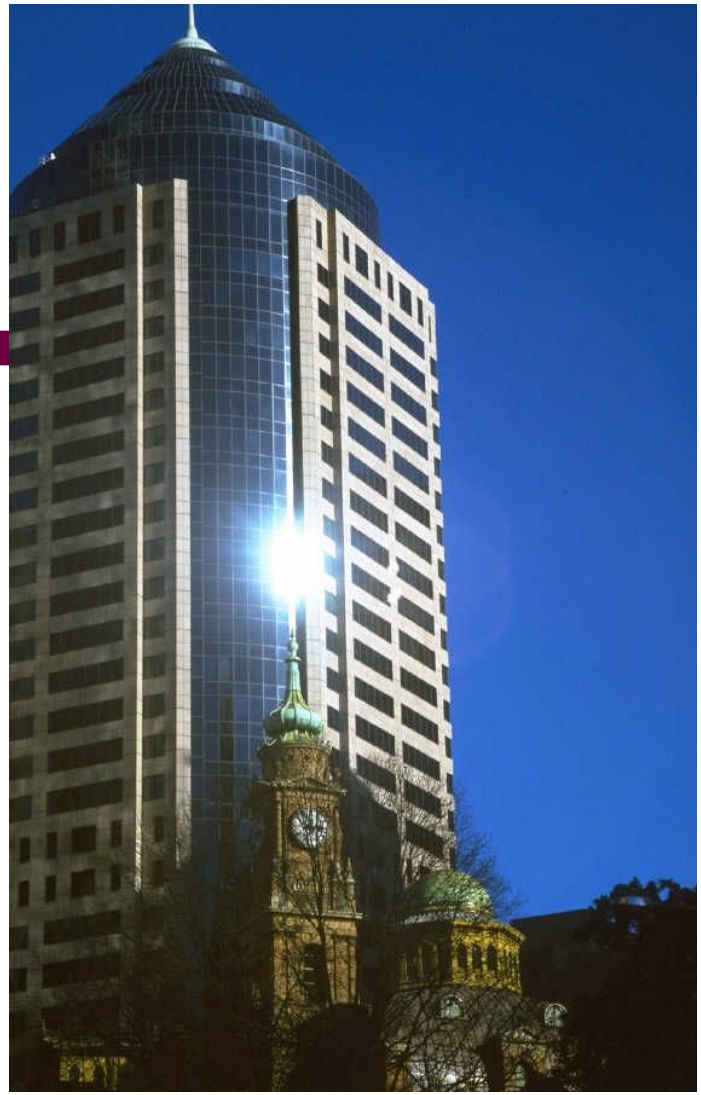
Market Analysis for Office Buildings



Characteristics and Concepts

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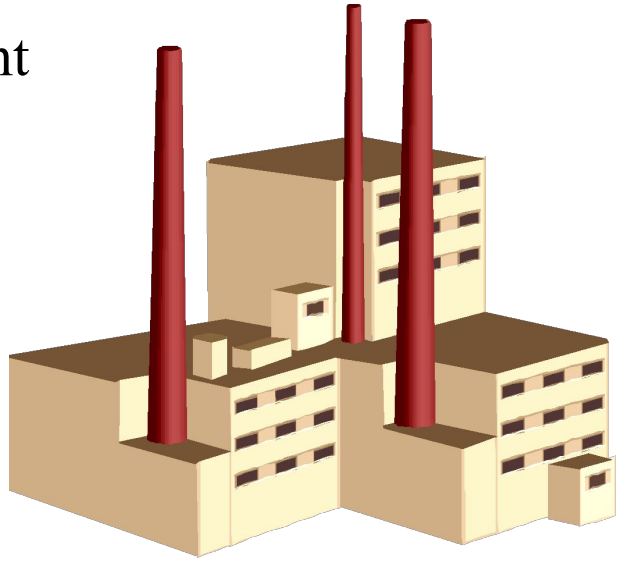
Building Users

- Differentiated by Users/Tenants
  - Major Institutional/Professional
    - Occupied by banks, insurance companies, professionals, corporate headquarters
  - General Commercial
    - Smaller buildings, accessible to workers and markets
    - Parking is important, tenants are sales oriented
  - Medical and/or Dental
    - Generally located near hospitals

Building Users

- Differentiated by Users/Tenants
  - Quasi-industrial
    - may be located in industrial parks
    - flex and/or research and development
  - Pure industrial
    - part of a manufacturing operation
  - Government and/or Education



Building Terms

- Gross Building Area (GBA)
  - Total area of the building in square feet
- Rentable Area
  - Usually considered the tenant's pro rata share of the entire building.
  - Excludes elements of the building that penetrate through the floor

Building Terms

- Rented Area
  - Amount of space under lease in a building
- Net Occupied Space (Useable)
  - Area within the building occupied by the tenant(s)
- Efficiency ratio
  - Rentable area divided by gross building area
- Store Area
  - Number of square feet in ground floor store area

Gross Building Area

MEASURING GROSS BUILDING AREA

GROSS BUILDING AREA is not to be used for leasing purposes except where an entire building is leased to a single tenant. This area is computed by measuring to the outside finished surface of permanent outer building walls, without any deductions. All enclosed floors of the building, including basements, garages, mechanical equipment floors, penthouses, and the like. are calculated. *GROSS BUILDING AREA* is sometimes referred to as "construction area" in the industry.

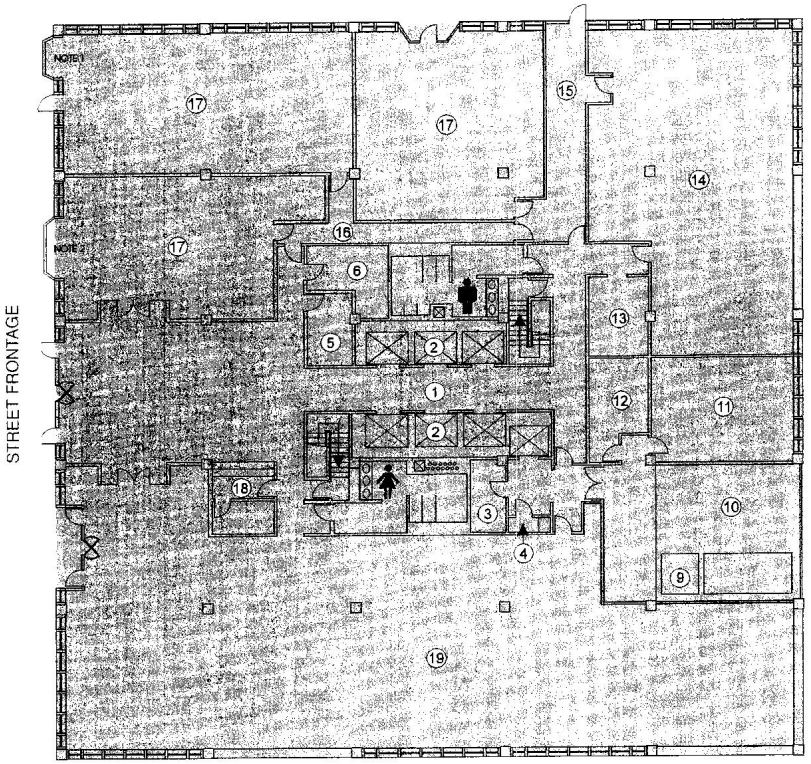


ILLUSTRATION OF *GROSS BUILDING AREA* FOR A TYPICAL GROUND LEVEL FLOOR WHERE THE BUILT AREA BOWS OUT OF AN OTHERWISE STRAIGHT BUILDING LINE (Note 1) AND A BAY WINDOW EXTENDS OUTSIDE THE BUILDING LINE (Note 2)

1 Lobby
2 Elevator
3 Electricity
4 Janitor
5 Fire Command
6 Building Maintenance
7 Fan Room
8 Ventilation Shaft
9 Trash Dumpster
10 Loading Dock
11 Electrical Room
12 Fire Pump
13 Vending Machines
14 Exercise Club
15 Exit Corridor
16 Retail Service Corridor
17 Store Area
18 Security
19 Restaurant

Rentable Area

MEASURING FLOOR RENTABLE AREA

FLOOR RENTABLE AREA shall mean the result of subtracting from the *GROSS MEASURED AREA* of a floor the area of the *MAJOR VERTICAL PENETRATION*s on that same floor. No deduction shall be made for columns and projections necessary to the building. Spaces outside the exterior walls, such as balconies, terraces, or corridors, are excluded. *BUILDING RENTABLE AREA* shall equal the sum of all *FLOOR RENTABLE AREA*s.

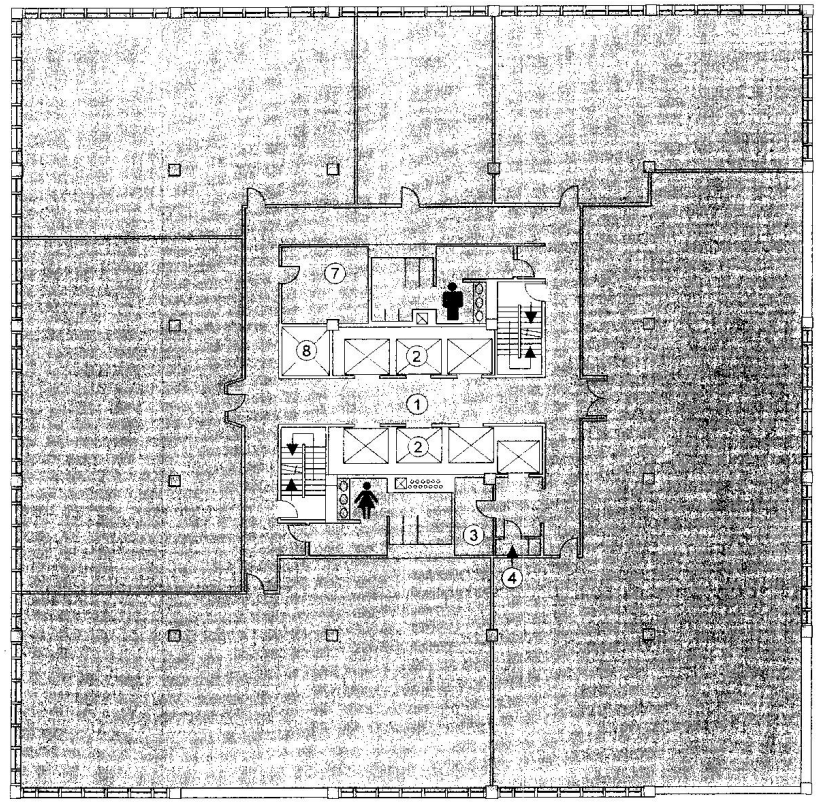


ILLUSTRATION OF *FLOOR RENTABLE AREA* FOR A TYPICAL UPPER LEVEL FLOOR

1 Lobby
2 Elevator
3 Electricity
4 Janitor
5 Fire Command
6 Building Maintenance
7 Fan Room
8 Ventilation Shaft
9 Trash Dumpster
10 Loading Dock
11 Electrical Room
12 Fire Pump
13 Vending Machines
14 Exercise Club
15 Exit Corridor
16 Retail Service Corridor
17 Store Area
18 Security
19 Restaurant

Useable Area

MEASURING FLOOR USABLE AREA

FLOOR USABLE AREA shall be computed by measuring the area enclosed between the FINISHED SURFACE of the *OFFICE AREA* side of corridors and the *DOMINANT PORTION* and/or *MAJOR VERTICAL PENETRATION*s. *BUILDING COMMON AREA*s are considered to be part of *FLOOR USABLE AREA*. No deduction shall be made for columns and projections necessary to the building. Where alcoves, recessed entrances or similar deviation from the corridor line are present, *FLOOR USABLE AREA* shall be computed as if the deviation were not present.

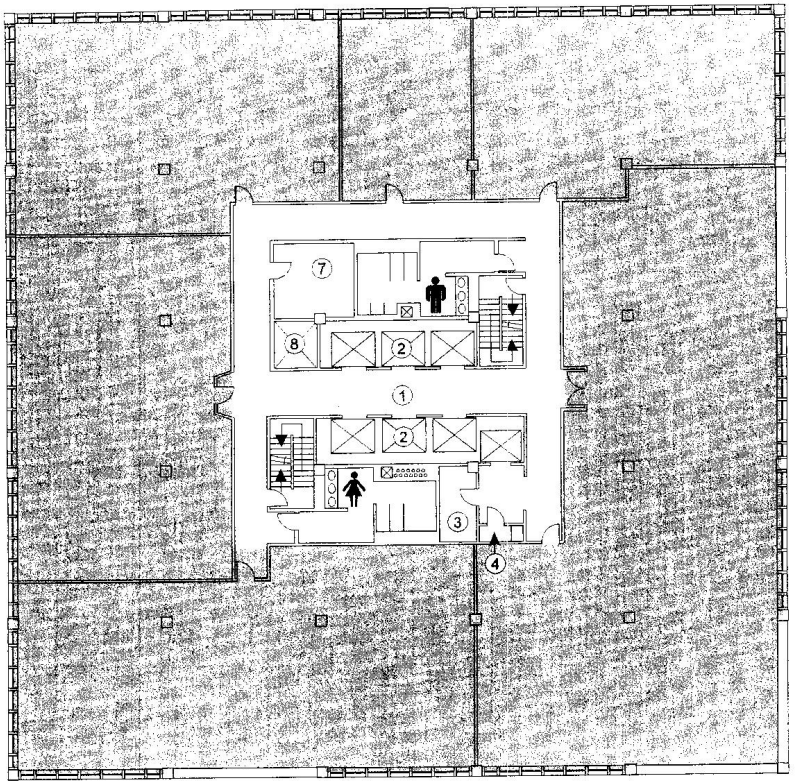


ILLUSTRATION OF *FLOOR USABLE AREA* FOR A TYPICAL UPPER LEVEL FLOOR

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19 Restaurant

Building Terms – an Example

Building Quantities				
	Gross Building Area	Stairwells & Hallways	Baths & Janitorial	Net Useable Area
1st Floor	16,661.43	2,018.56	429.25	14,213.62
2nd Floor	16,661.43	1,658.56	420.50	14,582.37
Total	33,322.86	3,677.12	849.75	28,795.99
Load Factor	1.16			

Building Types

- Trophy
  - highest quality building, one-of-a-kind
  - unique architectural design
  - outstanding location
- Class A
  - excellent location and access
  - good quality materials and workmanship
  - good to excellent condition

Building Types

- Class B
  - good location and good construction
  - may suffer from physical deterioration and some form of functional obsolescence
- Class C
  - Older (15 to 25 years), may not meet current codes
  - may suffer from physical deterioration and some form of functional obsolescence
- Rehab
  - older vacant or poorly occupied that if rehabbed could become Class A

General Concepts and Terms

- Analysis of Competition
  - should recognize differences between building types
  - segmentation of supply by building classification
- Office Space per Employee
  - norms change from market area to market area, and even between submarket areas within the same general market
  - generally average is 175 to 200 sq. ft. per employee

BOMA Survey Data

Orange County, CA

ALL SUBURBAN

INCOME	# BLDS	TOTAL BUILDING RENTABLE AREA 63 BLDS 10,486,522 SQ. FT. DOLLARS/SQ. FT. AVG	MEDIAN	MID RANGE** LOW	HIGH	TOTAL OFFICE RENTABLE AREA 10,216,884 SQ. FT. DOLLARS/SQ. FT. AVG	MEDIAN	MID RANGE** LOW	HIGH
OFFICE AREA	63					23.31	22.91	19.59	26.01
RETAIL AREA	20	21.73	21.34	16.05	27.96				
OTHER AREA									
TOTAL RENT	63	23.90	23.07	20.69	26.15				
GROSS PARKING INC	49	1.53	1.30	.43	1.96				
TENANT SERVICES	53	.32	.14	.08	.39				
MISCELLANEOUS	26	.76	.06	.04	.17				
TOTAL INCOME	63	26.25	24.31	21.30	28.49				
EXPENSE									
CLEANING	63	1.21	1.21	1.09	1.30	1.23	1.23	1.10	1.30
REPAIR/MAINT	63	1.59	1.60	1.12	1.85	1.61	1.62	1.12	1.90
UTILITIES	61	2.25	2.35	1.84	2.74	2.27	2.35	1.90	2.74
ROADS/GROUNDS	60	.18	.17	.09	.22	.19	.17	.09	.22
SECURITY	61	.49	.43	.32	.64	.50	.43	.32	.72
ADMINISTRATIVE	61	1.51	1.54	1.39	1.79	1.55	1.60	1.40	1.91
TOTAL OPER EXP	61	7.18	7.25	6.46	8.34	7.37	7.51	6.56	8.36
FIXED EXPENSE	61	2.50	2.46	1.91	2.93	2.57	2.46	1.91	3.02
TOTAL OPER+FIX	61	9.68	9.68	9.03	10.88	9.93	10.04	9.18	10.99
DIR LEASING EXP	27	.29	.12	.09	.18	.30	.12	.09	.18
AMORT LEASING EXP	8	4.84	1.40	.53	3.31	4.90	1.40	.53	3.34
PARKING EXP	53	.61	.28	.07	.74	.63	.31	.07	.74

OCCUPANCY INFO.	AVERAGE	BLDS
SQFT/OFFICE TENANT	13379.52	33
SQFT/RETAIL TENANT		
SQFT/OFFICE WORKER	312.13	26
SQFT/MAINTENANCE STAFF	97001.53	29
OFFICE OCCUPANCY (%)	87.82	33
RETAIL OCCUPANCY (%)	84.25	22
YR-END RENT ($)	27.79	31
GROSS PARKING INC/STALL ($)	487.78	32
PARKING RATIO (STALLS/1000SF)	3.13	26
RENTABLE/GROSS SQFT	.96	26
RENTABLE/USABLE SQFT	1.11	25
TOTAL BTUs		
CAPITALIZATION THRESHOLD ($)	15784.88	38
BUILDING HOURS	60.18	38

DETAIL*	AVERAGE	BLDS	DETAIL*	AVERAGE	BLDS	DETAIL*	AVERAGE	BLDS	DETAIL*	AVERAGE	BLDS	DETAIL*	AVERAGE	BLDS
OFFICE RENT			ELEVATOR	.14	63	**RDS/GDS**			GEN OFC EXP	.16	60	DIR-TENANT IMP	1.30	2
BASE RENT	20.90	63	HVAC	.33	63	RDS/GDS LANDSCAPE	.17	60	EMP EXP	.01	38	DIR-OTHER	.04	11
PASS-THROUGHS	4.08	16	ELECTRICAL	.09	63	RDS/GDS GARAGE	.08	19	OTHER ADM EXP	.14	52	AMORT-COMMISION	2.85	11
OPER COST ESCAL	1.79	54	STRUC/ROOF	.02	10	RDS/GDS SNOW			**FIXED EXPENSES**			AMORT-TENANT IMP	3.54	7
BASE RENT ESCAL			PLUMBING	.05	57	RDS/GDS OTHER	.04	23	REAL ESTATE TAX	1.68	61	AMORT-BUY-OUTS		
LEASE CANCEL	.26	12	FIRE/LIFE SAFETY	.09	37	**SEC**			BLDG INSURANCE	.82	60	AMORT-OTHER		
RENT ABATEMENT			GEN EXTERIOR	.11	57	SEC PAYROLL	.24	7	PERS PROP TAX			**PARKING**		
CLEANING			GEN INTERIOR	.41	63	SEC CONTRACT	.45	53	OTHER TAX	.02	8	IN HOUSE	1.82	3
PAYROLL	.32	7	CONTRACT	.74	24	SEC EQUIPMENT	.05	17	LICENSE FEE	.01	19	CONTRACT	.51	50
ROUTINE CONTRACT	.96	59	**UTILITIES**			SEC OTHER	.06	38	**LEASING EXPENSES**			SNOW		
SPEC CONTRACT	.07	58	ELECTRICITY	2.12	61	**ADMINISTRATIVE**			PAYROLL			SHUTTLE		
SUP/MAT/MISC	.13	62	GAS	.09	43	PAYROLL	.49	55	ADV/PROMOTION	.05	37	**TELECOMMUNICATIONS**		
TRASH REMOVAL	.07	62	FUEL OIL			ALLOC ADMIN			TRAVEL			WIRE ACCESS	.06	14
			STEAM			MGMT FEES	.79	60	DIR-COMMISSIONS			ROOF TOP	.05	3
REPAIR/MAINT			CH WTR			PROF FEES	.03	48	DIR-BUY OUT			TOTAL INCOME	.06	16
PAYROLL	.47	56	WATER/SEWER	.08	55				PROF FEES	.07	16	TOTAL EXPENSES		

*Income calculation based on office rentable sq. ft.; Expense calculation based on total bldg. rentable sq. ft.
**low = 25th percentile; high = 75th percentile

Orange County, CA

SUBURBAN 100,000-299,999 SQ. FT.

INCOME	# BLDS	TOTAL BUILDING RENTABLE AREA 26 BLDS 4,262,689 SQ. FT. DOLLARS/SQ. FT. AVG	MEDIAN	MID RANGE** LOW	HIGH	TOTAL OFFICE RENTABLE AREA 4,239,367 SQ. FT. DOLLARS/SQ. FT. AVG	MEDIAN	MID RANGE** LOW	HIGH
OFFICE AREA	26					23.63	23.19	20.56	26.26
RETAIL AREA									
OTHER AREA									
TOTAL RENT	26	24.38	24.42	20.84	26.26				
GROSS PARKING INC	20	1.32	1.21	.42	1.89				
TENANT SERVICES	22	.24	.11	.06	.39				
MISCELLANEOUS	8	.08	.05	.02	.11				
TOTAL INCOME	26	25.72	24.88	21.09	27.94				
EXPENSE									
CLEANING	26	1.20	1.17	1.03	1.28	1.20	1.17	1.08	1.26
REPAIR/MAINT	26	1.64	1.61	1.40	1.86	1.65	1.62	1.40	1.86
UTILITIES	24	2.25	2.41	1.88	2.69	2.26	2.41	1.92	2.69
ROADS/GROUNDS	23	.18	.16	.07	.23	.18	.17	.07	.23
SECURITY	24	.41	.35	.12	.57	.42	.35	.12	.57
ADMINISTRATIVE	24	1.56	1.54	1.42	1.67	1.57	1.54	1.45	1.67
TOTAL OPER EXP	24	7.30	7.14	6.53	7.90	7.34	7.20	6.56	7.90
FIXED EXPENSE	24	2.67	2.63	1.90	3.19	2.68	2.63	1.90	3.30
TOTAL OPER+FIX	24	9.97	9.54	9.14	10.42	10.02	9.69	9.19	10.56
DIR LEASING EXP	9	.51	.11	.10	.16	.51	.11	.10	.16
AMORT LEASING EXP	2	1.15	1.17			1.15	1.17		
PARKING EXP	23	.29	.17	.03	.45	.30	.17	.03	.45

OCCUPANCY INFO.	AVERAGE	BLDS
SQFT/OFFICE TENANT	9321.17	9
SQFT/RETAIL TENANT		
SQFT/OFFICE WORKER	348.22	9
SQFT/MAINTENANCE STAFF	107936.35	8
OFFICE OCCUPANCY (%)	89.13	9
RETAIL OCCUPANCY (%)	86.00	3
YR-END RENT ($)	28.38	9
GROSS PARKING INC/STALL ($)	470.84	10
PARKING RATIO (STALLS/1000SF)	3.43	7
RENTABLE/GROSS SQFT	.96	7
RENTABLE/USABLE SQFT	1.09	7
TOTAL BTUs		
CAPITALIZATION THRESHOLD ($)	2352.94	22
BUILDING HOURS	62.38	9

DETAIL*	AVERAGE	BLDS	DETAIL*	AVERAGE	BLDS	DETAIL*	AVERAGE	BLDS	DETAIL*	AVERAGE	BLDS	DETAIL*	AVERAGE	BLDS
OFFICE RENT			ELEVATOR	.12	26	**RDS/GDS**			GEN OFC EXP	.19	24	DIR-TENANT IMP	1.30	2
BASE RENT	22.50	26	HVAC	.36	26	RDS/GDS LANDSCAPE	.18	23	EMP EXP	.01	19	DIR-OTHER	.02	2
PASS-THROUGHS	3.04	2	ELECTRICAL	.07	26	RDS/GDS GARAGE	.02	4	OTHER ADM EXP	.13	18	AMORT-COMMISION	3.49	4
OPER COST ESCAL	1.01	24	STRUC/ROOF	.01	3	RDS/GDS SNOW			**FIXED EXPENSES**			AMORT-TENANT IMP		
BASE RENT ESCAL			PLUMBING	.06	26	RDS/GDS OTHER	.02	4	REAL ESTATE TAX	1.74	24	AMORT-BUY-OUTS		
LEASE CANCEL	.18	4	FIRE/LIFE SAFETY	.13	9	**SEC**			BLDG INSURANCE	.93	24	AMORT-OTHER		
RENT ABATEMENT			GEN EXTERIOR	.09	25	SEC PAYROLL	.25	2	PERS PROP TAX			**PARKING**		
CLEANING			GEN INTERIOR	.43	25	SEC CONTRACT	.38	19	OTHER TAX			IN HOUSE		
PAYROLL	.11	4	CONTRACT	1.23	4	SEC EQUIPMENT	.05	3	LICENSE FEE	.01	2	CONTRACT	.29	22
ROUTINE CONTRACT	.96	26	**UTILITIES**			SEC OTHER	.05	21	**LEASING EXPENSES**			SNOW		
SPEC CONTRACT	.06	26	ELECTRICITY	2.10	24	**ADMINISTRATIVE**			PAYROLL			SHUTTLE		
SUP/MAT/MISC	.10	26	GAS	.09	20	PAYROLL	.52	24	ADV/PROMOTION	.06	19	**TELECOMMUNICATIONS**		
TRASH REMOVAL	.06	25	FUEL OIL			ALLOC ADMIN			TRAVEL			WIRE ACCESS		
			STEAM			MGMT FEES	.73	24	DIR-COMMISSIONS			ROOF TOP	.07	2
REPAIR/MAINT			CH WTR			PROF FEES	.04	21	DIR-BUY OUT			TOTAL INCOME	.08	2
PAYROLL	.49	25	WATER/SEWER	.06	24				PROF FEES	.06	4	TOTAL EXPENSES		

*Income calculation based on office rentable sq. ft.; Expense calculation based on total bldg. rentable sq. ft.
**low = 25th percentile; high = 75th percentile

Market Analysis: the Six Steps

- Step 1: Define the Product
  - (property productivity analysis)
- Step 2: Define Users of the Property
  - (market delineation)
- Step 3: Forecast Demand Factors
- Step 4: Inventory and Forecast Competitive Supply
- Step 5: Analyze and Interaction of Supply and Demand
  - (residual demand study)
- Step 6: Forecast Subject Capture

Step 1: Define the Product
Property Productivity Analysis

- Identify the type of Office Building
  - tenants and construction quality
- Analyze the site and the building
  - rate the subject in relation to the typical competition and/or industry standards
- Analyze the location
  - rate the node to other competitive nodes within the metropolitan area. Consider linkages and direction of urban growth.
  - analyze the characteristics of the subject's location within it's node.

Office Building Rating Matrix							
Comparison to Standard	Inferior			Typical	Superior		
Rating Factors	High	Moderate	Slight	Average	Slight	Moderate	High
Site							
Parking				X			
Access				X			
Visibility				X			
Proximity to support facilities				X			
Building							
Construction Quality				X			
Design and exterior appearance		X					
Size (leaseable area)				X			
Efficiency ratio				X			
Condition and effective age				X			
Obsolescence		X					
Quality of tenant finish				X			
Property management and tenancy							
Management				X			
Quality of tenants			X				
Subject number of items	0	2	1	10	0	0	0
Times category score	0	2	4	5	6	8	10
Subject subtotal score	0	4	4	50	0	0	0
Total Subject score							58
Typical Score		65					
Subject Score		58					
Subject is 10% below standard		58/65 = 89%					

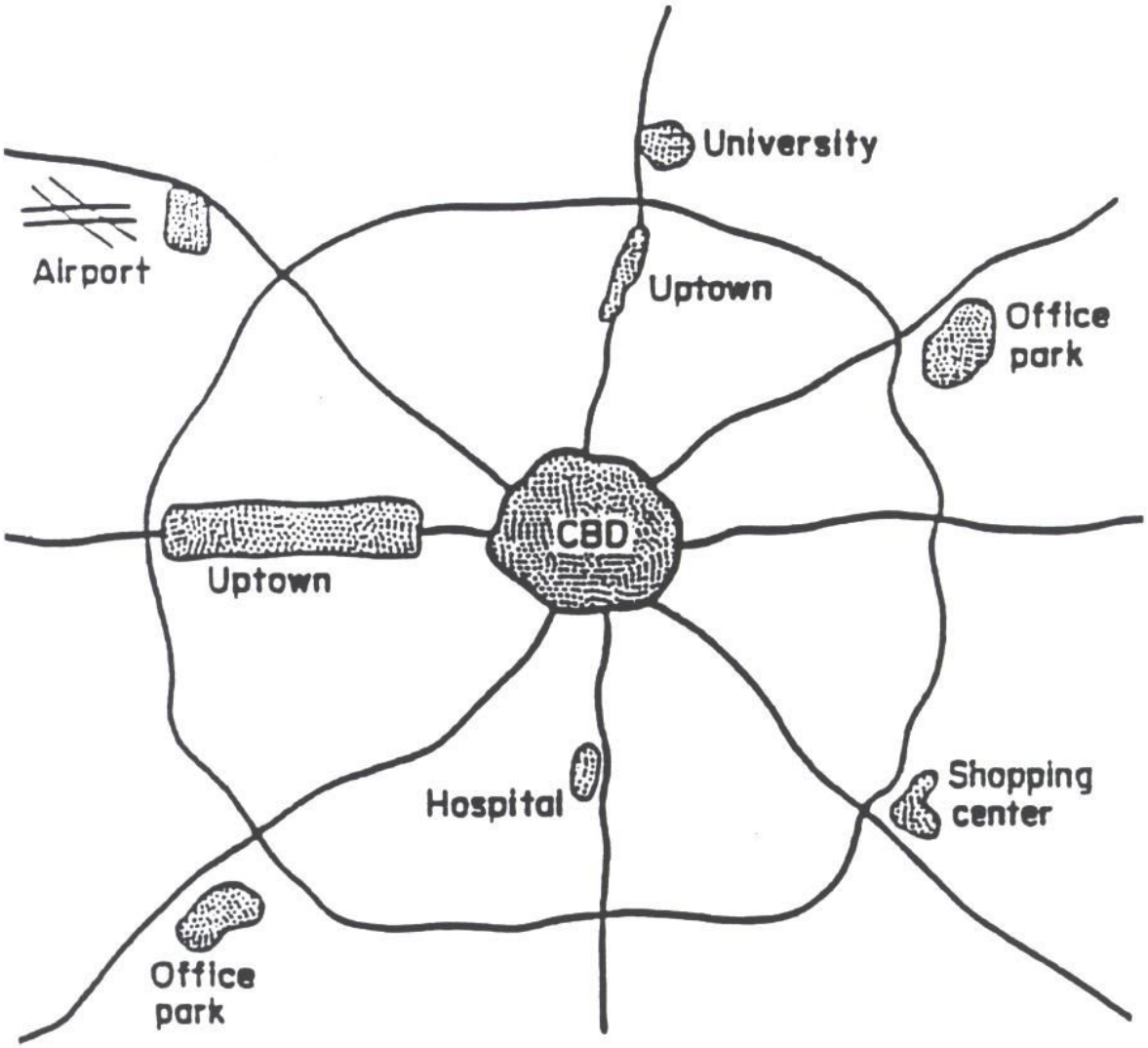
Location Analysis

- Often reflects its convenience to office workers, support facilities and executive housing areas
- Office node where the subject property is located is analyzed for its linkages and position in the urban growth pattern
  - comparing subject's node to competitive office nodes
  - direction and rate of urban growth

Location Analysis

- Identification of Office Nodes
  - Downtown (central business district)
  - Uptown
    - located along major arterial highways providing access to the suburbs
  - Shopping Centers
  - Office Parks
    - tend to be oriented toward manufacturing or research and development activity
  - Special Nodes
    - buildings serving attorneys, title companies and other uses often develop around major government buildings
    - Universities often provide a focal point for research and development and other office development

Typical Nodes of Office Building Development



Source: John McMahon, *Property Development,* 1976, p. 183.

Location Analysis

- Identification of Node Linkages
  - Employee and Management Housing
  - Support facilities within the node
    - hotel, restaurants, health clubs, shopping, printing, etc.
  - Associated office uses
    - i.e.: attorneys and courthouses; doctors and hospitals
  - Traffic conditions
  - Proximity or travel time to airports
  - Proximity to mass transit
  - Proximity to interstate highways

Office Node Location Rating					
		Suburban	Suburban	Suburban	Suburban
Rating Element	Downtown	SW	SE	NE	NW
Current travel time to employee housing areas	2	3	2	2	1
Expected travel time in 5 years	1	3	2	2	1
Current travel time to executive housing	1	4	3	1	1
Expected travel time in 5 years	1	4	3	1	1
Current travel time to airport	2	2	2	1	1
Expected travel time in 5 years	2	3	2	1	1
Support facilities in area (hotels, print shops, etc.)	3	4	2	2	1
Proximity to country clubs, upscale shopping & restaurants	2	4	3	2	1
Quality of node's tenants	4	4	3	2	1
Reputation (prestige) of area	3	3	2	2	1
Area of most new buildings (last 5 years)	2	4	3	2	1
Area of most public expenditures in next 5 years	3	4	2	1	1
Amount of Class A office space in the area	5	4	3	2	1
Node Total Score	31	46	32	21	13
Grand Total Score	143				
Node Percent of total score	21.7%	32.2%	22.4%	14.7%	9.1%
Higher numbers denote a superior rating: 5 is the highest rating, 1 is the lowest.					

Location Analysis

- Land Use considerations
  - Reputation of the area
  - Nuisances in the area
    - Traffic conditions adjacent to the site
      - One way streets
      - Curb cuts and median cuts
  - Pedestrian access to and from major support facilities
  - Parking availability and access
  - Natural amenities
    - view
    - beaches, lakes, etc.
  - Size and tenant mix
    - office clusters are based on the idea of face to face contact

Location Analysis

- Citywide growth analysis
  - Procedure for analysis
    - map current major urban centers and housing areas
    - map current and committed roads, transit systems, airports, and other transportation facilities expected in the next 5 to 15 years
    - project and map any major land use expansion anticipated in the next 1 to 10 years
    - map the growth forecast for 10 to 20 years
    - locate the subject property within the present and forecast land use patterns
  - Questions to consider
    - where has office growth occurred in the past five years?
    - where are the largest residential and retail growth areas?

Step 2: Define the Users of the Property Market Delineation

- Specify the market of possible property users
  - the tenants in the building
  - the clientele the tenants will draw
  - most office space does not have a contiguous market area, generally broad metropolitan area, or sub-area
  - tenants and clientele will vary with the character of the cluster or node.

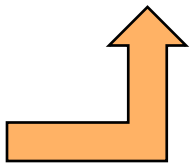
Step 3: Forecast Demand Factors

- Inferred (trend) methods
  - general employment growth (decline) trends
  - general secondary data that reports total market occupancy and absorption
  - general trends in rents and/or sales
- Fundamental methods
  - Forecast work force occupying office space
  - Estimate the size of the work force occupying space in the subject's class of office building
  - Estimate the requisite space per office worker
  - Calculate demand for the specific class of office space

Inferred Methods

Forecasted Employment Growth for Office Town, USA			
SIC Class	Employment in 5 years	Current Estimate	Employment Growth in 5 years
Agriculture	30,000	28,000	2,000
Mining	10,000	8,500	1,500
Construction	50,000	45,000	5,000
Manufacturing	200,000	180,000	20,000
Transportation	65,000	61,000	4,000
Wholesale and Retail Trade	21,000	18,000	3,000
Finance, Insurance, & Real Estate	6,000	5,500	500
Services	30,000	28,500	1,500
Public Administration	7,000	6,000	1,000
Totals	419,000	380,500	38,500

Forecast Employment Growth



Historical Absorption	
Year	Net Absorption
5 yrs	289,200
4 yrs	290,900
3 yrs	292,300
2 yrs	312,600
Current	304,200
Total	1,489,200
Average/yr	297,840

Historical Absorption Trend:

Worksheet for Demand and Supply Analysis

Office Demand and Supply Analysis					
				Forecast	
	Inputs	Math Relationships	Current	3 Years	7 Years
1	Total Citywide Employment				
2	Percent Occupying Office Space				
3	Total Employed in Office Space	1 x 2			
4	Average SF per employee				
5	Total Citywide Office Demand in SF	3 ÷ 4			
6	Estimated percent Capture (subject area)				
7	Total Demand in SF from employees in subject area	5 x 6			
8	Plus frictional vacancy				
9	Total Demand in SF in subject area	7 + 8			
10	Less current competitive SF				
11	Less estimated new competitive SF				
12	Net (Excess) Shortage	9-10-11			

Fundamental Method

- Project Employment Growth for the Overall Market

Projection of Office Workers in Office Town, USA			
SIC Class	Employment Growth in 5 years	Percent in Offices	Number in Offices
Agriculture	2,000	2.6%	52
Mining	1,500	18.8%	282
Construction	5,000	14.6%	730
Manufacturing	20,000	17.0%	3,400
Transportation	4,000	30.2%	1,208
Wholesale and Retail Trade	3,000	16.8%	504
Finance, Insurance, & Real Estate	500	59.0%	295
Services	1,500	19.0%	285
Public Administration	1,000	28.3%	283
Totals	38,500		7,039

Table 4.2

Office Using Occupations (SIC)

SIC	Industry
Division D: Manufacturing	
2731	Book Publishing
Division E: Transportation, Communications & Utilities	
483	Radio and TV
484	Cable TV
Division H: Finance, Insurance and Real Estate	
60	Depository Institutions
61	Non-Depository Credit Institutions
62	Security and Commodity Brokers, Dealers, Exchanges, and Services
63	Insurance Carriers
64	Insurance Agents, Brokers, and service
65	Real Estate
67	Holding and Other Investment Offices
Division I: Services	
731	Advertising
732	Adjustment, Collections, Credit reporting agencies
7331	Direct Mail Advertising
7338	Secretarial & Court reporting services
7352	Medical equipment rental & leasing
7361	Employment agencies
7363	Help Supply Services
737	Computer Industry Services
7382	Security Systems Services
7389	Business Services
801	Offices & Clinics of doctors of medicine
802	Offices & Clinics of dentists
803	Offices & Clinics of osteopathy
804	Offices & Clinics of chiropractors, optometrists, podiatrists & health practior
81	Legal Services
832	Individual and Family Services
833	Job Tranining and Related Services
839	Social Services
861	Business Associations
862	Professional Organizations
863	Labor Organizations
869	Membership Organizations
87	Engineering, Accounting, Research, Management, and related services
89	Miscellaneous Services

Table 4.4

Office Using Occupations (NAICS)

NAICS	Industry
23: Construction	
2331	Land Subdivision and Land Development
42: Wholesale Trade	
42186	Transportation Equipment & Supplies
51: Information	
51113	Book Publishers
51114	Database and Directory Publishers
51121	Software Publishers
51223	Music Publishers
513	Broadcasting and Telecommunications
514	Information and Data Processing Services
52: Finance and Insurance	
52	Finance and Insurance
53: Real Estate Rental and Leasing	
53	Real Estate Rental and Leasing
54: Professional, Scientific and Technical Services	
54	Professional, Scientific and Technical Services
55: Management of Companies and Enterprises	
55	Management of Companies and Enterprises
56: Administration and Support, Waste Management, Remediation Servic	
5611	Office Administrative Services
5612	Facilities Support Services
5613	Employment Services
5614	Business Support Services
5615	Travel Arrangement and Reservation Services
5616	Investigation and Security Services
61: Educational Services	
6117	Educational Support Services
62: Health Care and Social Assistance	
621	Ambulatory Health Care Services
6241	Individual and Family Services
71: Arts, Entertainment and Recreation	
7113	Promoters of Entertainment Events
7114	Agents/Managers for Artists and Other Public Figures
81: Other Services (except Public Administration)	
81299	All other personal Services
8132	Grantmaking and Giving Services
8133	Social Advocacy Organizations
8139	Business/Labor/Political/Like Organizations

Fundamental Method

- Estimate Office Space Occupancy
  - Analysis of NAICS categories for employment that utilizes office space
  - Ratio Method:

Total Occupied Office Space / Sq. Ft. per employee	=	Aproximate Employment in Offices
59,895,000 / 283	=	211,643
Approximate Employment In Offices / Total Current Employment	=	Percent employment in Offices
211,643 / 1,300,000	=	16.30%

Fundamental Method, con't....

- Convert Office Occupancy into an Office space demand projection
  - Office Space per Employee
    - will vary by area
    - Source: Building Owners and Managers Assn. (BOMA)
    - Source: Black's Guide

Conversion into estimated office space demand		
workers		7,039
times (x)		x
SF per worker		250
=		=
Office Space Demand		1,759,750

Fundamental Method, con't....

- Convert Office Occupancy into an Office space demand projection: Ratio Method
  - Total Occupied Office Space divided by Total Employment equals Occupied Office Space per Employee

Total Occupied Office Space	16,157,200
Total Current Employment	380,500
Demand (SF) per Employee	42.5
Forecast Employment Growth	38,500
Five Year Demand (SF)	1,634,828

Fundamental Method, con't....

- Reconcile Demand Forecast
  - Inferred Method
    - Growth Trends: Positive
    - Market Occupancy: Moderate Positive Citywide
    - Historical Absorption: 297,840 sf per year average last five years
  - Fundamental Method
    - Segmentation New Demand 1,759,750 sf
    - Ratio Method New Demand 1,634,828 sf
    - Average per Year: 326,966 to 351,950 sf

Step 4: Inventory and Forecast Competitive Supply

- Inventory the current competitive office space within the subject's building class
- Inventory the competitive buildings under construction
- Forecast the amount of space expected from proposed competitive buildings
- Estimate the amount of space anticipated for demolitions, renovations, and conversions

Survey of Existing Office Space

Office Town USA - Existing Free Standing Office Space (Rentable SF in Thousands)								
Space Type	Location	No. of Bldgs.	Net Rentable Space (SF)	% of Total Citywide Existing Space (SF)	Occupied Space (SF)	% of Total Citywide Occupancy	Vacant Space (SF)	% Vacant
Class A	Downtown	15	4,542.2		3,860.9	23.9%	681.3	15.0%
Class B	Downtown	27	3,085.0		2,313.8	14.3%	771.2	25.0%
Subtotal Downtown		42	7,627.2	40.7%	6,174.7	38.2%	1,452.5	
Class A	Suburban SW	40	4,193.8		4,026.1	24.9%	167.8	4.0%
Class B	Suburban SW	20	900.6		810.5	5.0%	90.0	10.0%
Subtotal Suburban SW		60	5,094.4	27.2%	4,836.6	29.9%	257.8	
Class A	Suburban SE	28	2,124.0		1,911.6	11.8%	212.4	10.0%
Class B	Suburban SE	20	910.3		773.8	4.8%	136.5	15.0%
Subtotal Surburban SE		48	3,034.3	16.2%	2,685.4	16.6%	348.9	
Class A	Suburban NW	18	1,424.2		1,210.6	7.5%	213.6	15.0%
Class B	Suburban NW	12	766.9		613.5	3.8%	153.4	20.0%
Subtotal Surburban NW		30	2,191.1	11.7%	1,824.1	11.3%	367.0	
Class A	Suburban NE	3	50.6		38.0	0.2%	12.7	25.1%
Class B	Suburban NE	22	748.0		598.4	3.7%	149.6	20.0%
Subtotal Surburban NE		25	798.6	4.3%	636.4	3.9%	162.3	
Total Metro Wide		205	18,745.6	100.0%	16,157.2		2,588.5	13.8%

Inventory of Space Under Construction and Forecast of New Planned Space

- Review of Building Permits yields:
  - 25,000 sq. ft. currently under construction in SE area
  - 45,000 sq. ft. currently under construction in SW area
- Research planned projects
  - interview building and planning officials, review newspaper announcements, interview brokers, lenders and developers active in the area.
  - Compile a list of possible projects and assess the probability of their completion.

Forecast the amount of space expected from proposed competitive buildings

Forecast New Office Space						
Bldg. I.D. No.	Location	Planned SF	Probability of Start	Probable Area (SF)	Probable Start Date	Comment
1	Downtown	200,000	10%	20,000	+7 yrs.	No prelease and declining absorptions in CBD
2	Suburban SW	100,000	60%	60,000	+2 yrs.	Good developer, some prelease, strong growth area
3	Suburban SW	175,000	80%	140,000	+1 yr	Major tenant 30% preleased small space, strong growth area
4	Suburban SW	85,000	40%	34,000	+3 yrs.	Good developer, no prelease, strong growth area
5	Suburban SE	20,000	10%	2,000	+5 yrs.	No prelease and marginal developer and location
Total City wide		580,000		256,000		
Total in Subject Area (SW)				234,000		

Step 5: Analyze Interaction of Supply and Demand

- Compare supply and demand to estimate residual demand
  - City wide residual demand:
    - Existing vacant space: 2,588,500 SF
    - Space under construction: 70,000 SF
    - Proposed space: 256,000 SF
    - Total Available Space 2,914,500 SF
  - Time needed to absorb the available, developing and proposed space, allowing for frictional vacancy:
    - 1,960,920 sf ÷ 352,000 sf/yr = 5.6 years
    - (2,914,500 sf - 953,580 frictional vacancy = 1,960,920 sf)

Segment to subject building type and area

- Subject is a Class A building in SW area
  - SW area captures 30% city-wide demand
  - Class A buildings capture 83% of SW demand

  - Citywide 5-year new demand: 1,760,000 sf
  - Pct. SW area demand: 30%
  - SW demand: 528,000 sf
  - Pct. SW demand for Class A 83%
  - SW area Class A new demand: 438,240 sf
  - SW area Class A new demand/yr. 87,648 sf

Segment to subject building type and area

- Compare SW area existing and potential competitive supply

  - Current Vacant Class A Space: 167,800 sf
  - Space under construction: 45,000 sf
  - Forecast new space: 234,000 sf
  - Total: 446,800 sf
  - Time needed to absorb the available, developing and proposed space, allowing for frictional vacancy:
    - 223,200 sf ÷ 87,648 sf/yr = 2.6 years
    - (446,800 sf - 223,600 frictional vacancy = 223,200 sf)

Step 6: Forecast Subject Capture

- Inferred methods
  - analyze the subject's competitiveness in view of the overall market forecast
    - Subject's current occupancy is 85%, consistent with metro area occupancy of 86%, however SW area vacancy is only 4%.
    - Building rating table indicates that subject building is 10% below average, due to design deficiencies.
- Fundamental methods
  - analyze specific submarket competition; rate the subject against competitive properties
    - make an inventory of all buildings in the competitive area that correspond to the area of the forecast data
    - compile a list of the elements to be rated

Step 6: Forecast Subject Capture

- Reconciliation
  - Subject is 85% occupied
  - Absorption of vacant space is forecast to take about 3 years before the submarket shows excess demand.
  - Rating analysis suggests that subject is 10% inferior to the market
  - Forecast is that subject occupancy and rents will lag the market

So That's - - -

Market Analysis for Office Buildings

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