as depreciation percentage or percent good. The following formulas are used:

Depreciation Percentage:

Sale Price – Land Value = Imp. Value from the Sale

RCN – Imp. Value from the Sale = Depreciation $

Depreciation $ ÷ RCN = Depreciation Percentage

Percent Good:

Sale Price – Land Value = Imp. Value from the Sale

Imp. Value from the Sale ÷ RCN = Percent Good

Depreciation can also be broken down into three different types. The following are the types of depreciation that should be considered.

7.6.1. Physical Deterioration

Physical deterioration is the loss in value due to wear and tear in service and the forces of nature. Physical deterioration is treated no differently than other commercial type properties. Items to look at would include: floors and floor coverings, interior construction, mechanical equipment, roof and exterior walls, etc.

Physical deterioration can be either curable or incurable. Curable deterioration is measured by the cost to cure the problem. Physical incurable is broken down to short-lived items and long-lived items and both are measured by the age life method.

The age life formula is:

Effective Age ÷ Total Economic Life.

Items of physical deterioration commonly found in self-storage facilities include:

1. Faded building paint
2. Deteriorated asphalt
3. Deteriorated concrete
4. Aging fencing
5. Outdated office interior
6. Outdated HVAC system

Marshall Valuation Service gives the estimated economic life assignment for mini-warehouses as either low or high rise as follows:

Construction Class

Quality	A	B	C	D	S
Good			45	40	40
Average	45	45	40	35	35
Low			35	30	30

7.6.2. Functional Obsolescence

Functional obsolescence is the impairment of functional capacity or efficiency and is a loss in value brought about by such factors as overcapacity, inadequacy and changes in style, taste, technology and demands. Functional obsolescence can be either curable or incurable.

The most common causes of functional obsolescence in self-storage properties include:

1) Poor unit layout. Even new self-storage facilities can suffer from functional obsolescence if the space is poorly designed.

2) Crowded placement of buildings. There should be adequate space for truck loading and turning.

3) Buildings positioned too deep on a site. Units far from the office are perceived to be less secure and convenient.

4) Vertical space in a non-vertical market. The latest trend is to build multi-story buildings, but upper-floor units may not be well accepted in some markets.

Normal functional obsolescence is considered a part of most physical deterioration tables. This comment is found in Marshall Valuation Services and is logical as older self-storage properties may have some functional obsolescence due to design and desires in today's markets.

According to Marshall some of the things that should be considered when looking at functional obsolescence are:

1) **Design characteristics** – unappealing, poor or antiquated style of design, climate conditions, traffic levels, market acceptance or resistance, eye appeal, special purpose use, architectural style, etc.

2) **Physical layout** – net versus gross space, foot traffic flow, beam obstructions, appropriate wall heights, lighting levels, ventilation, ingress/egress, counter/cabinet space, storage space, etc.

3) **Mechanical equipment** – inadequate or excess number of poorly spaced or antiquated plumbing, electrical and lighting fixtures, PA systems, energy consumption or efficiency, abnormal operating costs, etc.

Sometimes it may be also be necessary to calculate non-typical functional obsolescence that is not included in a cost manual's depreciation table. An example of extracting additional or non-typical functional obsolescence is as follows.

A self-storage property sold with indicated depreciation of 43% and another self-storage property that is well documented to have a non-typical functional obsolescence problem sold and is very similar to the first sale. The indicated percentage of depreciation for the second sold property was 55%. The additional functional obsolescence is a percentage of the cost manual's depreciation table and would be calculated as follows:

0.55 – 0.43 = 0.12
0.12 ÷ 0.43 = 0.2791

Normally obsolescence is rounded to the nearest 5% so you could say 30%. The proof would be as follows:

0.43 x 0.30 = 0.13 additional depreciation
0.55 – 0.13 = 0.42 or 42% with the sale indicating 43%

Normal functional obsolescence can best be determined by use of paired sales analysis. This is the easiest method of measuring functional obsolescence. What are required are two sales exactly alike except for the characteristic (functional problem) that you believe may create a loss in value. The sales need to be adjusted for time if necessary. After the time adjustment has been made, the difference between the two sale prices would be the dollar amount of functional obsolescence.

Functional obsolescence can also be calculated by the capitalization of rent loss. The formula using the capitalization of rent loss method is:

Rent Loss x Gross Income Multiplier (GIM).

The rent loss is annual income. Be careful when working with GIMs. They are usually an effective gross income multiplier (EGIM). At times we work with potential gross income but most of the time appraisers are developing multipliers with historical actual rents.

7.6.3. External Obsolescence

External obsolescence is the loss in value brought about by changing economic forces such as a change in the highest and best use, legislation, etc. External obsolescence is often referred to as locational or economic obsolescence. Typical external indicators that should be looked at are:

1) Location (a value loss due to an undesirable location is likely to be permanent.)

2) Physical factors (lack of view or landscaping, proximity of desirable features and barriers, general neighborhood maturity)

3) Economic factors (competition, high unemployment, increasing interest rates)

4) Infrastructure (quality of public services, traffic patterns, public parking)

Market related external obsolescence may decrease over time as supply and demand in the market move toward equilibrium.

This may be found in a jurisdiction by comparing sales of comparable properties in different economic areas of the jurisdiction. This could very easily be found in the market if one is comparing sales from one jurisdiction to another jurisdiction. Some jurisdictions or regions may have the same economic climate, but the market will dictate this if it exists.

Normal external obsolescence can best be determined by use of paired sales analysis. This is the easiest method of measuring external obsolescence. What is required is two sales exactly alike except for the characteristic (external problem) that you believe may create a loss in value. The sales need to be adjusted for time if necessary. After the time adjustment has been made, the difference between the two sale prices would be the dollar amount of external obsolescence.

Another way to measure external obsolescence would be the capitalization of the rent loss caused by the outside factor. The formula is:

Rent Loss x GIM or EGIM x % of Building Value.

Some fee appraisers have also estimated external obsolescence by capitalizing the net operating income (NOI) by comparing the NOI of a newly constructed property compared to the NOI required to support the new construction. Following is an example of external obsolescence applied in an independent appraisal of an income producing property based on capitalizing the NOI difference:

7.6.4. External Obsolescence Discussion Question

"As described previously in the highest and best analysis, the appraiser is of the opinion that construction of a self-storage property represents the highest and best use. As such, the appraiser has prepared an estimate of external obsolescence based on the net operating income (assuming new construction) as compared to the net operating required to support new construction. The analysis and the resulting external/functional obsolescence estimate are presented in the chart below:"

Calculation of External Obsolescence:

Replacement Cost New	$1,650,000	
Plus Land Value	$ 200,000	
Total Replacement Cost	$1,850,000	
Total Replacement Cost	$1,850,000	
Representative Cap Rate	8.1%	
NOI (new construction)	$ 149,850	
Projected NOI	$ 130,000	
NOI Differential	$ 19,850	
Representative Cap Rate	÷ 8.1%	
Value loss from external obsolescence		$245,062
Typical % for Land		30%
Improvement percentage		70%
Indicated External Obsolescence		$ 171,543
		($245,062 X 0.70)

A few notes on the above calculation:

1. The RCN includes entrepreneurial profit.

2. The projected NOI was developed using the reconstruction of income and expense formula.

3. If the calculated NOI includes income from personal property then part of the projected loss may be attributable to personal property.

Question: *Is this a viable method to calculate external obsolescence?*

7.7. Cost Approach Conclusions

This approach works best on newly constructed properties. In the valuation of existing self-storage properties, the cost approach is generally not relevant for the following reasons:

A. The estimates of value generated by the sales comparison and income approaches are often well-supported and persuasive, while the depreciation estimates needed to apply the cost approach are often difficult to support.

B. Market participants including owners, investors, developers and brokers do not rely on depreciated cost estimates as a basis for estimating prices.

C. The cost to replace an existing property has little relevance to the "as is" value of the property.

D. This last statement is supported by some comments from the *Self-storage Almanac Valuation 2010*. Marshall Swift is used within this publication to estimate the replacement cost new. Information from that publication is printed below.

1) The cost approach to value is not often used by investors as a primary tool of asset pricing, and is generally given the least emphasis in the final value conclusion. Nevertheless, the cost approach is an important benchmark to test the highest and best use conclusions (including market analysis conclusions of feasibility) and is utilized for an estimate of the subject land value and insurable value. More recently, some investors' buy criteria is based upon price below replacement cost.

2) Direct cost data should be based on survey research as well as direct cost comparable data (when available).

3) Cost estimates should account for site improvements such as parking and landscaping (generally about $2 to $4 per square foot of land area). Indirect costs include the following: taxes during construction, legal and accounting fees, leasing and marketing expenses, and loan fees and points. A range of eight percent to 12 percent of direct cost is typical of the construction industry.

4) The cost estimate does not include developer compensation for overhead or compensation for time and effort of the project. As outlined in the *Self-storage Investor Survey – summer 2008*, an average profit factor of 15.86 percent is forecast on feasible self-storage projects (building cost only, not applied to land value).

B. The authors of this workshop have found over the years that owner participation in the construction of Traditional – Metal type facilities often occurs in smaller and rural jurisdictions. The participation may consist of purchasing the materials and then serving as general contractor for the project or actually owning a construction company and using employees to construct the facility. Therefore, construction costs provided may not be reflective of a total turnkey cost (contractor constructed). The jurisdiction could consider adding the 16% shown above from the *Self-storage Investor Survey* to then estimate an RCN using actual local cost.

C. Misapplication of functional obsolescence has also been seen multiple times by the authors. CAMA (Computer Assisted Mass Appraisal) cost tables will often calculate a high RCN for the Traditional facilities. Appraisers then try to compensate for the high value indications by applying additional functional. There normally is not additional functional, the RCN needs to be corrected. In some situations it has been shown that the cost of the doors are overstated as compared to actual cost. If you have the ability to adjust the component pricing within the CAMA system, that would be the appropriate process. If the components cannot be changed, then you would apply a cost and design factor as discussed above except it would be a factor less than one (1).

D. No real conclusion can be drawn from the actual construction cost presented earlier, but the two from Kansas are your more typical rural type structures and the excess manual cost could again be a result of excess cost attributed to the doors.

Section 8 – Sales Comparison Approach

8. General

The sales comparison approach uses the market to estimate value by comparing the subject property to similar properties that have recently sold. It is based on sales that have already occurred, therefore, it requires the assumption that market behavior in force in the past, will continue into the future. It is based on the economic principles of supply and demand, substitution and contribution.

The current inventory of properties on the market represents the supply side and such things as location, lending rates, age, story height and cost of substitute buildings represent the demand side. The sale price represents the interaction of supply and demand.

This approach is not normally viewed as reliable as the income approach but it can provide a useful check against the income value. One of the major weaknesses to this approach deals with the possibility of items other than real estate being included in the sale price.

To derive an estimate of market value using the sales comparison approach it is necessary to address the issues of personal property and intangible business value.

8.1. Adjustments

Market data may not be available to calculate a market condition adjustment for self-storage properties. Changes in the market for these types of properties may not be at the same rate as other commercial properties. There are a limited number of potential buyers and the changes for time may be less in an up-market and may be greater in a down-market. Sometimes you will find articles in national magazines or on various web sites that will address value trends for these properties.

Another factor to monitor is the days a property is on the market. If sales are not available to determine a time adjustment, the indicated days on the market will be a good indication of a whether a market is an up-market or a down-market.

Trends are often locational and may not affect your particular area the same. However, that type of information, especially if it is indicating a downturn in values, is exactly what the property owner will provide in attempting to get a

value reduction. Lacking actual data to the contrary, the appraiser may have to assume the uniqueness of the property will cause a similar affect in your area.

Adjustments in the comparable sales approach may not include that many items. Time or market conditions were discussed above, location would obviously be a large contributor or detractor of value along with condition, land to building ratio and possibly financing.

If there is some type of creative financing involved, then perhaps you may want to review the section on finance adjustment in the IAAO's Property Appraisal and Assessment Administration, pages 139 and 201.

Locational adjustments were discussed in the cost approach section. If these adjustments are used on the cost approach, they should also be used for adjustments in the sales comparison approach. Quality adjustment factors used in the cost approach could also be used in the sales comparison approach.

Comparable selection is very important when using the sales comparison approach. For example, one would not wish to compare a traditional self-storage with a big box self-storage property. Their income structures can be very different.

8.1.1. Typical Comparable Sale Adjustments

A. **Financing** – this adjustment is actually a specific motivation adjustment and often is not capable of being accurately derived from a mathematical discounting process. The most reliable financing adjustment is from paired sales but such detailed data is generally not available from sales information.

B. **Market Conditions** – a time adjustment is typically a straight-line adjustment, a set percentage change per month.

C. **Age/Condition** – this adjustment can use the basic age-life method. The age-life formula is: effective age ÷ total economic life.

D. **Location** – this adjustment can take into account such factors as access, visibility, frontage, traffic counts, general neighborhood characteristics, etc.

E. **Improvement Size** – when considering this adjustment keep in mind that a smaller property will command a higher price per square foot than a larger property with all other factors being equal. Also, a 25,000 square foot self-storage facility sale should not be used as a sale comparable for the valuation of a 5,000 square foot facility. These storage facilities are simply not comparable properties and would require too large of adjustments.

F. **Construction Quality** – The contribution of quality must be viewed as it relates to income performance. A wood frame facility will likely have a higher insurance cost when compared to a comparable steel project. An open building that resembles a warehouse may have much lower income per square foot than a building with many smaller units. A specialized building for boat or car storage may also have different income and price characteristics.

   Also, a factor to consider when looking at quality is the appraisal principle of increasing and decreasing returns. The highest quality self-storage projects which have multi-story designs, artistic site façade elements, full climate control and large retail display areas may not achieve the rental rates needed to support the operation and compensate for the risk involved. Self-storage is just storage and in most markets there are price limits created by competitive alternatives.

G. **Layout** – The functional utility of the subject property is compared to the comparable. The comparable should be properties that would be in the same competitive environment as the subject.

H. **Land to Building Ratio** – This adjustment reflects the need for adequate parking for the commercial uses of the subject and comparable. Adjustments, reflecting the superior nature of a higher land to building ratio are applied as appropriate. Excess or surplus land may need to be treated independently of this adjustment. This land to building ratio is different than the one used in the land valuation process. To calculate this ratio it is land size ÷ building size. It would be common to see ratios of 8:1, etc. The ratio is often set as minimums within the zoning requirements.

I. **Occupancy** at time of the sale

J. **Excess or surplus land** – Excess land is land remaining after improvements are in place that can either be developed later or separated off for another use. Surplus land cannot be sold off or functionally used because of the limitations of its size or other physical characteristics. For example, interim use of excess land for outdoor storage must be addressed appropriately. Appraisers should not count the outdoor storage income and then add the value of the land as excess land. That amounts to double assessing.

8.2. NOI Per Square Foot

Another way to look at comparable sales data is to look at net operating income per square foot and sale price per square foot. Following is an example on how to analyze the market sales and then develop adjustments for differences in the comparable properties and the subject property.

	Subject Property	Sale 1	Sale 2	Sale 3
Sale Price	-0-	$2,000,000	$1,900,000	$2,200,000
NOI	$210,000	$200,000	$190,000	$220,000
Net Rentable SF	35,000	35,000	35,000	35,000
NOI/SF	$6.00	$5.71	$5.43	$6.29
Price/SF		$57.14	$54.29	$62.86

	Subject Property	Sale 1	Sale 2	Sale 3
Price/SF	-0-	$57.14	$54.29	$62.86
NOI/ SF	$6.00	$5.71	$5.43	$6.29
Subject NOI	$6.00	$6.00	$6.00	$6.00
Adjustment	-0-	+5%	+10.5%	-5%
Adj. price/SF	-0-	$60.00	$60.00	$60.00

Section 9 – The Income Approach

9. General

The Income Approach is the preferred method to value most commercial properties, as it best reflects the pricing decisions of buyers and sellers active with this property type. The direct capitalization method of the Income Approach is developed using the following ingredients:

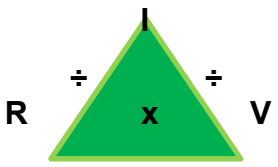
Income ÷ Rate = Value, where

I = Net Operating Income **R = Overall Capitalization Rate (R_O)**

V = Market Value (Sale Price)

IRV Formula

I = Income
R = Rate **R x V = I**
V = Value



I ÷ R = V

I ÷ V = R

The Income Approach is usually reconstructed on an annual basis.

The appraiser will need to be aware of all the real property, personal property, and intangible property components of value for the use being values that may contribute to the contract and corresponding comparable rental rates.

The Income Approach is the best indication of value for commercial properties that have a lease in place and/or located in a market where commercial properties are typically leased.

One of the challenges in setting up the Income Approach data is not only obtaining the comparable rent and capitalization rate data, but preparing the data for analysis.

9.1. Steps in Calculating the Income Approach

The income for the property is estimated using the following formula:

Potential Gross Income	PGI
Less: Vacancy & Collection Loss	- V&C
Add: Miscellaneous Income	+ MISC
= Effective Gross Income	EGI
Less: Operating Expenses	- OE
= Net Operating Income	NOI

The NOI calculated in the above statement is then capitalized into a value using the previously discussed IRV formula, where

Income ÷ Rate = Value.

The application of the income approach for self-storage parallels that of other commercial property. Following are the steps in developing the income approach using direct capitalization, followed by a more detail explanation of each step.

Step 1 – Estimate Potential Gross Income (PGI)

Potential gross income is the annual rent that would be collected if the property were fully occupied at market rent. Rent is typically expressed annually on a $/SF basis. The formula to calculate PGI is:

Building SF x Market Rent per SF.

For example, a typical storage facility may have different rates for different units types at the facility and the PGI would be estimated as follows:

PGI					
Climate Controlled	10,000 SF	x	$11/SF	=	$110,000
Non-Climate Cont'd	15,000 SF	x	$8/SF	=	$120,000
Covered RV Spaces	12,000 SF	x	$6/SF	=	$72,000
Total PGI					$302,000

Step 2 – Subtract Vacancy & Collection Loss (V&C)

Vacancy and collection loss is the allowance for reductions or loss in potential gross income attributable to vacancies and nonpayment of rent. Both of these rent losses may vary with the type and characteristics of the property, the quality of the tenants and supply and demand factors.

Vacancy and collection loss is applied as a percentage to Potential Gross Income (PGI). The formula is:

V&C % x PGI.

For example, if the market vacancy rate is 8% and the collection loss rate is 2%, the vacancy and collection loss rate applied would be 10% (8%+2%). Applied to the previous example PGI, the vacancy and collection loss would be calculated as follows:

V&C: 10% x $302,000 = $30,200

Step 3 – Add Miscellaneous Income (MISC)

Miscellaneous income covers all income generated by the operation of the real property that is not derived directly from rentable space. The income may or may not be attributable to the real property.

For Self-Storage, appropriate miscellaneous income typically comes from forfeited deposits and application fees. Other miscellaneous income typically comes from non-realty sources. An appraiser must determine whether the income is business income or income to the real property. Some examples of miscellaneous income for self-storage properties that should be excluded are: moving supplies, locks, insurance fees, and moving truck franchise income.

Miscellaneous income should be calculated and reported in an annual amount. For this example, $10,000 is included for miscellaneous income.

Step 4 – Effective Gross Income (EGI)

The effective gross income can be defined as the income that can effectively be anticipated after consideration of vacancy and collection loss and any miscellaneous income generated by the subject property. The effective gross income is calculated as follows:

PGI – V&C + MISC = EGI.

Step 5 – Less Operating Expenses (OE)

Operating expenses are the annualized expenses necessary to maintain the property for the production and continuation of the effective gross income. An appraiser begins to develop an expense forecast for a subject property by studying the property's expense history.

Operating expenses are usually expressed as a $/SF basis for fixed expenses and as a percent of EGI for variable expenses. Similar to the rent, the expenses are expressed on an annual perspective. Operating expenses for QSRs are typically minimal given the typical triple net leases they are based upon.

For this example, an amount of $2.00/SF is indicated from the market for both variable and fixed expenses. Applied to the 37,000 SF total building area, the annual expenses would be estimated as:

OE: 37,000 SF x $2.00 = $74,000.

Step 6 – Net Operating Income (NOI)

The final step in the reconstruction of the income and expense statement is to find net operating income. Net operating is income is left after deduction for allowable expenses from the effective gross income. It is an estimate of the property's earning capacity, free of debt and before income taxes. The formula for finding net operating income is:

EGI – OE = NOI.

Using the previous examples for each component in the statement, the income and expense analysis is constructed as follows:

INCOME APPROACH – INCOME AND EXPENSE STATEMENT EXAMPLE

PGI					
Climate Controlled	10,000 SF	x	$11/SF	=	$110,000
Non-Climate Cont'd	15,000 SF	x	$8/SF	=	$120,000
Covered RV Spaces	12,000 SF	x	$6/SF	=	$72,000
Total PGI					$302,000
- V&C	$302,000	x	10%	=	$30,200
+ MISC					$10,000
EGI					$281,800
- OE	37,000 SF	x	$2.00/SF	=	$74,000
NOI					$207,800

The NOI calculated in the above statement is then capitalized into a value using the previously discussed IRV formula, where Income ÷ Rate = Value. If the market capitalization rate were 9%, the Income Approach value would be calculated as follows:

$207,800 NOI ÷ 9% Cap Rate = $2,308,900 Value.

Since the expenses should be analyzed exclusive of real estate taxes taken as an expense, the capitalization rate should be loaded with an effective tax rate, which will be address later in this section.

9.2. Data Collection and Analysis

Data collection is arguably the most important part of the appraisal process. With adequate data, a well-supported income analysis can be developed. Availability of data is determined by the size of the market and composition of the market.

One of the first steps in the income approach is the process of analyzing a property's income and expenses. At least three years' worth of income and expense data should be examined.

Self-storage operating statements come in a variety of formats and contain several pages of information. Fully detailed statements will often show itemized income and direct expenses for each type of storage on a subject property.

Other statements may not be so sophisticated. It is important to understand ways to consolidate the information so that it can be analyzed. It is suggested that the information during this analysis be converted into a standard summary format, which will make it easier to make comparisons with other data sources.

9.2.1. Data Collection

Data utilized in the Income Approach can be obtained through:

- Surveys – Mail, phone, or on-site interviews
- Listings – Properties for sale or lease
- Appeals
- Interviews with real estate professionals (agents, appraisers, management companies, developers, etc.)
- Subscription services for data (Costar, REIS, Real Capital Analytics, etc.)

The best data is obtained directly by the appraiser. When first hand confirmation is made with the data source it is most reliable.

A sample request for income and expense data is shown on the next page.

April 22, 20__

Dear Self-storage Property Owner:

The County Assessor's Office is required by law to annually appraise all property in the county as of January 1. As the owner of a Mini-Warehouse, you are aware that economic as well as physical factors affect the value of your property from year to year.

Our job is to monitor activity in the real estate market, interpret what we find, and apply it to similar properties utilizing mass-appraisal procedures. Your help is requested for us to follow how the market is reacting to current economic conditions.

Our records show that the property indicated on the attached form is a Mini-Warehouse. We ask that you complete the enclosed questionnaire and return it by July 1. You may provide a copy of your rent roll if you prefer. The purpose of the form is to gather income and expense information about property that may impact its market value.

Specific information about your property is CONFIDENTIAL and is not available to the public. We would also appreciate any comments or information that you believe may influence the value of this property. OTHER INCOME SHOULD INCLUDE ALL OUTSIDE STORAGE.

Your cooperation and assistance is needed and your response by July 1 is greatly appreciated.

Sincerely,

County Assessor

Enclosures

SELF-STORAGE OPERATING STATEMENT YEAR: 20___
PROPERTY NAME: _____
ADRESS: _____
PIN:_____

RENT INFORMATION

UNIT SIZE	# OF UNITS	CURRENT RENT/MONTH	UNIT SIZE	# OF UNITS	CURRENT RENT/MONTH
____	_____	_____	____	_____	_____
____	_____	_____	____	_____	_____
____	_____	_____	____	_____	_____
____	_____	_____	____	_____	_____

INCOME:

GROSS RENTAL REVENUE AT 100% OCCUPANCY $_____

ACTUAL RENTAL REVENUE $_____

OTHER (OUTSIDE STORAGE, ETC) $_____

TOTAL ACTUAL REVENUE $_____

EXPENSES:

MANAGEMENT $_____

INSURANCE (PROPERTY INSURANCE ONLY) $_____

REPAIRS & MAINTENANCE
(Please circle the most appropriate below.)
1. All 2. Exterior & structure only 3.Other $_____

UTILITIES $_____

PAYROLL $_____

ADMIN & GENERAL(LEGAL, ACCOUNTING, ETC*) $_____

TOTAL EXPENSES $_____

* Exclude debt service, interest, depreciation or property taxes as expenses.

_____ _____ _____
Signature: Owner, Manager, or Agent Date Telephone Number
Email: _____

9.2.2. Income & Expense Survey Discussion Questions

1) *You receive the income and expense survey back from the property and after checking the figures in a spreadsheet, the Total Gross Revenue is not calculated correctly based on the actual unit mix. How do you handle this situation?*

2) *After you compare the state of Sally's Self-Storage with the other storage facilities in your database, the management expense seems high. How do you handle this situation?*

3) *Door repairs and replacements are common. Should the doors be an expense item or should they be a reserve account? If in a reserve account, should they have a shorter economic life assignment because of the use and/or abuse?*

See **Appendix 1** in back of this manual for discussion question answers.

9.3. Investment Classification

Mass appraisal of commercial property such as Self-Storage facilities includes property stratification and market segmentation of the properties appraised and the data being analyzed. Using an investment classification system will assist the appraiser in this process.

Using an Investment Class system allows the appraiser to organize conclusions for rental rates, expenses and capitalization rates, as indicated appropriate by the market.

A properly applied Investment Class system includes definitions that outline the criteria for each Investment Class and is used by the jurisdiction. Having a well-defined investment class takes the subjectivity out of the process. The following Investment Class rating criteria example utilizes an A-B-C-D scale, but an Investment Class scale could use a Good-Average-Fair scale.

Class A
An institutional-grade facility with a gated entry, an on-site office and manager's apartment, masonry construction, and sophisticated design and layout. These facilities typically range in size from 60,000 to 120,000 square feet and feature high-tech security, climate controlled units, and signature design elements. They are located in primary and secondary retail-type locations in major metropolitan areas.

An Investment Class A Self-Storage property may include the following:

- An effective age less than 10 years.
- Rents falling in the upper quartile for properties for the market area.
- Good condition for the age (a well-maintained; no deferred maintenance).
- Contemporary design and/or above average quality construction materials.
- Site access has two or more vehicular points and/or corner location.
- Location in a submarket that has occupancy and/or rental rates above typical for general market area.
- Location in area of on-going commercial growth or high density of commercial development.

Class B
A quality middle-market facility with a combination of masonry and metal construction. These facilities have an on-site office and sometimes a manager's apartment. The facilities will range in size from 30,000 to 60,000 square feet and exhibit basic design elements. Some properties may offer climate-controlled units and outdoor storage. These properties occupy secondary commercial and primary industrial locations in first-tier and second-tier markets.

An Investment Class B Self-Storage property may include the following:

- An effective age between 10 and 20 years.
- Rents falling between the median and upper quartile for properties for the market area.
- Average to good condition for the age (maintained; minimal deferred maintenance).
- Typical design and function for the market, average quality construction materials.
- Site access has two or more vehicular points and/or corner location.
- Location in a submarket that has occupancy and/or rental rates above typical for general market area.
- Location in area of on-going commercial growth or high density of commercial development.

Class C
An average-quality typically featuring metal-constructed buildings. There may be an on-site office or simply a phone number directing customers to the building management. These facilities range in size from 20,000 to 100,000 square feet and are basic in appearance. They are usually located in secondary commercial, rural and industrial locations.

An Investment Class C Self-Storage property may include the following:

- An effective age between 20 and 30 years.
- Rents falling between the median and lower quartile for properties for the market area.
- Fair to Average condition for the age (some deferred maintenance).
- May have a dated design with functional issues, average or low-cost quality construction materials.
- Site access has one vehicular point and/or non-corner location.
- Location in a submarket that has occupancy and/or rental rates at or below typical for general market area.
- Location in a stable to declining submarket area.

Class D
An Investment Class D Self-Storage property may include the following:

- An effective age greater than 40 years
- Rents falling below the lower quartile for properties for the market area
- Poor to fair condition, deferred maintenance property
- Dated design with functional issues, average or low-cost quality construction materials
- Site access has one vehicular point and/or non-corner location
- Location in a submarket that has occupancy and/or rental rates at or below typical for general market area
- Location in a stable to declining submarket area

9.4. Effective Rent

It is common for self-storage facilities to offer free rent that needs to be considered in the analysis. Often this comes in the form of reduced rent off the first month or a discount offered if the rent is paid in full for the year instead of making monthly payments.

Effective Rent will take into account the average contract rent for the term of the lease, as well as any concessions (discounts), tenant paid expenses, landlord paid expenses or other items that would influence the true consideration of the lease.

Effective Market Rent Formula

1) Determine the total contract rent over the term of the lease (indicated on lease, or calculate manually)

2) Deduct total concessions (Concession Value) from the total contract rent to arrive at the Effective Rent

3) Divide Effective Rent by number of years in lease term

4) Then divide by the square footage of the space leased to arrive at the average annual Effective Rent per SF over the term of the lease

Total Contract Rent
– Concession Value
Effective Rent
÷ Years on Lease
Annual Effective Rent
÷ Square Feet of Space
Effective Rent per SF

Effective Rent Example

Landlord provides one month free rent for new tenants.

Unit SF: 120

Lease	Annual Rent	$/SF
Year 1	$1,200	$10.00
Total Contract	$1,200	
Less: Concession	-100	
Effective Contract Rent	$1,100	
Divided by Lease Term	1 years	
Effective Annual Rent	$1,100	
Divided by Bldg SF	120 SF	
Effective Rent/SF	$9.17	

9.5. Expense Analysis

There are a variety of ways to analyze the expense applied in the analysis. The following expense categories a typically considered in the analysis of self-storage properties.

Management Fee
Agency fee paid by Owner to a management company to oversee day-to-day operation of property. This is typically based on a percentage of collected rent.

Payroll Burden & Benefits
This expense category includes the wages, salaries, benefits, payroll taxes and related worker's compensation expenses for the staff needed to operate the property.

Administrative & General
This expense category includes the supplies and services that support the off-site or on-site office management activities for the property, as well as general fees for operation. Expenses include phone, accounting, legal, tenant screening, rental registration program, and related expenses that support the administrative activities of the operation.

Marketing
Expenses include online and direct mail advertising, print ads, promotional items, sponsorships, resident referral discounts, and related expenses to obtain residents and promote the property in the market.

Maintenance/Repairs/Contract Services/Turnover
These expenses account for the maintenance of the HVAC, plumbing, and electrical systems, as well as on-going upkeep of common area landscaping, lighting, fire/security systems, snow removal, contracted services, repairs/maintenance of both real and personal property, and related supplies. Turnover costs of flooring cleaning/repairs, interior painting, and cleaning fees also are included.

Utilities
Utilities expenses include the electricity, gas, and water/sewer/trash for the common areas of the property.

Insurance
The property insurance encompasses the fixed expense of the property's annual insurance premium for replacement in case of fire or other property loss.

Replacement Reserves
This replacement allowance or reserve for such properties to handle the replacement of short-lived items (interior finishes, HVAC systems, appliances, etc.) that wear faster than the long-lived items (structure, foundation, pipes, electric wiring, HVAC ducts, etc.).

This item reflects money the owner saves for future replacement of a short-lived item and is sometimes required by a lender on a commercial property loan.

Capital Expense Items
These items are expenses that do not typically occur on an annual basis, such as utilities or insurance. Examples: Roof Replacement, Building Addition, Parking Lot Replacement, Air-Conditioner Condenser Replacement, etc.

Capital expense items are typically excluded from the allowable expenses.

Expense Model Examples

The county has income and expense statements obtained from property owners within Douglas County through surveys and the appeal process for the years 2006 through 2018. The statistics for these 50 statements is detailed on the following table.

Douglas County Mini-Storage Expense Data

Total Sample	52	Dg Co Mini-Storage Statements		
Summary All Investment Classes	**Low**	**Median**	**Average**	**High**
PGI / SF	$5.12	$6.89	$7.57	$13.00
EGI / SF	$3.30	$5.36	$6.09	$12.61
Economic Occupancy	54.2%	84.8%	80.8%	100.0%
Management Fee (% EGI)	0.0%	3.2%	3.8%	8.8%
Total Payroll & Burden / SF	$0.00	$0.45	$0.54	$2.08
General & Administrative / SF	$0.00	$0.22	$0.29	$1.05
Marketing & Promotion / SF	$0.00	$0.05	$0.07	$0.32
Maint, Repairs & Contract Svcs / SF	$0.00	$0.27	$0.48	$2.95
Total Utilities / SF	$0.05	$0.23	$0.31	$1.59
Insurance / SF	$0.00	$0.16	$0.23	$1.53
Total (Without Mgmt) / SF	$0.47	$1.56	$1.94	$6.65

The data from the most recent two complete years are detailed on the following table.

Douglas County Mini-Storage Expense Data

Most Recent Data for 2017-2018	**2017**	Sample: 8	**2018**	Sample: 4
Summary All Investment Classes	**Median**	**Average**	**Median**	**Average**
PGI / SF	$8.51	$8.50	$9.06	$8.16
EGI / SF	$7.53	$7.76	$7.92	$7.78
Economic Occupancy	90.0%	88.3%	90.0%	89.7%
Management Fee (% EGI)	3.4%	4.0%		
Total Payroll & Burden / SF	$0.55	$0.67	$1.01	$0.88
General & Administrative / SF	$0.12	$0.16	$0.33	$0.29
Marketing & Promotion / SF	$0.07	$0.09	$0.11	$0.13
Maint, Repairs & Contract Svcs / SF	$0.24	$0.46	$0.52	$0.42
Total Utilities / SF	$0.23	$0.32	$0.25	$0.25
Insurance / SF	$0.17	$0.16	$0.16	$0.17
Total (Without Mgmt) / SF	$1.93	$1.88	$2.65	$2.23

The following information is from the *2020 Self-Storage Expense Guidebook*.

		2020 Report
Sample	19	
Net Rentable Area	1,011,390	West
No. of Units	8,092	North
Avg Units Per Property	426	Central
Income	**$/SF**	
Storage Rent	$12.90	
Miscellaneous	$0.75	
Total Income	$13.65	
Operating Expenses	**$/SF**	**% EGI**
Management Fee	$0.72	5.3%
Total Payroll & Burden	$1.34	9.8%
General & Administrative	$0.84	6.2%
Marketing & Promotion	$0.31	2.3%
Maint, Repairs & Contract Svcs	$0.41	3.0%
Total Utilities	$0.42	3.1%
Insurance	$0.14	1.0%
Real Estate Taxes	$2.40	17.6%
Replacement Reserves	$0.00	0.0%
Total Operating Expenses	$6.58	48.2%
Net Operating Income (NOI)	$7.07	51.8%
Adjusted Expenses		
Management Fee	-$0.72	-5.3%
Real Estate Taxes	-$2.40	-17.6%
Total Operating Expenses	$3.46	25.3%
Net Operating Income (NOI)	$10.19	74.7%

		2020 Report
Sample	104	
Net Rentable Area	6,666,117	Midwest
No. of Units	56,021	
Avg Units Per Property	539	
Income	**$/SF**	
Storage Rent	$11.44	
Miscellaneous	$0.71	
Total Income	$12.15	
Operating Expenses	**$/SF**	**% EGI**
Management Fee	$0.70	5.8%
Total Payroll & Burden	$1.12	9.2%
General & Administrative	$0.56	4.6%
Marketing & Promotion	$0.34	2.8%
Maint, Repairs & Contract Svcs	$0.36	3.0%
Total Utilities	$0.28	2.3%
Insurance	$0.11	0.9%
Real Estate Taxes	$1.55	12.8%
Replacement Reserves	$0.00	0.0%
Total Operating Expenses	$5.02	41.3%
Net Operating Income (NOI)	$7.13	58.7%
Adjusted Expenses		
Management Fee	-$0.70	-5.8%
Real Estate Taxes	-$1.55	-12.8%
Total Operating Expenses	$2.77	22.8%
Net Operating Income (NOI)	$9.38	77.2%

				2020 Report	
				National	
				Sample	861
				NRA	6,666,117
				No. of Units	56,021
				Avg Units Per	639
Income				**$/SF**	
Storage Rent				$14.68	
Miscellaneous				$0.75	
Total Income	**Midwest 2020 Expense Summary**			$15.43	
Operating Expenses	**Low**	**Avg**	**High**	**$/SF**	**% EGI**
Management Fee	$0.47	$0.70	$0.87	$0.85	5.6%
Total Payroll & Burden	$0.46	$0.56	$1.04	$1.22	8.0%
General & Administrative	$0.27	$0.44	$0.36	$0.64	4.2%
Marketing & Promotion	$0.27	$0.34	$0.39	$0.31	2.0%
Maint, Repairs & Contract Svcs	$0.19	$0.28	$0.56	$0.42	2.7%
Total Utilities	$1.03	$1.12	$1.50	$0.31	2.0%
Insurance	$0.08	$0.11	$0.16	$0.18	1.2%
Real Estate Taxes	$0.68	$1.55	$2.98	$0.54	3.5%
Replacement Reserves	$0.00	$0.00	$0.00	$0.00	0.0%
Total Operating Expenses	$3.45	$5.10	$7.86	$4.47	29.2%
Net Operating Income (NOI)				$10.96	71.6%
Adjusted Expenses					
Management Fee	-$0.47	-$0.70	-$0.87	-$0.85	-5.6%
Real Estate Taxes	-$0.68	-$1.55	-$2.98	-$0.54	-4.4%
Total Operating Expenses	$2.30	$2.85	$4.01	$3.08	19.2%
Net Operating Income (NOI)				$12.35	101.6%

9.6. Developing Capitalization Rates from Market Transactions

Extracting capitalization rates from the market uses the following formula:

Capitalization Rate (R_O) = NOI ÷ Sale Price.

It is important to extract a capitalization rate from the sale data in the same way it is applied in the Income Approach. The ACTUAL capitalization rate may differ from the ANALYSIS capitalization rate.

What differences are there between how the ACTUAL cap rate was reported in a listing or calculated by the buyer and seller, versus how the Income Approach model is developed?

Are there adjustments for Income, Vacancy Rate, Collection Loss, Other Income, or Expenses that need to be made to have the capitalization rate be ***apples to apples*** with the Income Approach analysis?

The extraction and application of the capitalization rates must stay on the same perspective as the Income Approach, with an emphasis on:

- Using current contract rent versus effective rent figures;
- Making an allowance for vacancy and collection loss;
- Similar expense categories applied (management fees and replacement allowance);
- Sales of individual properties versus portfolios; and
- Accounting for renovations or tenant finish in the property.

If the expense analysis includes a Replacement Allowance (Replacement Reserves) in the Operating Expenses, then the cap rates extracted from the market (sales) need to have them included in the expenses and respective NOI for the cap rate calculation on the sale price.

Insight on the market can be implied by the sale data itself, as well as interviews with the buyer, sellers, agents, and other market participants involved with the transaction.

9.6.1. Developing Capitalization Rates from Market Transactions

The following market data was collected from self-storage properties in the local market. All of the sales are Investment Class A properties similar to the Class A parcels found in the market area that you're modeling. Based on the market data, what would be the appropriate capitalization rate for your Investment Class A Self-Storage model?

Sale Comp	EGI	Total Exp	Sale Price
1	$425,000	$127,500	$5,000,000
2	$680,000	$238,000	$7,150,000
3	$546,000	$163,800	$6,375,000
4	$450,000	$180,000	$4,440,000
5	$690,000	$207,000	$8,100,000

See **Appendix 1** in back of this manual for discussion question answers.

9.7. Band of Investment (Mortgage and Equity)

In some cases, there may not be sufficient sale data available from which a cap rate can be extracted.

Additional support can be offered from a band-of-investment analysis that looks at rates of return for debt and equity positions of the property. Interviews with local and regional lenders who are active with commercial loans can provide information on typical interest rates and loan terms to apply in the analysis. A band-of-investment analysis is also useful in the absence of market data from individual property sales.

The Band-of-Investment technique of developing a cap rate recognizes how most properties are acquired using debt and equity capital. Accordingly, the cap rate must satisfy the return requirements of both positions. Lenders seek a reasonable rate that is proportionate with to the risk of the investment (loan) before making funds available, and the principal must be repaid through amortization payments.

Equity investors (the borrower) similarly look to obtain a competitive cash-on-cash return on par with the risk of the investment, or they will place their funds in alternative investments. In some cases, a low initial cash-on-cash (income to the equity position) can be accepted if the reversion (sale of the asset at the end of the holding period) or expected upside of the property drives the overall yield of the investment higher.

In the Band-of-Investment model, the overall rate reflects a composite rate, weighted in proportion to the total property investment represented by debt and equity, or a weighted average of the mortgage capitalization rate (Rm) and the equity capitalization rate (Re).

The Band-of-Investment method utilizes the following variables:

R =	Rate to the debt position and rate to the equity position; **R_M** = Mortgage Constant **R_E** = Equity Rate (Cash-on-Cash or Equity Dividend)
R_O =	Overall Capitalization Rate (OAR)
M =	Mortgage Loan-to-Value (LTV) Ratio Down Payment (Equity Cash In)

The formula for the Band-of-Investment technique is outlined below.

Position	M	x	R	=	Ro
Debt	LTV	x	R_M	=	A
Equity	Down PMT	x	R_E	=	B
Total (OAR)					A + B

A survey of lenders in 2020 active in commercial loans revealed that interest rates are ranging between 3.5% and 5% on 20- to 30-year amortization schedules, with equity cap rates ranging from 6% to 12%. Typical loans are made at 75% to 80% loan-to-value ratios.

For a newer property, an interest range at the lower end of the range is reasonable. Using a 4.0% interest rate on a 25 year note results in a mortgage constant of 0.0633.

In conjunction with a 75% loan-to-value ratios and equity cap rates indicated from 6% to 12%, the following band of investment capitalization rates are indicated.

Band-of-Investment Capitalization Rate Calculations

Position	M	x	R	=	Ro
Debt	75%	x	0.0633	=	0.04751
Equity	25%	x	0.0600	=	0.01500
Total (Ro)					0.06251
As a Percent					**6.25%**

Position	M	x	R	=	Ro
Debt	75%	x	0.0633	=	0.04751
Equity	25%	x	0.1200	=	0.03000
Total (Ro)					0.07751
As a Percent					**7.75%**

The indicated capitalization rate range is from 6.25% to 7.75%.

9.8. Investor Surveys and Secondary Data Sources

Investor surveys and secondary data sources can be viable options to bolster the income analysis. Since most investor surveys focus on primary market areas with larger populations, the survey data is more meaningful for larger jurisdictions. Even if the appraiser is working in a small or rural market area, investor publications are resources to provide insight as to what is relevant in the current market.

There are several national real estate brokerage firms who publish annual, semi-annual, and sometimes quarterly reports that address the QSR market. These reports help provide insight into current trends in the QSR market and information on capitalization rates that can be used in the Income Approach to value. These sources include:

- The Boulder Group – The Net Lease QSR Market Report
- Calkain – Net Lease Report – QSR Sector
- CBRE – U.S. Food in Demand Series: Restaurants
- Marcus & Millichap – National Report Net Leased Retail
- Quantum Real Estate Advisors – The Quantum Pulse QSR Report

Performing an Internet search with one of the above brokerage firm names, the year in question, and the report referenced above will result in one of the most current publications available from that source.

Sources of comparable sale information with verifiable income/expenses and capitalization rates and/or national survey data include:

- Costar;
- Reis;
- RealtyRates.com;
- Brokers and agents active in the net lease market; and
- Real estate appraisers (public and private sector).

The jurisdiction can also conduct its own surveys with local/regional appraisers who are active in the property type appraised. The survey can ask for a range of rates they see in the market for a particular use group, as well as trends (stable, increasing, or decreasing).

SAMPLE APPRAISER AND INVESTOR SURVEY SUMMARY

Fee Appraiser Surveys		
Mini-Storage	**Cap Rate**	**Trend**
Respondent #1		
Respondent #2		
Respondent #3		
Respondent #4		
Respondent #5		

Cushman & Wakefield Mid-2019 (National)	
Mini-Storage	**Avg. Rate**
Class A	5.19%
Class B	6.11%
Class C	7.33%
Down slightly from prior year	
Self Storage State of the Market Survey Resul	

Colliers Self Storage Newsletter Q4 2020	
Mini-Storage	**Cap Rate**
Midwest - Class A	4.5%-5.5%
Midwest - Class B	5.5%-6.5%
Midwest - Class C	6.5%-7.0%
Down 0.5% to 1% from prior yr	

CBRE North America Cap Rate Survey First Half 2019					
Mini-Storage	**Class A**	**Class B**	**Class C**	**All Classes**	CBRE cap rates for Mini-Storage excludes replacement reserves
National-Range	4.5%-5.5%	5.5%-6.25%	6.25%-8.5%	4.5%-8.5%	
National-Average	5.00%	5.75%	6.75%	5.68%	
(Q3 2018)				↑ 8 BP from Prior	
NOI/SF	$10+	$6 - $10	< $5		

Integrating survey data to the appraisal analysis will assist the jurisdiction in staying in tune with market trends and the observations of those participating in the market.

Section 10 – Data Sources

Multiple sources have been referenced and quoted throughout the material but this is a recap of those used and others that are available.

Listings

- CRExl – www.crexi.com
- Brevitas – https://brevitas.com/
- Commercial Brokers Association – www.commercialmls.com
- Commercial Exchange – www.commercialexchange.com
- CoStar Group – www.costar.com
- Loopnet – www.loopnet.com
- The Ultimate Guide to the Best Commercial Real Estate Listings Sites (Updated Annually) – www.sharplaunch.com/blog/the-ultimate-guide-to-commercial-real-estate-listing-sites
- Compstak – https://compstak.com/

Free Publications

- CBRE (www.cbre.us)
  - North America Cap Rate Survey
    www.cbre.us/research-and-reports
- Cushman & Wakefield
  - MarketBeat Reports
    www.cushmanwakefield.com/en/insights
- Marcus & Millichap – www.marcusmillichap.com – Requires registration
  - Research Briefs
    https://blog.marcusmillichap.com/
  - Research Reports
    www.marcusmillichap.com/research/researchreports

- National Association of Realtors
    - Commercial Real Estate Market Trends and Outlook

      www.nar.realtor/commercial-real-estate-market-trends-and-outlook
    - Commercial Lending Survey

      www.nar.realtor/research-and-statistics/research-reports/commercial-lending-survey
    - Expectations and Market Realities in Real Estate

      www.nar.realtor/research-and-statistics/research-reports/expectations-and-market-realities-in-real-estate

- Price Waterhouse Coopers (PWC)
    - Emerging Trends in Real Estate

      www.pwc.com/us/en/industries/asset-wealth-management/real-estate/emerging-trends-in-real-estate.html
- Real Capital Analytics (RCA)
    - RCA Insights

      www.rcanalytics.com/rca-insights/
- REIS | Real Estate Solutions by Moody's Analytics
    - Cap Rates

      www.reis.com/cap-rates/

Subscription Publications and Data Services

- Marshall Valuation Services – www.corelogic.com/buy/appraiser-solutions/
- Realty Rates – www.realtyrates.com
- CoStar Group – www.costar.com
- Reonomy – www.reonomy.com
- Real Estate Information Solutions by Moody's Analytics (REIS) – www.reis.com

Commercial Real Estate News

- Globe Street – www.globest.com
- Wealth Management (formerly National Real Estate Investor) – www.wealthmanagement.com/real-estate
- Real Estate Journal by Market – https://rejournals.com/
- Society of Industrial and Office Realtors
    - Latest News

      www.sior.com/education-and-insights/insights/latest-news
- The Business Journals – www.bizjournals.com
- Commercial Investment Real Estate – www.ccim.com/cire-magazine

- Local economic conditions by metro area and industry
    - US Census – https://www.census.gov/quickfacts
    - Crowdsourced data – free if you contribute data to the database

Free publications

- Colliers International
    - Self-Storage Newsletter (stats on p. 7; investment class on p. 8)

      http://apps.colliersvaluation.com/publications/newsletters/CIVAS_Self-storage_Newsletter.pdf
- Cushman & Wakefield
    - Self-Storage Investor Survey

      http://cushwakeselfstorage.com/library/

- Marcus & Millichap (www.marcusmillichap.com) – Requires registration
    - Self-Storage US Investment Forecast

      www.marcusmillichap.com/research/researchreports

Subscriber publications

- Mini-Storage Messenger
    - Self-Storage Almanac and Self-Storage Expense Guidebook

      www.ministoragemessenger.com/products/

Appendix 1 – Answers to Discussion Questions

3.8. Self-Storage Discussion Questions

There are no right or wrong answers to these discussion questions. They are intended to be thought provoking and encourage you to plan for the next valuation cycle.

4.2.1. Self-Storage Market Trends Discussion Questions

1) What have been the national rent trends for the past five years?

Rental rates have been flat to increasing over the past five years, with the five-year forecast to continue to be slightly increasing.

2) What have been the national occupancy trends for the past five years?

Occupancy rates have been decreasing over the past five years, with the five-year forecast to be increasing, but not to pre-pandemic levels.

3) What have been the national cap rate trends for the past five years?

Cap rates have been generally flat to slightly decreasing over the past five years, but have decreased substantially from the levels observed in 2000.

4) Have the expectations changed much for expenses according to the PwC and NKF Investor Survey data?

Average Expense Growth noted in the PwC and NKF Investor Survey data shows an average increase of roughly 3% per year, which is slightly less than the forecasted rent growth that averages 3.25% to 4.29%.

5.4. Highest and Best Use Discussion Question

Based on the market trends previously shown in this workshop, do you think self-storage development is financially feasible at present?

With decreasing trends in occupancy rates and flattening rental rates in recent years, some markets may be overdeveloped and it may not be financially feasible for new self-storage construction.

Financial feasibility typically exists when rental rates and occupancy rates are experiencing increasing trends.

7.6.4. External Obsolescence Discussion Question

Is this a viable method to calculate external obsolescence?

The viability of any calculation made in real estate appraisal is determined by whether it is premised upon market data.

In some cases of lacking data availability, an appraiser may have to rely upon judgement. Preferably, the market will support all conclusions developed in the appraisal analysis.

9.2.2. Income & Expense Survey Discussion Questions

1) You receive the income and expense survey back from the property and after checking the figures in a spreadsheet, the Total Gross Revenue is not calculated correctly based on the actual unit mix. How do you handle this situation?

If the physical unit mix is correct and able to be confirmed, then it might be a math error on the owner's behalf. The appraiser can reconstruct the statement using the correct income figures and then apply the expense information provided by the owner.

If multiple errors and issues are observed in all the data provided, the survey could be labeled as unusable or an outlier, and then not utilized in the analysis.

2) After you compare the state of Sally's Self-Storage with the other storage facilities in your database, the management expense seems high. How do you handle this situation?

The management fee could be adjusted to a market level expense based on the other comparable data that you have on file.

For example, an EGI of $100,000 was reported with a management fee reported was $50,000 or 50% of EGI, whereas the data in your file shows a management fee of 5% of EGI is typical. The $50,000 expense could be adjusted to be $5,000 (0.05 x $100,000) for purposes of the analysis.

3) Door repairs and replacements are common. Should the doors be an expense item or should they be a reserve account? If in a reserve account, should they have a shorter economic life assignment because of the use and/or abuse?

The replacement of short-lived items should be addressed as a reserve account (allowance).

Only apply a replacement reserve if the cap rate data includes it as an operating expense for the sales. If a replacement

9.6.1. Developing Capitalization Rates from Market Transactions

The following market data was collected from self-storage properties in the local market. All of the sales are Investment Class A properties similar to the Class A parcels found in the market area that you're modeling. Based on the market data, what would be the appropriate capitalization rate for your Investment Class A Self-Storage model?

Sale Comp	EGI	Total Exp	NOI	Sale Price	Indicated Cap Rate
1	$425,000	- $127,500	= $297,500	÷ $5,000,000	= 5.95%
2	$680,000	- $238,000	= $442,000	÷ $7,150,000	= 6.18%
3	$546,000	- $163,800	= $382,200	÷ $6,375,000	= 6.00%
4	$450,000	- $180,000	= $270,000	÷ $4,440,000	= 6.08%
5	$690,000	- $207,000	= $483,000	÷ $8,100,000	= 5.96%
				Average	6.03%
				Median	6.00%

Based on the data, a cap rate of 6% is well-supported by looking at the median and average of the data set.

Appendix 2 – Self-Storage Excel Template Instructions

1) Complete the **Valuation Year**, etc. and then copy into the open text box on the right.
2) **PGI Actual** – Uses the actual property data if available. Columns E, G and H are calculated fields, all others are data entered.
3) **Total SF** and **Annual Rent** are calculated fields.
4) **PGI Market** – Same as #2 and #3 above except the Total SF field is used. Changing the Total SF in $3 will also change this field.
5) **Actual PGI** and **Market PGI** – Carried down from above.
6) **Actual V&C** Loss and **Market V&C Loss** – Data entered.
7) **Misc Income** – Data entered.
8) **Actual EGI** and **Market EGI** – Calculated.
9) **Market Management** – Calculated by using K46. Enter as a decimal – example 5% as 0.05.
10) **Actual Expenses** and **Market Expenses** are calculated by expense divided by EGI.
11) **Total Expense** – Sums all expenses.
12) **Actual Reserves** and **Market Reserves** are calculated by expense divided by EGI.
13) **Total Reserves** – Sums all reserves.
14) **Total Actual Expens**e, **Reserves**, **Total Market Expense,** and **Reserves** – Sums the Total Expenses and Total Reserves.
15) **NOI** – Calculated for Actual, Market with expense breakdown and Market with expense as a percentage.
16) **Total Rate** – Carried down from L32.
17) **Indicated Value** – Calculated for Actual, Market with expense breakdown and Market with expense as a percentage.
18) **Value/SF** – Calculated for Actual, Market with expense breakdown and Market with expense as a percentage.

Appendix 3 – Self-storage Sample Cost and Income Valuation

Subject Property

Location: Midwest

Facility Type: Traditional – Metal

Quality Rating: Marshall Valuation Service S – Average

Condition: Average

Site Size: 1.87 acres, no excess or surplus land

Gross Building Area:

Building #1	3,200 SF
Building #2	6,600 SF
Building #3	6,600 SF
Building #4	5,900 SF
Total	26,300 SF

Net Building Area: 24,000 SF, 2,300 SF is office

Building Breakdown: All the storage buildings are steel frame and metal sided structures with metal partitions and have a pitched metal roof. All the buildings feature regular storage units but space in buildings #1 and #4 is climate controlled.

Number of Total Units: 221

Age: 5 years

Estimated Economic Life: 35 years

Indicated Remaining Economic Life: 30 years

Straight-line Depreciation: 14% (5 ÷ 35)

Subject Potential Gross Income:

Unit Size	#	Unit / Mo.	Monthly
5x5	38	$27.00	$1,026
5x10	4	$37.00	148
5x10	30	$69.00	2,070
5x10	10	$37.00	370
10x10	35	$65.00	2,275
10x10	1	$50.00	50
10x10	11	$89.00	979
10x10	5	$65.00	325
10x15	20	$79.00	1,580
10x15	21	$119.00	2,499
10x20	39	$89.00	3,471
10x30	7	$129.00	903
Total Units	221	Total	$15,696
			x 12
Annual Gross Potential Rental Income			**$188,352**

Current Occupancy: 77%

Actual PGI & EGI for years 2007 – 2009:

Gross Potential Income	$188,352	$188,352
Less Vacancy	(133,576)	(80,084)
Discounts	(7,000)	(7,000)
Less Credit Loss	0	(3,000)
Effective Gross Income	$47,776	$98,268

Actual Expenses for years 2007 – 2009:

Management Fee	$3,549	$5,135
General and Administrative	19,761	28,857
Repairs and Maintenance	4,295	8,039
Utilities	5,274	7,197
Insurance	2,850	2,416
Property Tax	548	16,978
Total Expenses	$36,278	$68,622

Aerial View

Rent Kiosk

Security Keypad Entry

Typical Units

Climate controlled building

Cost Approach Valuation:

Direct Cost per SF	**Cost Manual**	**Actual Cost**
Reference	**(Manual Section & Page)**	**Developer**
Base Cost per SF	S Average $27.93	
Climate controlled (1)	x 3.17	
Current Multiplier (CCM)	x 0.91	
Local Cost Multiplier	x 1.02	
New cost per square foot	$29.87	
Gross Building Area	x 24,000	
RCN for Building	$716,880	

(1) Used warm and cooled air from Section 44 at $8/36 per square foot. $8.36 x 9,100 square foot of climate controlled and this equals $76, 076 and then divided by total square foot to get an effective rate per square foot. $76,076 ÷ 24,000 = $3.17.

RCN	$716,880
Depreciation $716,880 x 0.14	-$100,363
RCNLD	$616,517
RCNLD Fence, Paving, Lights	+$34,100
Land Value	+200,000
Indicated Cost Approach Value	$850,617

Cost Approach Value Conclusion: $850,600 (rounded)

Income Approach Valuation:

Using the actual income and expense data and what is typical for the Midwest Region based upon extracted data, an EXCEL spreadsheet was developed and can be found in the file "**Self-storage Income & Expense Analysis Template.xls**" **and is labeled as worksheet** "**Midwest Example"**. This is a sample template that can be modified as needed on a property by property basis.

Indicated values by using the template are:

Actual Data: $414,017 Say $414,000

Market Data with most of subject expenses: $867,654 Say $867,600

Market Data with market expenses was $767,571 Say $757,600

Value indications:

- Cost Approach: $850,600
- Market Data with most of subject expenses: $867,600
- Market Data with market expenses: $757,600

Value Indication: $757,600