





Why you need an insurance appraisal



**RIMS**  
Massachusetts Chapter

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# Insurance Appraisals

Presented By:

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Suncorp Valuations

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# Overview of Suncorp Valuations

**SUNCORP VALUATIONS**

Our Business is Value.









**RIMS**  
Massachusetts Chapter

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### What is an Insurance Appraisal?

- Defined as:
- **“the art and science of estimating the insurable cost or value of a property as of a specific date”.**
- An appraisal will include specific insurable property
- Utilizing a premise of value relevant for insurance purposes
- Performed by qualified accredited senior appraisers (ASA) designated by the American Society of Appraisers
- Complies to the Uniform Standards of Professional Appraisal Practice (USPAP) whose guidelines are established by the Appraisal Foundation

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### Why do we require Insurance Appraisals?

- An Insurance Appraisal should be one component of an overall Program to manage an organization's various risks:



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2017 Thomas Fire in California

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## 2015 US Snowstorms and 2017 Hurricanes

Northeast Snowstorms \$3.8 Billion in Losses



Hurricane Harvey \$100 Billion in Losses



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## Property Loss Experience

How many organizations can achieve their objectives, after a loss, with only 2/3 of their Assets replaced?



Loss experience has shown that the destroyed property on average is 30% under-insured.

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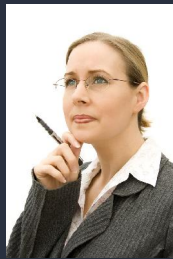
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## How Were Values Established?



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Historical Cost  
Net Book Value  
Market Value  
Allocated Purchase Price  
Liquidation Value

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Replacement Cost New  
Cost of Reproduction New  
Actual Cash Value

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SAMPLE OF APPRAISED PROPERTIES  
& PREMISES OF VALUE

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Standard Airport Terminal



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Industrial Plant M&E



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Historical Landmark Hotel

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### Appraisal Process – Historically Designated Property



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### 20 Year Old Injection Molding Machine



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### Example of Value Relationships

Assume we have a 2008 10-year old riding fork lift truck 5,000 lb capacity in good condition.



Original Cost:	\$33,000
Net Book Value:	\$10,000
Market Value:	\$13,300
Orderly Liquidation:	\$6,700
Replacement Cost:	\$40,000
Actual Cash Value:	\$18,000

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## Example of Value Relationships

					RC = \$40,000
			OC= \$33,000		
		ACV= \$18,000			
	MV = \$13,300				
	NBV = \$10,000				
	OLV = \$6,700				

Using Incorrect Premise of Value will understate the Insurable Value

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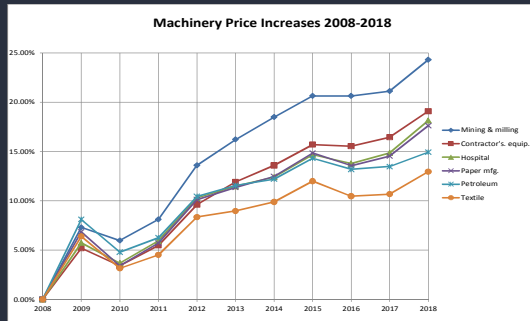
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## Equipment Cost Trends for Various Industries




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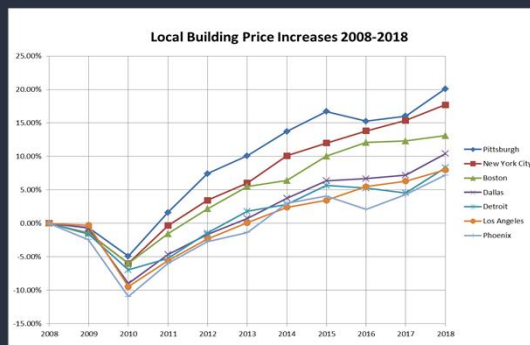
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## Construction Cost Trends for Various Cities




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## Construction Cost Changes

U.S. City	% Change Last Year	% Change Last 5 Years	% Change Last 10 Years
Atlanta	3.6%	7.9%	23.1%
Boston	1.6%	11.1%	26.6%
Chicago	3.9%	12.7%	31.1%
Cincinnati	3.2%	11.5%	17.4%
Houston	4.4%	12.5%	21.9%
Los Angeles	3.2%	10.2%	23.6%
New York	2.1%	13.2%	27.0%
Portland	4.7%	11.6%	27.7%
Seattle	6.0%	12.5%	30.5%

Sourced from Marshall Valuation Service – January 2018



**Buildings**



**Site  
Improvements**



**Other  
Infrastructure**



**Leasehold  
Improvements**

### Property Inclusions



**Machinery  
& Equipment**



**Furnishings &  
Equipment**



**Mobile  
Equipment**



**Computer  
Hardware**

### Property Inclusions








Raw Materials

Goods In Progress

Finished Goods

Supplies & Consumables

Property Inclusions

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INSURANCE APPRAISAL  
PROCESS

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Proposal Issuance

Information provided by client may include:

> Listing of Assets to be Appraised

> Premise(s) of Insurable Value

> Square Footages of Buildings

> Occupancies of Buildings

> Quantity & Capacities of M&E

> Level of Detail Required In Report

> Specified Date for Final Report Delivery

> Availability of Construction Drawings



Fees estimated based on the professional time required to complete the appraisal

Proposal issued outlining parameters of appraisal service

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## Project Planning

- Formal written authorization is received from client
- Client is contacted to re-confirm parameters of proposed appraisal service
- Information is requested from client including:
  - Architectural Drawings, Site Plans, Blueprints, Construction Related Data & Property Records
  - Site Contact(s)
- Scheduling of Appraisal Inspection



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## Site Inspection

### For Buildings & Infrastructure:

- Review “As-Built” architectural drawings
- Measure the structures
- Record pertinent architectural features of building construction
- Determine specifications of building systems
- Photograph buildings (if authorization from client is received)
- Assess Physical Condition (for ACV)

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## Develop Insurable Values

### Buildings & Infrastructure:

- Develop CRN, RCN or ACV value using reliable costing sources:
  - Marshall & Swift/Boeckh – Marshall Valuation Service
  - RS means Construction Cost Estimating
  - Advice of Local Contractors
  - Proprietary Database
- Employ valuation approach to suit building under appraisal:
  - Segregated Cost Method
  - Model-Based Method

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## Develop Insurable Values

### Demolition and Debris Removal

- Confirm property loss assumption is in compliance with policy
- Give consideration to pertinent cost factors:
  - Location/Ease of Access
  - Type and Quality of Construction
  - Distance from Dump Site
- Apply benchmark cost:
  - On a per sq. ft. basis; or
  - As a % of Building CRN

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## Site Inspection & Verification – Machinery & Equipment



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## Site Inspection

### For Machinery & Equipment:

- Inventory assets by location, building and cost center and/or dollar cut off, \$25K, \$50K, \$100K
- Record Manufacturer, Model Number, Capacity and Specialty Features
- Note age and condition (for ACV)
- Review Property Records

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## Develop Insurable Values

### Machinery & Equipment (Continued)

- Give consideration to other applicable costs:
  - Freight
  - Engineering/Design
  - Installation including foundations, controls, piping and electrical connections
  - Start-up and Testing
  - Taxes

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## Develop Insurable Values

### Machinery & Equipment

- Develop RCN or ACV values using reliable costing sources:
  - Current quotes from equipment suppliers
  - Richardson's Process Plant Construction Estimating
  - Equipment manufacturers' catalogues
  - Proprietary Database
  - Comparison to original cost (if recent & available)

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## Appraisal Process – Develop Insurable Values



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## BENEFITS OF AN INSURANCE APPRAISAL PROGRAM

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### Benefits To Property Owners

An appraisal by an accredited appraiser will:

- Avoid a co-insurance penalty, for an under-insured loss
- Avoid paying too much premium, if over-insured
- Rate reduction may apply
- Provide an accurate documentation of the Insured assets
- Transfer risk to appraisal firm
- Expedite claim



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### Benefits To Insurance Brokers

An up-to-date appraisal will:

- Transfer risk to appraisal firm
- Facilitate placement of insurance with underwriters
- Provide an allocation of insurable value by property class
- Enable implementation of an annual update program

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### Benefits To Insurers

An appraisal from a reliable source:

- Ensures that insurance is underwritten on current accurate data
- Facilitates assessment of risks
- Provides documented evidence of the specific insured assets
- Avoids under-insured loss scenario
- May avoid unnecessary litigation costs in the event of loss claim dispute

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### INSURANCE APPRAISAL REPORT MANDATORY REQUIRMENTS

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### Report Preparation & Issuance

- Report complies to the Uniform Standards of Professional Appraisal Practice (USPAP)
- Report is structured to the terms of the authorized service
- Deliverables provided to client in hard-copy and/or electronic format
- Support data for appraisal is retained on file for at least seven years
- Supplemental information can be provided to client, upon request

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### Purpose, Effective Date and Intended Users

- Purpose may be primarily for Insurance Purposes but appraisal service can be expanded to meet other purposes such as Property Records & Financial Reporting
- Effective Date - typically the last date of the appraisal inspection.
- Intended Users generally consist of:
  - Client of Record
  - Insurance Broker or Agent
  - Insurer of Property

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### Premise(s) of Value

- **Replacement Cost New:** "the estimated monetary cost, as at the valuation date, of constructing new, a building or structure that would have a similar utility to the subject property under appraisal, but constructed with modern materials and according to current standards, design and layout"
- **Cost of Reproduction New:** "the monetary amount required to reproduce property of like kind and quality at one time in accordance with current market prices for materials, labor, manufactured equipment, contractor's overhead, profit and fees, but without provisions for overtime, bonuses for labor, or premiums for materials"
- **Actual Cash Value:** "Replacement or Reproduction Cost New Less Physical Depreciation"

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### Approaches to Value

- Income Approach
- Direct Comparison (Sales Comparison)
- Cost Approach
  - Segregated Cost Method
  - Model Based Method

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## Conclusion of Value

- Re-states Effective Date
- Premise of Value
- Summary of Insurable Costs by Property Classification
- Total Insurable Value
- Currency

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## Addenda

- General Service Conditions
- Contingent and Limiting Conditions
- Certification Statement
- Summary of Insurable Costs
- Construction Cost Analysis
- Inventory of Machinery and Equipment

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## SAMPLE INSURANCE APPRAISAL – EQUIPMENT INVENTORY

[illegible]

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## SAMPLE INSURANCE APPRAISAL – OFFICE BUILDING

DATE BUILT	1991	EFFECTIVE DATE	NOVEMBER, YEAR
TOTAL GROSS FLOOR AREA	507,818 SF	APPROX. BUILDING NO.	B1
GROSS SQUARE AREA	500,042 SF	CONSTRUCTION CLASS	A-3-C
ABOVE GRADE AREA	476,149 SF	# STORIES	TWENTY-SEVEN (27)
BELOW GRADE FLOOR	23,667 SF	FULL MEZZANINE	AND CORRIDORS
OCCUPANCY	DATA		
<b>BUILDING CONSTRUCTION AND SERVICES - BELOW GRADE ASSETS</b>			
FOUNDATION, EXCAVATION AND SITE PREPARATION			\$352,000
FOUNDATION - EXCAVATION AND SITE PREPARATION			\$4,480,000
<b>TOTAL BELOW GRADE ASSETS</b>			<b>\$4,832,000</b>
<b>BUILDING CONSTRUCTION AND SERVICES - ABOVE GRADE ASSETS</b>			
ROOF STRUCTURE			\$3,890,000
ROOF FINISHES			\$1,840,000
EXTERIOR CONSTRUCTION, MEZZANINES, STAIRS			\$15,940,000
ROOF AND STAIRS FINISHES			\$1,152,000
PLUMBING (TOTAL FINISHED AND DRAINAGE)			\$1,891,000
ELECTRICAL, MECHANICAL AND AIR CONDITIONING			\$1,183,000
ELECTRICAL AND LIGHTING			\$17,770,000
EXTERIOR WALL CONSTRUCTION, BALCONIES			\$17,542,000
ROOF STRUCTURE, ROOF COVERING, AND CANOPIES			\$847,000
FIRE PROTECTION			\$1,347,000
MECHANICAL			\$4,715,000
ARCHITECTURAL CONSTRUCTION			\$17,000
ARCHITECTURAL OR FINISHES (TOTAL)			\$141,170,000
<b>TOTAL BUILDING CONSTRUCTION AND SERVICES</b>			<b>\$143,649,000</b>
<b>TOTAL DEMOLITION AND DEBRIS REMOVAL COSTS</b>			<b>\$4,370,000</b>
<b>TOTAL GROSS COST</b>			<b>\$148,019,000</b>
<b>CONSTRUCTION:</b>			
FOUNDATIONS:			EXCAVATION, FOUNDATION, FOUNDATION
ROOF STRUCTURE:			EXCAVATION, FOUNDATION, FOUNDATION
INTERIOR CONSTRUCTION:			EXCAVATION, FOUNDATION, FOUNDATION
PLUMBING SYSTEM:			EXCAVATION, FOUNDATION, FOUNDATION
ELECTRICAL AND LIGHTING:			EXCAVATION, FOUNDATION, FOUNDATION
EXTERIOR WALLS:			EXCAVATION, FOUNDATION, FOUNDATION
ROOF:			EXCAVATION, FOUNDATION, FOUNDATION
MECHANICAL:			EXCAVATION, FOUNDATION, FOUNDATION
ADDITIONAL CONSTRUCTION:			EXCAVATION, FOUNDATION, FOUNDATION

## Addenda – Construction Cost Analysis

- Property Name
- Property Address including Postal Code
- May have a Legal Description
- Date Built
- Size (square feet)
- Building Components & Services (i.e Floor, Roof, HVAC)
- Fire Protection System Details

## Benchmarking Current Construction Cost Ranges

Occupancy	Cost Range Per Square Foot ( Dollars)
Mining Mill Buildings:	\$200 - \$250
Food Processing Plants:	\$150 - \$250
Power Plants:	\$300 - \$400
Pulp & Paper Mills:	\$100 - \$200
Hospitals :	\$400 - \$600
Light Manufacturing (Non-Butler type):	\$80 - \$120
Heavy Process Manufacturing Plants:	\$250 - \$400
Office Buildings	
Under 5 Stories:	\$160 - \$250
5 – 10 Stories:	\$170 - \$270
10 – 20 Stories:	\$190 - \$350
Over 20 Stories:	\$250 - \$450
Regional Shopping Malls:	\$160 - \$250

### Benchmarking Current Contents Cost Ranges

Occupancy	Cost Per Square Foot
Pharmaceutical:	\$300 - \$400
Food Processing Plants:	\$250 - \$350
Office Buildings:	\$40 - \$70

Occupancy	Cost Per Operating Capacity Unit (In U.S. Dollars)
Cement Plant:	\$170* - \$350* per Metric Ton
Pulp & Paper Plants:	\$800,000 to \$1,300,000* per Metric Ton

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### Benchmark Costs For Electricity Generating Plants

Fuel	Technology Type	Nominal Capacity	Cost/KW (US \$)
Coal	Ultra Supercritical Coal	650,000	3,636
Coal	Ultra Supercritical Coal with CCS	650,000	5,084
Coal	Pulverized Coal Converted to Natural Gas	300,000	226
Nat. Gas	Natural Gas Combined Cycle	702,000	978
Nat. Gas	Advanced Combined Cycle	429,000	1,104
Nat. Gas	Conventional Combustion Turbine	100,000	1,101
Nat. Gas	Advanced Combustion Turbine	237,000	678
Nat. Gas	Recip. Internal Combustion Engine	85,000	1,342

\* Source – U.S. Department of Energy

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### Benchmark Costs For Electricity Generating Plants

Fuel	Technology Type	Nominal Capacity	Cost/KW (US \$)
Uranium	Advanced Nuclear	2,234,000	5,945
Biomass	Biomass Fluidized Bed	50,000	4,985
Wind	Onshore Wind	100,000	1,877
Wind	Offshore Wind	100,000	6,628
Solar	Photo Voltaic - Tracking	150,000	2,534
Solar	Photo Voltaic - Tracking	20,000	2,644
Hydro-Electric	Conventional Hydroelectric	500,000	3,123
Battery	Battery Storage	4,000	2,813

\* Source – U.S. Department of Energy

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Benchmark Costs for Healthcare Facilities

Building Construction	Cost/Sq. Ft. Range
Hospital Building	\$500 - \$600
Clinic Building	\$400 - \$450
Laboratory Building	\$450 - \$550
Administrative Building	\$280 - \$330
Above Ground Parking Garage	\$90 - \$110
Underground Parking Garage	\$90 - \$130

Furnishings & Equipment	
Cost Per Square Foot	\$140 - \$200
Cost Per Bed	\$350,000 - \$450,000

\* Cost Source: Suncorp Valuations Internal Data

Thank you

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