



PIBC 2017 ANNUAL CONFERENCE

Justen Harcourt, Senior Consultant



JUSTEN HARCOURT CV



Education and Qualifications

MSc Regional & Urban Planning – London School of Economics

BA Urban Geography & Political Science – University of British Columbia

In 2006, Justen joined Colliers as an Analyst with the Unique Properties Brokerage Group. Over the course of two years with Unique Properties he was involved in the underwriting of over \$200 million worth of transactions ranging from Marinas and Ski Hills to Islands and Timber Portfolios.

In 2007, Justen joined Colliers Consulting as a Planning Consultant. He specializes in providing Advisory, Valuation and Strategic Planning services on behalf of Institutional Clients, Developers, as well as Government.

Justen's primary area of consulting practice is Development Management; Feasibility Analysis; Valuation; Highest & Best Use Analysis; Land Use Economics; and Public Policy Refinement, through the provision of financial modeling informing anticipated outcomes.

Justen draws on his strong academic background, work ethic, and creativity to ensure timely, accurate and sound consulting and development management services.

COLLIERS CONSULTING CAPABILITIES



COLLIERS CONSULTING CAPABILITIES



STRATEGIC ADVISORY

Acquisition / Divestiture Strategies
Asset & Portfolio Management
Commercial Land Demand Analysis
Competitive Assessment
Feasibility Analysis
Highest & Best Use Studies
Pro Forma Development
Retail and Mixed-Use Strategies
Retail Inventory Analysis
Retail Locational Analysis
Revitalization / Redevelopment Studies
Site Selection and Ranking
Strategic Planning
Tenant Mix & Merchandizing
Trade Area Analysis

DEVELOPMENT MANAGEMENT

Development Management
Facilities Planning
Project Budgeting / Scheduling
Tenant Improvements
Consultant Coordination

URBAN PLANNING

Municipal Approvals
Site Planning & Concept Development
Urban Design

COMMUNITY CONSULTATION

Community Workshops
Focus Groups

FIRST NATION ADVISORY

Community Planning
Economic Development
Governance
Public Consultation
Project Marketing

MARKET ANALYSIS

Absorption Analysis
Competitive Assessment
Demand Assessment
Demographic Modeling
Demographic Profiling
Market Impact Assessment

BLOCK F



Approx. Area

Publicly Accessible Open Space

1	Community green	0.45 ac (0.18 ha)
2	Wetland	0.70 ac (0.28 ha)
3	Street open space (Road A and B)	1.10 ac (0.45 ha)
4	Village open space	1.16 ac (0.47 ha)
5	Dedicated Park	3.10 ac (1.25 ha)
6	Community Building Parcel	0.90 ac (0.36 ha)
7	University Blvd Linear Park	1.57 ac (0.64 ha)
8	Public Access Easments	0.15 ac (0.06 ha)
9	Ortona Trail	0.17 ac (0.07 ha)

TOTAL PUBLICLY ACCESSIBLE OPEN SPACE

9.3 ac (3.8 ha)



View looking West towards UBC

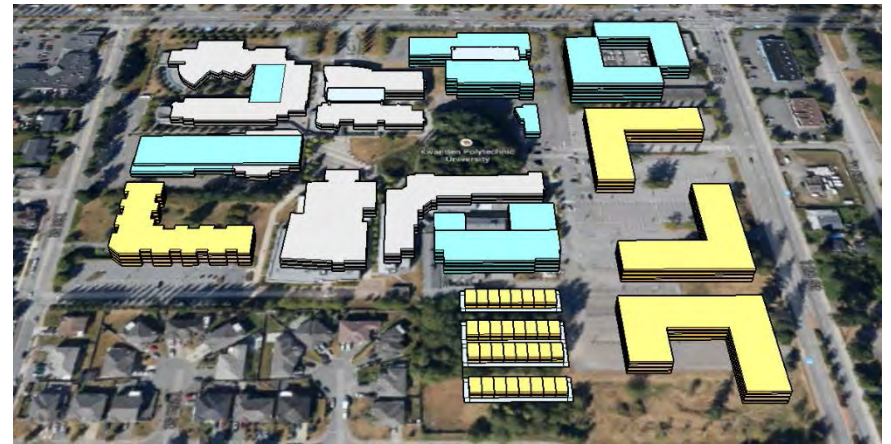


View looking Southeast towards Toronto Rd and Acadia Rd

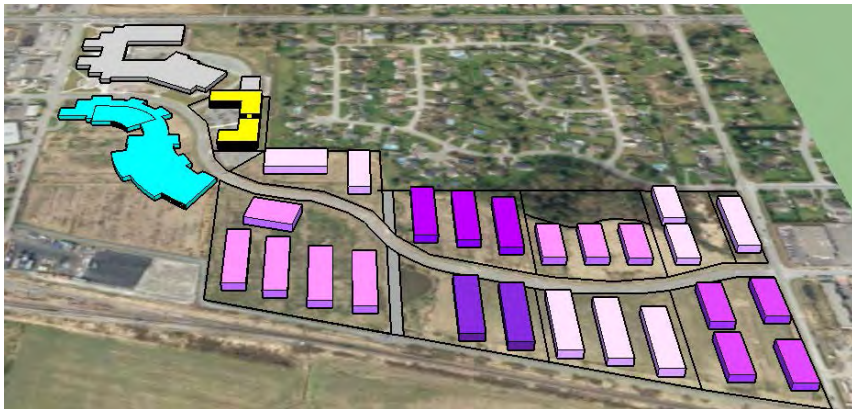
KPU LAND TRUST



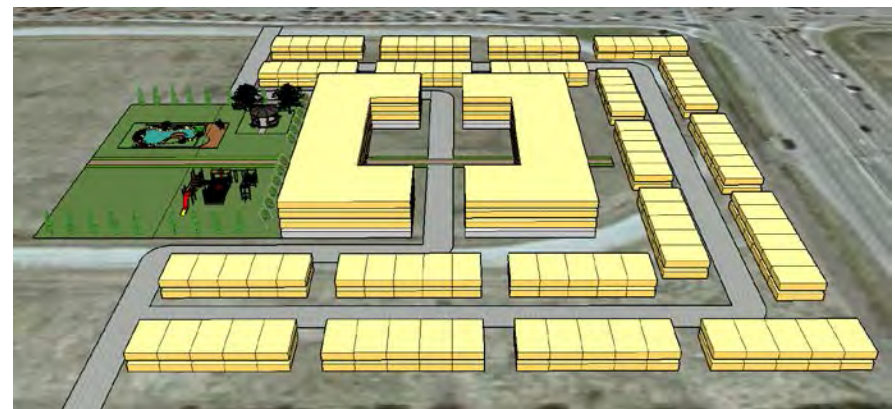
Richmond Campus



Surrey Campus



Cloverdale Campus



Delta Campus

VANCOUVER MASONIC CENTRE

1495 West 8th Avenue



AGENDA



- Part One:
 - Basic understanding of real estate development financing concepts and terms
 - How to conduct market analysis and utilize key metrics of proforma modelling regarding project feasibility
- Part Two:
 - Using multifamily case study to understand how the market, policy, building forms, costs, partnerships, interest rates and revenue sources determine project feasibility
- Questions

Principles of Real Estate Valuation



The Valuation Process:

1. Identify the real estate to be appraised
2. Conduct preliminary analysis, data selection & collection
3. HIGHEST & BEST USE ANALYSIS
4. Legal Uses
5. Physically Possible
6. Financially Feasible
7. Maximum Income



Examples: Neighborhood, policy, environmental, site configuration, improvements, history of ownership & use, current income etc.

*Defined as "The reasonably probable and legal use of vacant land or an improved property that is **physically possible, appropriately supported and financially feasible**, and that results in the **highest value**"*

Possible for 'Vacant Land' or 'with Improvements'

Appraisal Methods

Sales Comparable Approach

- Compares a property to other properties with *similar characteristics* which have sold recently
- Commonly used for valuing single family homes & land

Cost Approach

- Used to estimate the value of properties that have been improved
- Commonly used for valuing properties which are *not frequently transacted* and are *not income producing* eg. Schools, churches, hospitals, government buildings

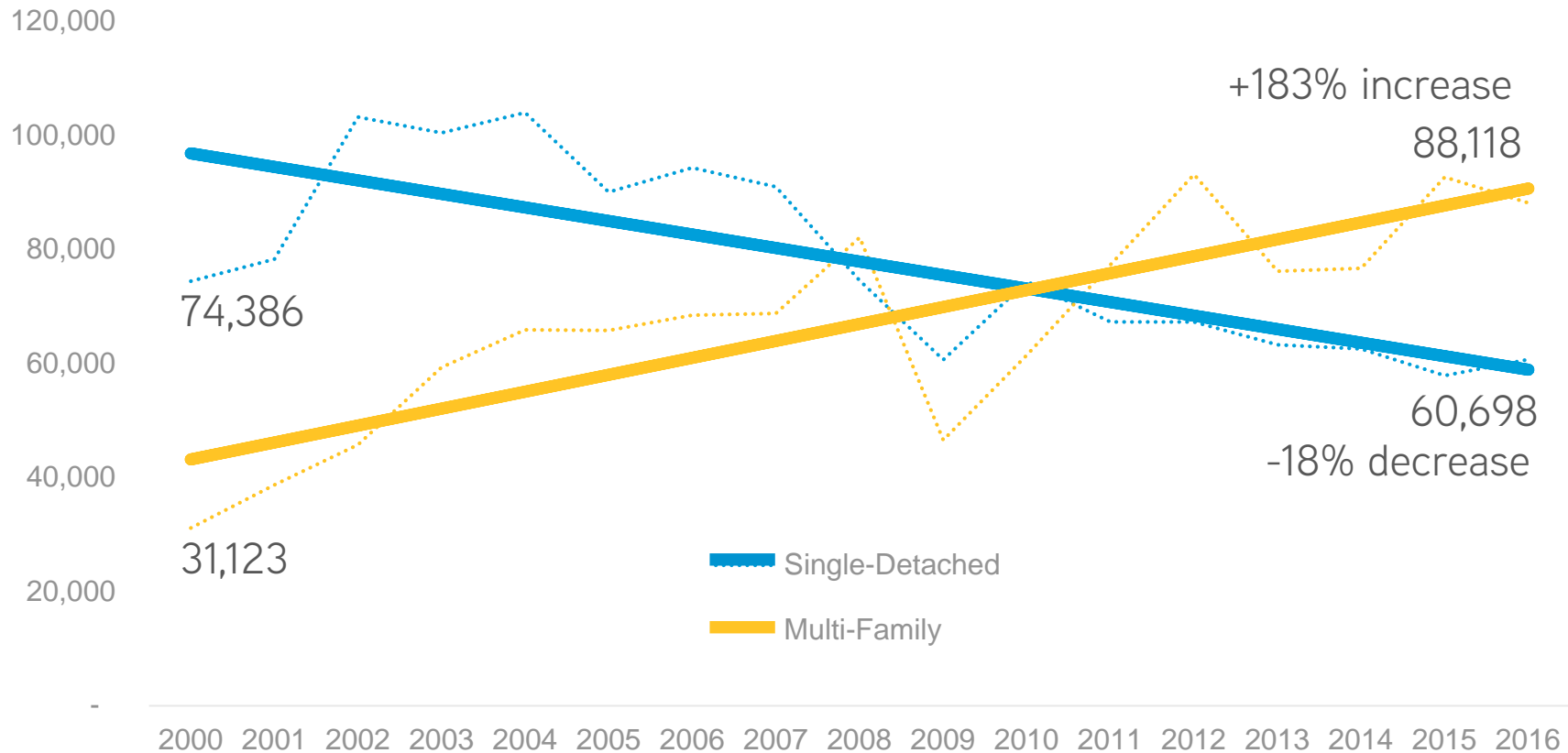
Income Approach/ Land Residual

- Methodology is based on the relationship between the investor rate of return target and actual property net income
- Commonly used for valuing *income-producing properties* such as apartment complexes, office buildings, shopping centers etc.
- The second part of the presentation will further elaborate on this methodology

MULTIFAMILY CASE STUDY



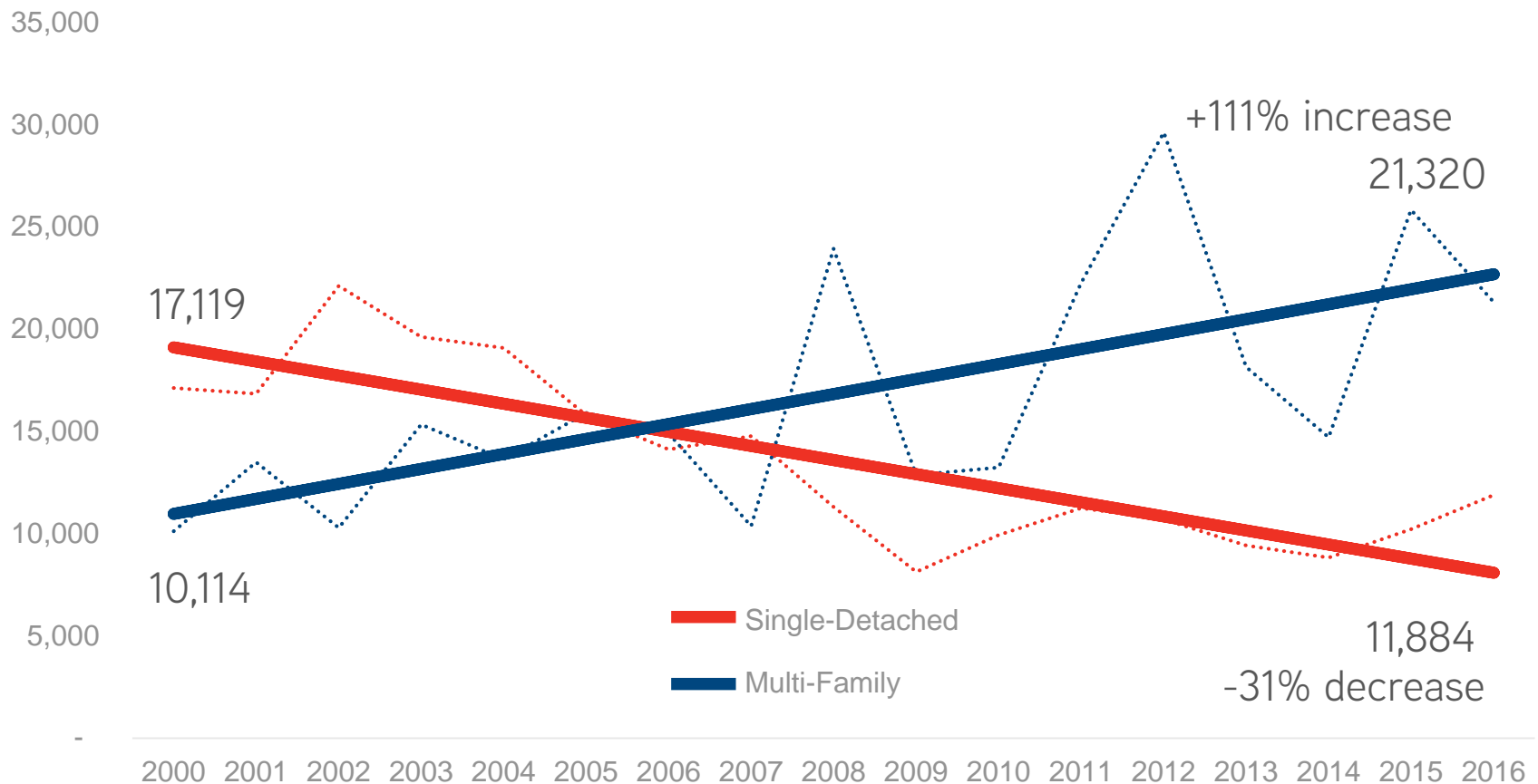
Housing starts for single-detached and multi-family homes in Canada



MULTIFAMILY CASE STUDY



Housing starts for single-detached and multi-family homes in GTA



MULTIFAMILY CASE STUDY



Housing starts for single-detached and multi-family homes in Metro Vancouver



MULTIFAMILY CASE STUDY



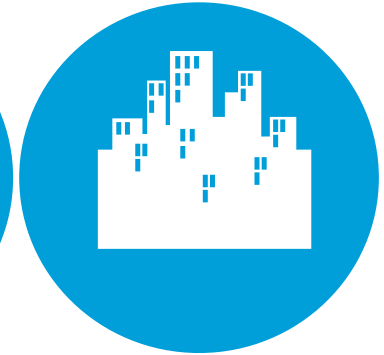
5 units per acre



20 units per acre



50-60 units per acre



80-110 units per acre

Hard cost average from Altus group:

\$170/sf

\$140/sf

\$280/sf

\$350/sf

Soft cost estimate (20% of hard costs):

\$34/sf

\$28/sf

\$56/sf

\$70/sf

Land price of the site:

\$1 million/acre

\$1 million/acre

\$1 million/acre

\$1 million/acre

Price per buildable per square foot:

\$400/sf

\$300/sf

\$200/sf

\$100/sf

Capture the upward pressure on prices as CACs or sell density?

VANCOUVER CASE STUDY



Created value by asset class:

Asset Class	NOI/Sales Value Measured in dollar per square foot	Cap Rate	Created Value
Strata Residential	\$1,100	N/A	\$1,100
Rental Residential	\$30	4.0%	\$750
Office*	\$30	4.5%	\$667
Industrial*	\$24	5.0%	\$480
Retail*	\$60	5.5%	\$1,091

*Strata excluded because relatively low ratio of representative product in the market place

PROFORMA: KEY ASSUMPTIONS



Key assumptions or inputs for real estate financial analysis can broadly be categorized under 4 buckets:

Area/Development Program

- **Land area and FSR**
- “GFA” vs. “GBA”
- Development mix and area allocation
- *Policy vs profit!*

Revenue

- Rental Value (per SF)
 - Residential - rental
 - Office
 - Retail
 - Industrial
 - Parkade
 - Any other “revenue generating” uses
- Sale price (per SF)
 - Residential – condo
 - Office/Retail/Industrial – Strata
- Stabilized vacancy levels
- **Operating expenses**
- **Inflation**

Cost

- “Hard” Costs / Construction Costs (per SF)
 - Residential - rental
 - Office
 - Retail
 - Industrial
 - Parkade
 - Any other development
- Other “Hard” Costs
 - Site preparation
 - Landscaping
 - Off-site civil
 - Tenant Improvements
- “Soft” Costs
 - **Municipal & other approvals/permits/fees**
 - Development Manager
 - Insurance
 - Consultants (Marketing, brokerage, architects, engineers...)
- Contingencies!
- **Taxes!**

Financing

- Loan to Value
- Interest Rates
- Amortization
- Debt Coverage Ratio

PROFORMA ANALYSIS



ABC Development Project XYZ St., Vancouver, BC													
Cash Flow Analysis			Project Total	Pre-Construction		Construction		Operation					
Inputs/Assumptions							Leasing	Stabilized	Operation				
Schedule (Years)				1	2	3	4	5	6	7	8	9	10
Gross Buildable Area (GBA)													
Residential - Rental	SF												
Office/CRU	SF												
Parkade	SF												
	Total GBA	SF											
	Cumulative Total												
Net Area													
Residential - Rental	SF												
Office/CRU	SF												
Parkade													
	Total Net Area	SF											
	Cumulative Total												
Absorption Schedule													
Net Area													
Residential - Rental	SF												
Office/CRU	SF												
Parkade													
	Total Net Area	SF											
	Cumulative Total												
Unit Count													
Revenue													
Absorption - Rental													
Revenue													
Residential - Rental													
Office/CRU													
Parkade													
Net Operating Income (NOI) Annual													
Terminal Value	cap rate												
Total Created Value													
Equity Contribution	per GBA												

Area/Development Mix

- Timelines /Development Schedule

Key Concepts:

- Absorption
- Stabilization
- Net Operating Income
- Terminal Value
- Cap Rate
- Created Value
- Residual Land Value

Revenue / Income

PROFORMA ANALYSIS

ABC Development Project XYZ St., Vancouver, BC									
Cash Flow Analysis									
Inputs/Assumptions	Project Total	Pre-Construction		Construction		Operation			
Schedule (Years)		1	2	3	4	Leasing	Stabilized	Operation	
						5	6	7	8 9 10
Expense									
Land Cost									
Land Purchase Price									
Land (purchase) cost		-							
Property Purchase Tax		-							
GST on Residential Rental (Accounts for Rebate)		-							
Total Land Costs	\$ -								
Hard Costs									
<i>Development & Other Costs</i>									
Construction Cost - Residential									
Construction Cost - Office/CRU									
Construction Cost - Parking									
T.I. Allowance									
Offsite construction cost									
Landscaping/At-Grade Parking									
Site Prep/Fill/Grading									
Hard Cost Contingency	%								
Total Hard Costs									
Soft Costs									
Development Management									
Construction Management									
Insurance									
Architecture, Engineering & Consultants									
Brokerage Fee									
Legal & Accounting									
Project Marketing									
Permits & Fees									
Rezoning Application Fees									
Building Permit Fees:									
Development Permit:									
Engineering Fees									
A&P									
Utility Payments									
Development Cost Charges									
Development Cost Levy									
Soft Cost Contingency	% of soft costs								
Total Soft Costs									
Hard, Soft, Land Cost									
Financing Cost									
Construction Loan									
Construction Loan interest									
Interest payments									
Financing Fee									
Total Financing Costs	\$ -								
Total Project Cost Before Tax	\$ -								
Tax									
Tax Remittance	50.0%								
Total Project Cost After Tax	\$ -								
Total Project Cost After TaxTPC/GBA	\$ -								

Key Concepts:

- How costs/expenses are assessed
- Importance of Contingency
- Construction loan vs. Mortgage/Take Out Loan
- Key construction loan terms

Financing Costs

PROFORMA ANALYSIS



Operating Income and Debt Service		
	(Unit)	Total
Net Operating Income	(\$)	
Residential	(\$)	
Office/CRU	(\$)	
Parkade	(\$)	
Debt Service (Annual)	(\$)	
Cash Flow After Debt Service	(\$)	
DCR (Stabilized Year 1)	(#)	

Valuation		
	(Unit)	Project Total
Stabilized NOI (Rental Income)		
Capitalization Rate		
Created Value		
Development Costs (excluding Land)	(\$)	
Margin	(\$)	
Developer's Required Return on Costs (@15%)	(\$)	
Developer's Required Return on Land (@15%)		
Residual Value	(\$)	
Project IRR (Unlevered - Includes Land as Cost. 40-Year Term)		
Project IRR (Unlevered - Includes Land as Cost. Exit at Year 6)		
Project IRR (Unlevered - Excludes Land as Cost. Exit at Year 6)		
Equity IRR (Levered. 40-Year term)		
Equity IRR (Levered. Exit at Year 6)		
Project Margin/ROE (Excludes Land as Cost)		
Project Margin/ROE (Includes Land as Cost)		

Key Concepts:

- a) Sources of development financing (debt vs equity)
- b) Why use debt instead of equity? (Ref Case Study)
- c) Financing rates & availability
- d) Hold period/ investment horizon
- e) Cap rate
- f) IRR
- g) ROI / ROE
- h) Cash on Cash Return

Other Considerations:

- Importance of Equity structure / capital stack
- Refinancing & balancing strategies
- Alternative financing (operating line of credit for development)
- Investor motivation: Yield Capital Gain

CASE STUDY: IMPACT OF CAPITAL STRUCTURE ON IRR



- We show the impact of debt on the investor returns (IRR) for a sample development project in Metro Vancouver.
 - IRR is a 'time-adjusted' return measure. Other parameters for assessing financial returns include Return on Investment (ROI) and Return on Equity (ROE).*
- Mixed use commercial / retail rental development with total area of 200,000 SF and anticipated Total Project Cost (Land + Development + Construction Financing) at \$93 million

Scenario 1: Unlevered (No Debt) Cash Flow with a Year 6 Exit

Project Cashflow (Unlevered, Assuming Year 6 Exit)		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Area	200,000 SF						
Rent/SF	25 \$/SF						
Total Revenue					5,412,161	5,520,404	5,630,812
Less: Operating Expenses	15%				(811,824)	(828,061)	(844,622)
Net Operating Income				-	4,600,337	4,692,343	4,786,190
Land Cost	35,000,000	(35,000,000)					
Development Cost	58,000,000	(11,600,000)	(23,200,000)	(23,200,000)			
Total Project Cost	93,000,000	(46,600,000)	(23,200,000)	(23,200,000)	-	-	-
Project Cashflow		(46,600,000)	(23,200,000)	(23,200,000)	4,600,337	4,692,343	4,786,190
Cap Rate	4.0%						
Terminal Value							122,047,852
Project Cashflow		(46,600,000)	(23,200,000)	(23,200,000)	4,600,337	4,692,343	126,834,042
Project IRR		9.6%					
Project Yield (Stabilized)	=(Stab NOI/Total Investment) (Assumes zero leverage)						5.0%
Return on Equity (Stabilized, at Exit)	=(Terminal Value - Outstanding Debt)/(Total Equity)						136.4%

CASE STUDY: IMPACT OF CAPITAL STRUCTURE ON IRR



Scenario 2: Levered Equity Cash Flow with a Year 6 Exit

Case 1: at 80% Debt						
Financing						
Debt	80%	74,400,000				
Equity	20%	18,600,000				
Total Project Cost	100%	93,000,000				
Mortgage Debt Terms & Schedule						
Interest Rate	3.50%					
Amortization	25 Years					
Amount/Principal	74,400,000					
Less: Interest Service				(2,604,000)	(2,604,000)	(2,604,000)
Less: Principal Repayment				(1,910,148)	(1,910,148)	(70,579,704)
Total Debt Service				(4,514,148)	(4,514,148)	(73,183,704)
			Year 1	Year 2	Year 3	Year 4
Equity Cashflow						
Equity Investment		(18,600,000)	-	-	-	-
Add: Net Operating Income		-	-	-	4,600,337	4,692,343
Add: Terminal Value		-	-	-	-	122,047,852
Less: Debt Service		-	-	-	(4,514,148)	(4,514,148)
Net Equity Cash Flow		(18,600,000)	-	-	86,188	178,195
Equity IRR						23.8%
Project Yield (Stabilized)		=(Stab NOI/Total Investment) (Assumes				5.0%
Return on Equity (Stabilized, at Exit)		=(Terminal Value - Outstanding				288.4%
		Debt)/(Total Equity)				

Case 1:

- 80% Debt, 20% Equity
- Equity IRR = **23.8%**

Case 2: at 80% Equity						
Financing						
Debt	20%	18,600,000				
Equity	80%	74,400,000				
Total Project Cost	100%	93,000,000				
Mortgage Debt Terms & Schedule						
Interest Rate	3.50%					
Amortization	25 Years					
Amount/Principal	18,600,000					
Less: Interest Service					(651,000)	(651,000)
Less: Principal Repayment					(477,537)	(477,537)
Total Debt Service					(1,128,537)	(1,128,537)
			Year 1	Year 2	Year 3	Year 4
Equity Cashflow						
Equity Investment		(46,600,000)	(23,200,000)	(4,600,000)	-	-
Add: Net Operating Income		-	-	-	4,600,337	4,692,343
Add: Terminal Value		-	-	-	-	122,047,852
Less: Debt Service		-	-	-	(1,128,537)	(1,128,537)
Net Equity Cash Flow		(46,600,000)	(23,200,000)	(4,600,000)	3,471,800	3,563,806
Equity IRR						10.3%
Project Yield (Stabilized)		=(Stab NOI/Total Investment) (Assumes				5.0%
Return on Equity (Stabilized, at Exit)		=(Terminal Value - Outstanding				145.9%
		Debt)/(Total Equity)				

Case 2:

- 20% Debt, 80% Equity
- Equity IRR = **10.3%**

POLICY AND DEAL STRUCTURING



Land Acquisition (Cash
Purchase)

Vs.

Structured Deal with Payment
in Kind at Occupancy

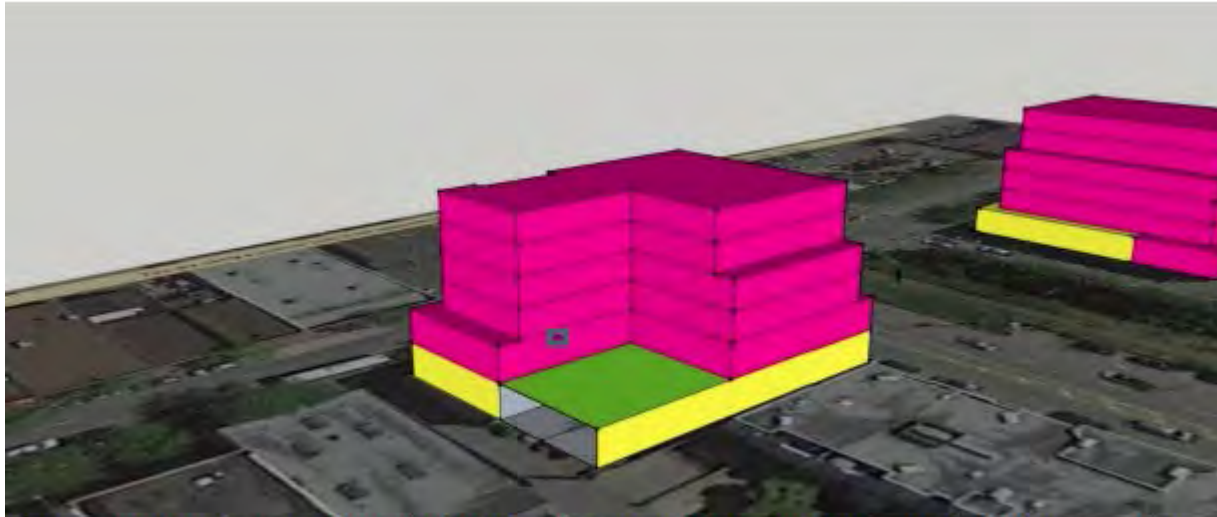
Residual Land Value

Vs.

Profit

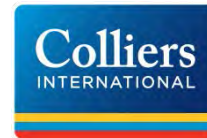
CASE STUDY: How Policy impacts Feasibility

Example: Kerrisdale Feasibility



Above: CIC scheme with view from the back lane looking northeast. Residential as pink and retail as yellow.

- Heritage Revitalization Agreements
- Rental 100
- CAC's on Strata Residential
- Amenity Bonusing



THANK YOU

Questions...

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Accelerating success.