Property and purchase assumptions		
Property size	14,000	sf
Premium space	3,000	sf
Premium rent	$18.00	psf
Secondary space	11,000	sf
Premium rent	$12.00	psf
Rent growth during holding period	2.50%	
Vacancy allowance	9.00%	
Operating expense ratio	15.00%	
Purchase price	$1,750,000	
Financing assumptions and calculations		
Maximum loan-to-value ratio	80.00%	
Minimum debt-coverage ratio	1.25	
Interest rate	8.00%	
Amortization length	25	years
Max loan based on LTV ratio	$1,400,000	= $1,750,000 × 0.80
Max monthly payment based on DCR	$9,591	= (NOI ÷ DCR) ÷ 12
Max loan based on DCR	$1,242,705	I/Y = 8., P/Y = 12, PMT = -9,591, N = 300, FV = 0
Total loan provided	$1,242,705	
Annual debt service	$115,097	I/Y = 8., P/Y = 12, PV = -1,242,705, N = 300, FV = 0
Debt-coverage ratio	1.25	= NOI / ADS
Discount rate assumptions and calculations		
Overall (property) discount rate	11.000%	
Equity discount rate	18.350%	

Pro Forma Operating Statement (First Year)

Potential gross income	$	186,000	= 3,000 sf × $18.00 psf + 11,000 sf × $12.00 psf
– Vacancy & collection @ 9.00%	$	16,740	
Effective gross income	$	169,260	
– Operating expenses @ 15.00%	$	25,389	
Net operating income	***$***	***143,871***	
– Annual debt service	$	115,097	
Before-tax cash flow	***$***	***28,774***	

Multipliers and Ratios

Going-in capitalization rate	***8.22%***	= NOI ÷ purchase price
Mortgage constant	***9.26%***	= Annual debt service ÷ loan amount
Cash-on-cash return	***5.67%***	= BTCF ÷ (purchase price – mortgage)
This investment exhibits negative leverage.		
Gross income multiplier	***10.34***	= Purchase price ÷ EGI
Net income multiplier	***12.16***	= Purchase price ÷ NOI
Breakeven ratio	***83.00%***	= (OE + ADS) ÷ EGI

Terminal Cash Flow Calculations

Terminal value assumptions

Terminal cap rate (comparable sales)		8.50%	
Income growth after terminal date		2.50%	
Property value growth rate		2.50%	
Mortgage balance due		$1,146,693	PV = 1,242,705, I/Y = 8.0, PMT = -9,591, N = 60 P/Y = 12

Terminal cap rate method

Year 6 NOI	$	162,777	= 143,871 × (1+0.025)^4 × (1+0.025)
÷ Cap rate at sale		8.50%	
Terminal value	***$***	***1,915,022***	

Constant income growth method

Year 6 NOI	$	162,777	= 143,871 × (1+0.025)^4 × (1+0.025)
÷ (r - g)		8.50%	r = 11.00% and g = 2.50%
Terminal value	***$***	***1,915,022***	

Growth over purchase price method

Purchase price	$	1,750,000	
× (1+G)^T		1.1314	= (1 + 0.025)^5
Terminal value	***$***	***1,979,964***	

Growth over initial value method

PV of NOI @ 11.00%	***$***	***556,128***	
× Multiplier	***$***	***3.0435***	= 1 / (1 – (1 + 0.025)^5 / (1 + 0.11)^5)
Initial Value	***$***	***1,692,600***	
× (1 + G)^T		1.1314	= (1 + 0.025)^5
Terminal Value	***$***	***1,915,021***	

Pro Forma Operating Statements

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Potential gross income	$ 186,000	$ 190,650	$ 195,416	$ 200,302	$ 205,309	$ 210,442
– Vacancy & collection @ 9.00%	$ 16,740	$ 17,159	$ 17,587	$ 18,027	$ 18,478	$ 18,940
Effective gross income	$ 169,260	$ 173,491	$ 177,829	$ 182,275	$ 186,831	$ 191,502
– Operating expenses @ 15.00%	$ 25,389	$ 26,024	$ 26,674	$ 27,341	$ 28,025	$ 28,725
Net operating income	***$ 143,871***	***$ 147,467***	***$ 151,155***	***$ 154,933***	***$ 158,807***	***$ 162,777***
– Annual debt service	$ 115,097	$ 115,097	$ 115,097	$ 115,097	$ 115,097	
Before-tax cash flow	$ 28,774	$ 32,371	$ 36,058	$ 39,837	$ 43,710	

Unlevered Cash Flows

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	NPV	IRR
Terminal cap rate method	$ (1,750,000)	$ 143,871	$ 147,467	$ 151,155	$ 154,933	$ 2,073,829	$ (57,400)	10.14%
Constant income growth method	$ (1,750,000)	$ 143,871	$ 147,467	$ 151,155	$ 154,933	$ 2,073,829	$ (57,400)	10.14%
Growth over purchase price method	$ (1,750,000)	$ 143,871	$ 147,467	$ 151,155	$ 154,933	$ 2,138,771	$ (18,860)	10.72%
Growth over initial value method	$ (1,750,000)	$ 143,871	$ 147,467	$ 151,155	$ 154,933	$ 2,073,828	$ (57,400)	10.14%

Levered Cash Flows

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	NPV	IRR
Terminal cap rate method	$ (507,295)	$ 28,774	$ 32,371	$ 36,058	$ 39,837	$ 812,039	$ (68,082)	14.62%
Constant income growth method	$ (507,295)	$ 28,774	$ 32,371	$ 36,058	$ 39,837	$ 812,039	$ (68,082)	14.62%
Growth over purchase price method	$ (507,295)	$ 28,774	$ 32,371	$ 36,058	$ 39,837	$ 876,981	$ (40,112)	16.21%
Growth over initial value method	$ (507,295)	$ 28,774	$ 32,371	$ 36,058	$ 39,837	$ 812,038	$ (68,082)	14.62%