





Architect



Mechanical Engineer



Construction Manager



Building Performance Consultant



Civil Engineer



Energy Modeling



Structural Engineer



Atlantic WoodWORKS



Structural Engineer  
Peer Reviewer



Kent Homes



Code Consultant



Canadian Mortgage  
& Housing Corporation



Electrical Engineer







POPULATION:  
HALIFAX REGIONAL MUNICIPALITY  
418,700

10 KM RADIUS  
± 100,000



MAIN STREET DARTMOUTH  
BUSINESS IMPROVEMENT DISTRICT

180+ BUSINESSES  
45+ HEALTH & WELLNESS SERVICES







-  Village Main Office
-  Shops & Services
-  Food & Drink
-  Health & Wellness
-  Automotive
- 

Distance from the GardenView to 4 bus routes on Hartlen St. = 200 meters



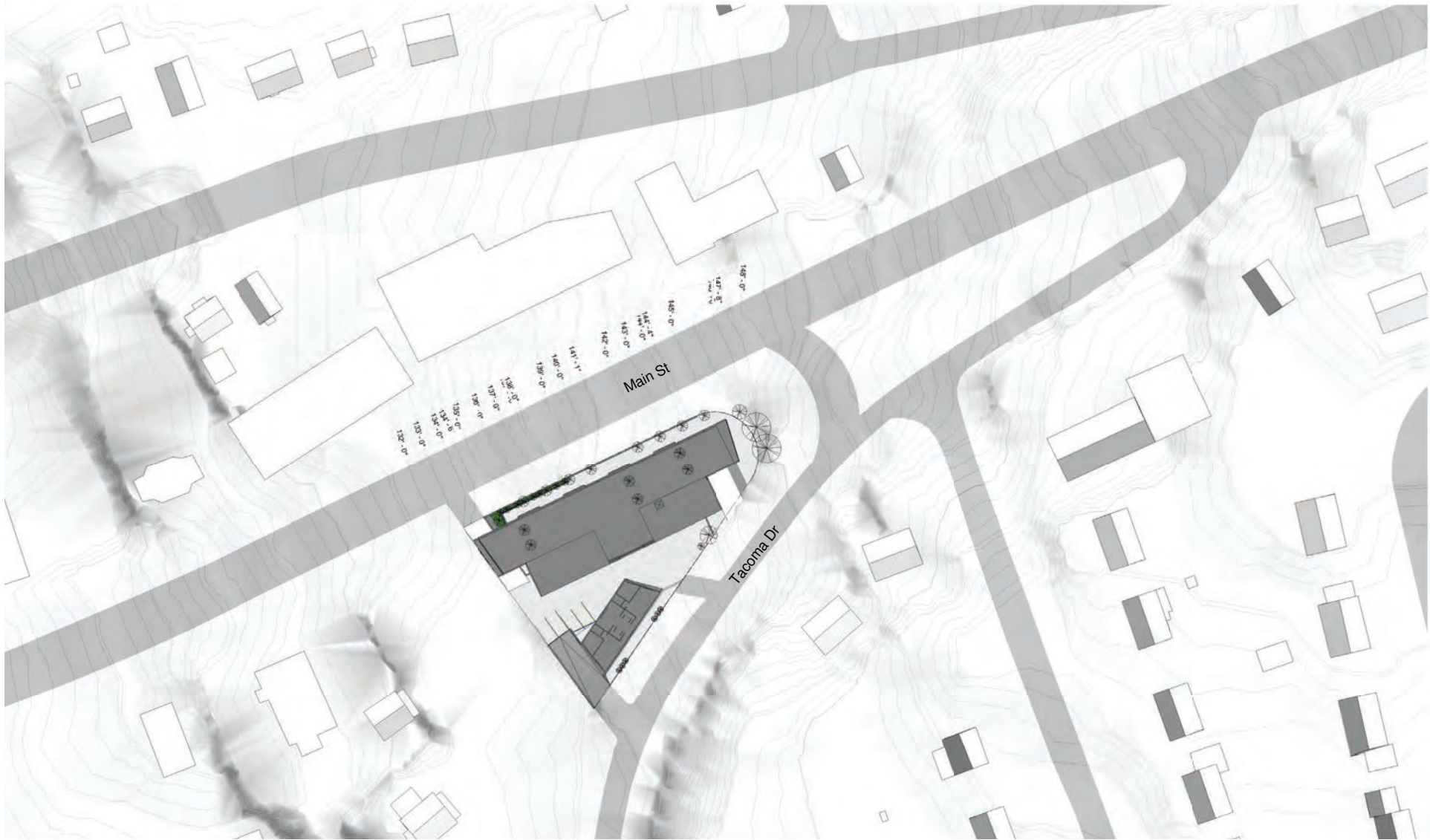
## Site Analysis & Context Map



- 1 208 Main Street
- 2 32 Lakecrest Drive
- 3 5th Dimension Hair Design
- 4 A.P. Reid Insurance Ltd.
- 5 Aabel Fuels
- 6 Aaron's Sales and Lease Ownership
- 7 Ace Communications Ltd
- 8 Admiral Westphal Elementary School
- 9 Affirmative House
- 10 Andrew Younger- MLA
- 11 Apple Self Storage
- 12 Army Navy Airforce Veterans in Canada
- 13 Atlantic Auto Protector
- 14 Atlantic Car Stereo
- 15 Atlantic Evershine Cleaners
- 16 Avensys Solutions, Suite 207
- 17 Balance Fitness & Wellness Centre
- 18 Beazley Sports Field
- 19 Best Burners Ltd.
- 20 Big Ray Convenience Store Ltd. & Asian Grocery
- 21 Black Educators Association
- 22 Boutilier and Associates
- 23 Bridgeway Academy
- 24 Burger King
- 25 Business Reach Marketing Services Ltd.
- 26 C.A. Sweeney Custom Orthotics, Main Street, Dartmouth, NS, Canada
- 27 Caledonia Jr High School
- 28 Canadian Business Management Accounting Services Inc
- 29 Canadian Celiac Association- Halifax Chapter
- 30 Certified Counselor Karla Dawe
- 31 Choice Chiropractic & Integrated Health Centre Ltd.
- 32 Circle of Care Society
- 33 Clarmar Residential Care Facility
- 34 Classic Physiotherapy and Work Rehabilitation Centres Ltd.
- 35 Common Values Emporium
- 36 Computerease
- 37 Creative Freedom Marketing & Promotions
- 38 Curbza
- 39 CURRENT/FUTURE DEVELOPMENT
- 40 Dairy Queen (Ultimate Treats Inc.)
- 41 Darren Fisher . MP
- 42 Dartmouth East Community Centre
- 43 Dartmouth Lions Club
- 44 Dartmouth Veterinary Hospital
- 45 Dave Doolittle's Sport's Bar and Grill
- 46 David A. Grant- Barrister, Solicitor
- 47 Devencore Atlantic Ltd
- 48 Dollarama
- 49 Doull Books
- 50 Dr. Adele Belliveau
- 51 Dr. David Bond
- 52 Dr. Gene Jensen- Orthodontics Inc.
- 53 Dr. Gordon Mahaney
- 54 Dr. John Miller Dentistry Inc.
- 55 Dr. San Fung
- 56 Dr. Susan Webster
- 57 Duart Hardwood Stairs
- 58 Dulux Paints
- 59 East Dartmouth Community Health Team
- 60 Easy Financial
- 61 Ebony Hair Salon
- 62 EP Bligh TV
- 63 Esso Gas Station
- 64 Esthetics and Lashes by Erica
- 65 Family Vision Clinic
- 66 Fit Plus Martial Arts
- 67 Fresh Twenty One Café
- 68 Gary Murphy Automotive Services Ltd.
- 69 Global Pet Foods
- 70 Glubes Audio and Video
- 71 GoHard Fitness
- 72 Grant Thornton
- 73 Greco Pizza
- 74 Green Cap Automotive Retail and Sales Ltd
- 75 GROPRO
- 76 Gunners Tattoo
- 77 H&R Block
- 78 Ha's Driving School
- 79 Happy Smiles Dental Hygiene
- 80 Hard Drive Internet Cafe
- 81 Holistic Beauty and Wellness by Kristy
- 82 I.C. Optical Ltd.
- 83 Impact Videographic Services Limited
- 84 Integra Tire Auto Centre
- 85 Janet L Cheverie CA Inc.
- 86 Jay Set
- 87 Jessy's Pizza
- 88 JewelPop
- 89 Joseph's Unisex Salon Limited
- 90 Jungle Pets, Dartmouth, Canada
- 91 Katie's Tailor Shop
- 92 Kee Human Resources
- 93 KFC
- 94 King Vapor
- 95 Kinsmen Club of Dartmouth
- 96 Lake City Motel
- 97 Lawtons Drugs Westphal
- 98 Long & McQuade
- 99 Longstaff-Parker Surveying Ltd.
- 100 Lovitt-Stone Denture Clinic
- 101 Main Street Automotive
- 102 Manhattan Pizza
- 103 Mary Brown's Famous Chicken & Taters
- 104 Massage Addict
- 105 McDonald's
- 106 Metro Food Equipment
- 107 Metro Karate Training Center
- 108 National Association of Federal Retirees
- 109 Nightingale Nursing Services
- 110 Nova Scotia Liquor Corporation
- 111 NSCC Akerley Campus
- 112 Nune's Tailor Shop
- 113 Panda Buffet
- 114 Penningtons
- 115 Pet Value
- 116 Petro-Canada
- 117 Platinum Pawn
- 118 Plazacorp Retail Prop Ltd.
- 119 Pleasures N' Treasures
- 120 Popeye's Supplements
- 121 Prince Andrew High School
- 122 Princesa Gold Jewellers
- 123 Queen Nails
- 124 Ralph's Place
- 125 RBC
- 126 Reitmans Women's Clothing
- 127 Risk Marker
- 128 Ronnie's 2-for-1 Pizza
- 129 RPM Cycle
- 130 Rubber Duck Car Wash
- 131 Salon 117 Hair Design
- 132 Salvation Army Community Church
- 133 Salvation Army Thrift Store
- 134 Sam's Seafood and Grill
- 135 Schaefer Dental Lab Inc.
- 136 SCO Electric Ltd.
- 137 Scotia Driving School
- 138 Scotiabank
- 139 Securitas
- 140 Seventh Day Adventist Church
- 141 Shear Magic Creative Hair Stylings
- 142 Shoppers Drug Mart
- 143 SimplyCast
- 144 SISU Women's Self Defense
- 145 Slap Shot Sports Collectibles
- 146 Sleep Therapeutics
- 147 Smitty's Restaurant
- 148 Sobey's Pharmacy
- 149 Spartan Nutrition
- 150 Speedy Auto Service
- 151 Speedy Glass
- 152 St. Luke's Anglican Church
- 153 St. Thomas More Parish Catholic
- 154 Steven's Rd United Baptist Church
- 155 Subway
- 156 Sunrise Yoga
- 157 Swiss Chalet
- 158 Sylvan Learning
- 159 TAC Properties Inc
- 160 Tacoma Dental Centre
- 161 Tacoma Family Medicine and Walk-In
- 162 Tactical Tattooing
- 163 Tan FX
- 164 Tax Smart
- 165 The Cutting Zone
- 166 The Flag Shop
- 167 The Hub Too
- 168 The Mortgage Centre
- 169 The Physioclinic
- 170 Tim Horton's
- 171 Tim Horton's Drive-thru
- 172 Tymak Interiors
- 173 Under Development
- 174 Under Development
- 175 Varcon Inc. Consulting Engineers
- 176 Veterans Emergency Transition Services
- 177 Village on Main Office
- 178 Way Less
- 179 Westphal PharmaChoice
- 180 Woodlawn Medical Clinic
- 181 Young Drivers







**Site Plan**





Looking West



Looking East





**Main Street  
Image of Property**

GardenView - Dartmouth  
Canadian Wood Council | Ontario WoodWORKS  
February 21-22, 2017



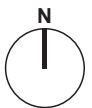
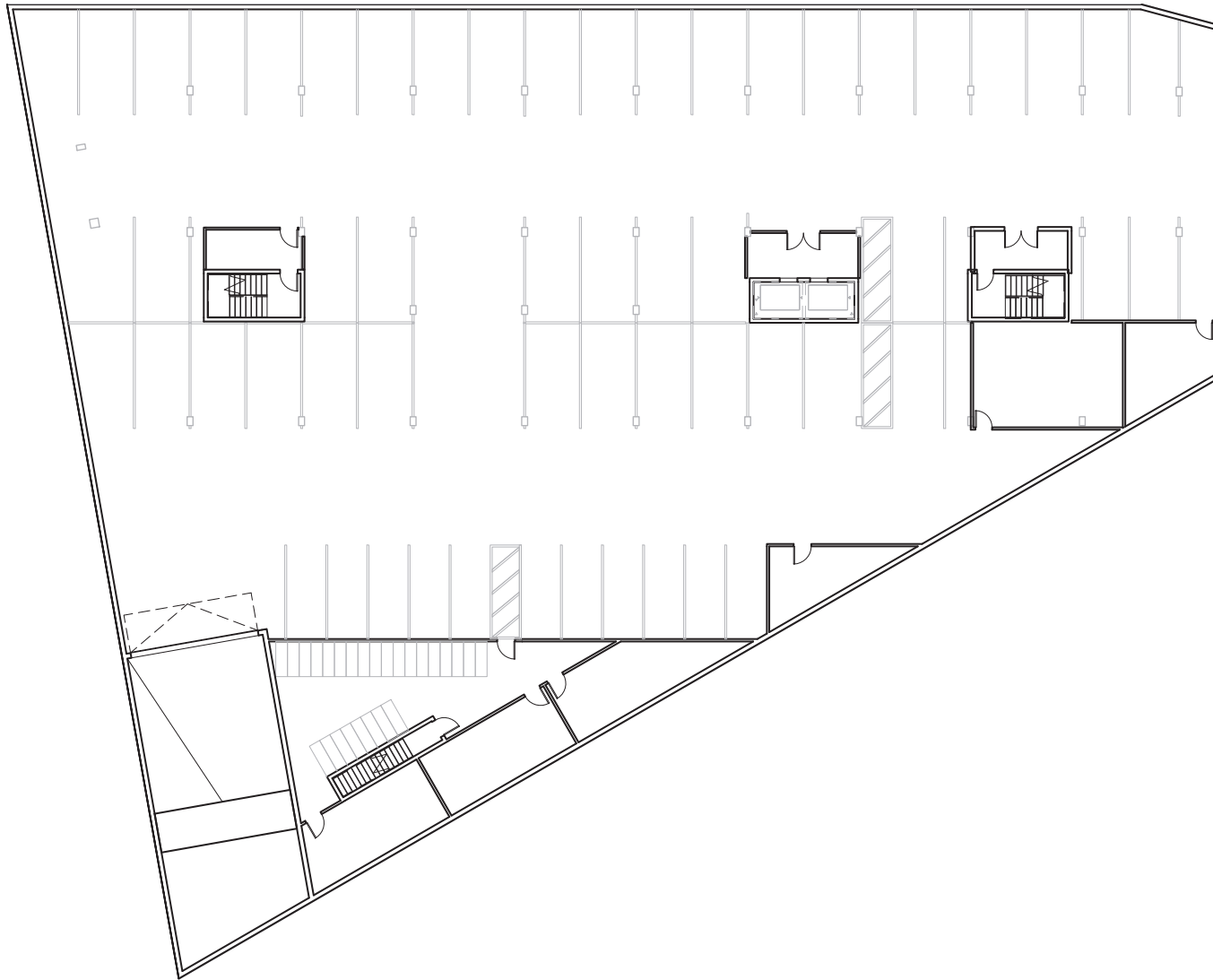




**Aerial View  
Looking Northwest**

GardenView - Dartmouth  
Canadian Wood Council | Ontario WoodWORKS  
February 21-22, 2017





**Level P1**  
**Rentable Area Plan**

GardenView - Dartmouth  
Canadian Wood Council | Ontario WoodWORKS  
February 21-22, 2017







### Rentable Area Legend

- Garbage Room
- Lobby
- Restaurant
- Retail

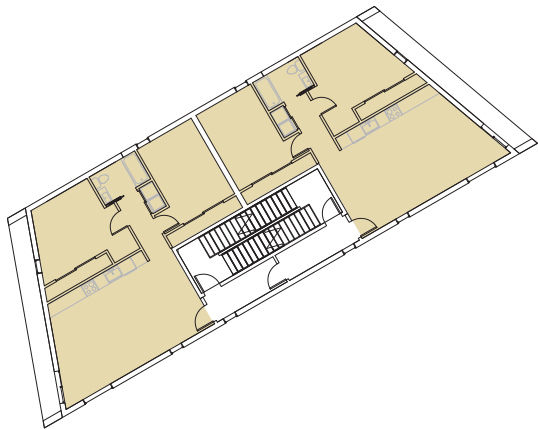




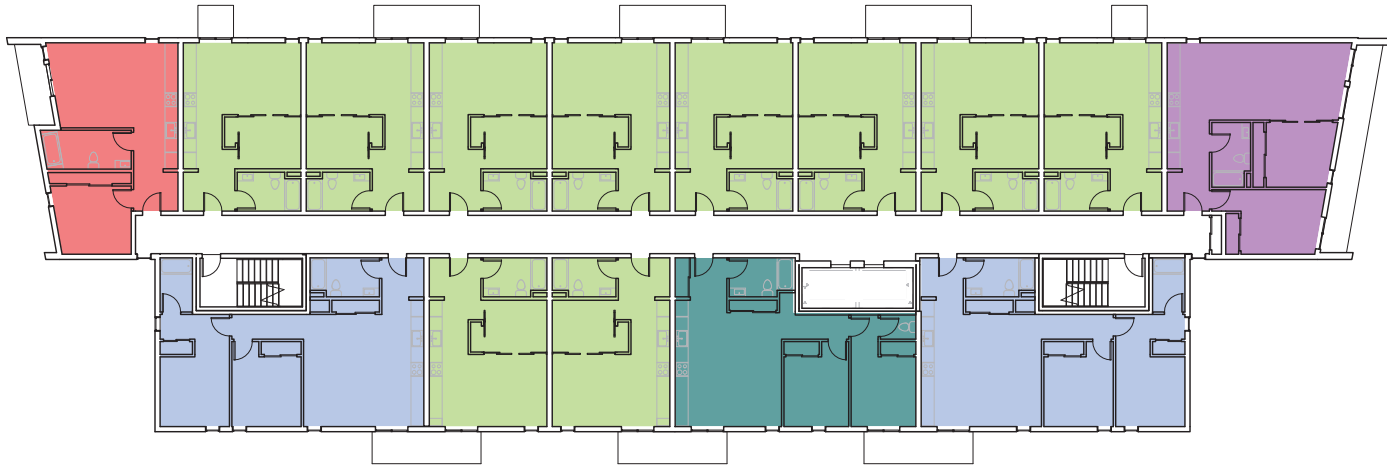
### Rentable Area Legend

- 1 Bedroom - Type A
- 2 Bedroom - Type A
- 2 Bedroom - Type B
- Common Room
- Studio A

- 2 Bedroom - Type E



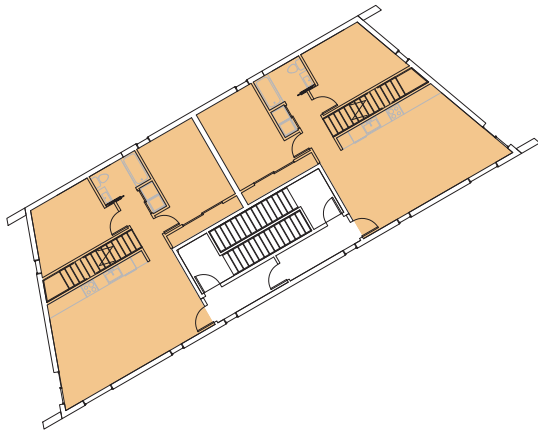




### Rentable Area Legend

- 1 Bedroom - Type A
- 2 Bedroom - Type A
- 2 Bedroom - Type B
- 2 Bedroom - Type D
- Studio A

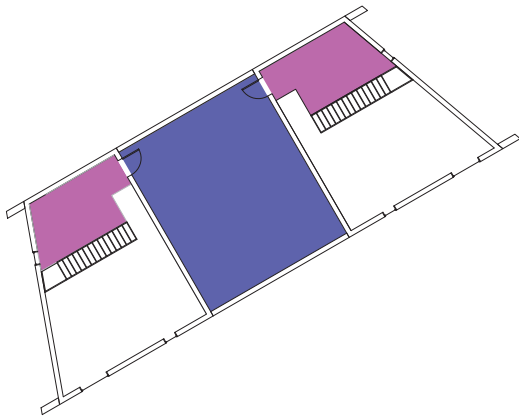
- 2 Bedroom - Type F



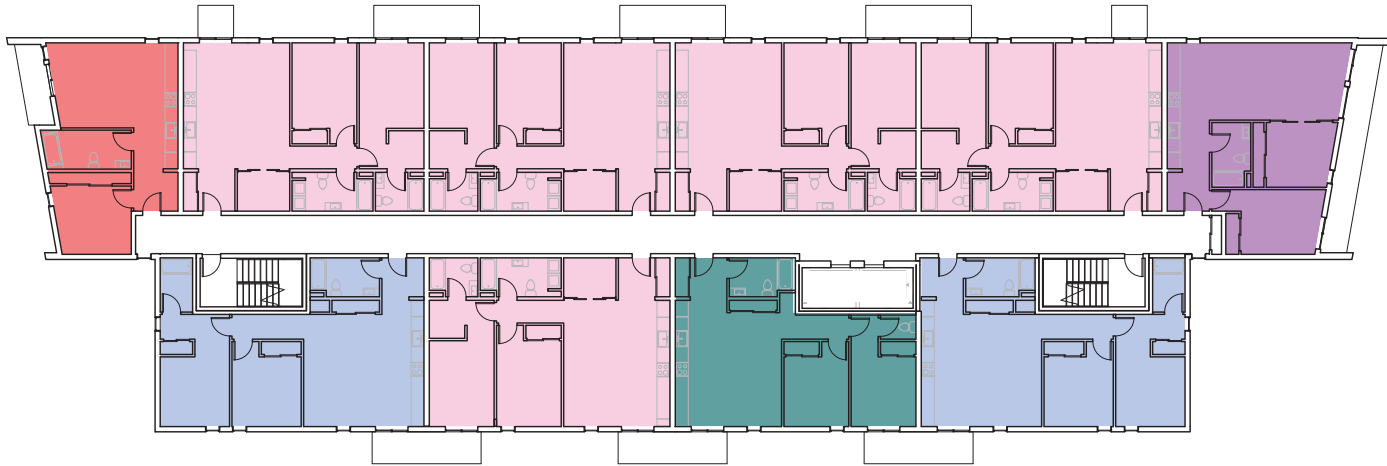


### Rentable Area Legend

- 1 Bedroom - Type A
- 2 Bedroom - Type A
- 2 Bedroom - Type B
- 2 Bedroom - Type C
- 2 Bedroom - Type D
  
- 2 Bedroom - Type F (Mezz.)
- Townhouse Roof Deck



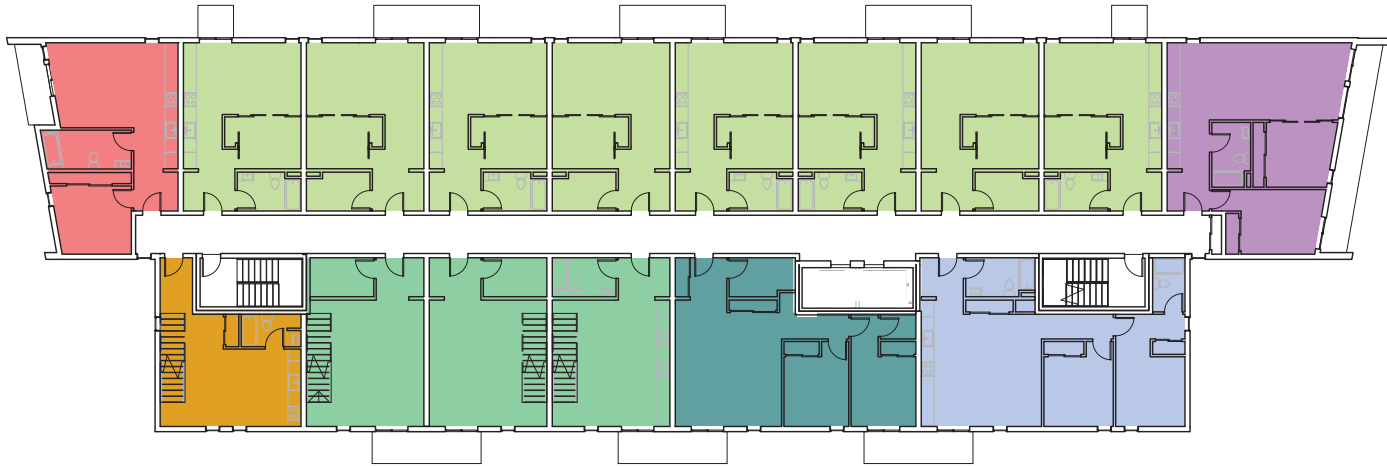




### Rentable Area Legend

- 1 Bedroom - Type A
- 2 Bedroom - Type A
- 2 Bedroom - Type B
- 2 Bedroom - Type C
- 2 Bedroom - Type D



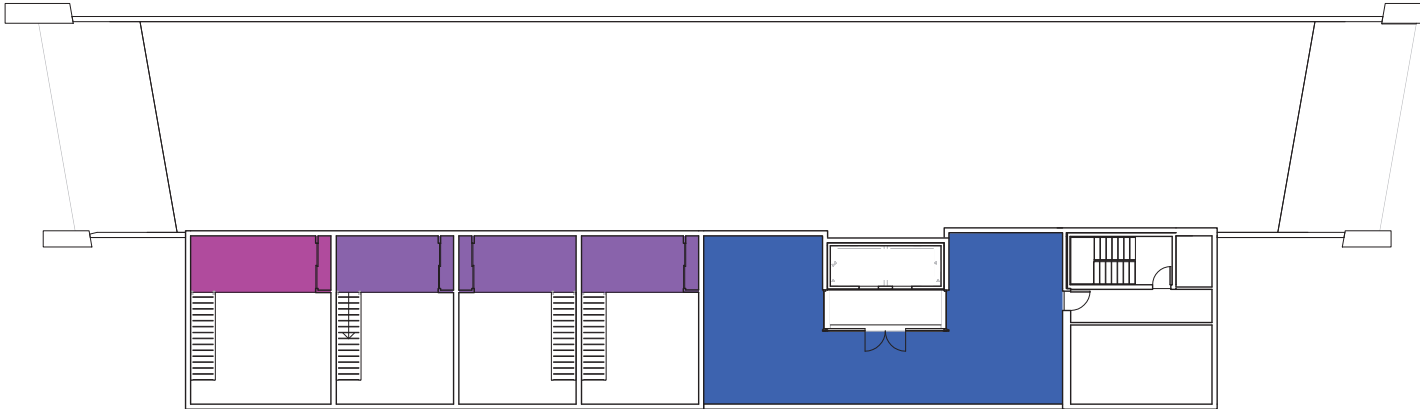


### Rentable Area Legend

- 1 Bedroom - Type A
- 1 Bedroom - Type B
- 1 Bedroom - Type C
- 2 Bedroom - Type A
- 2 Bedroom - Type B
- 2 Bedroom - Type D
- Studio A



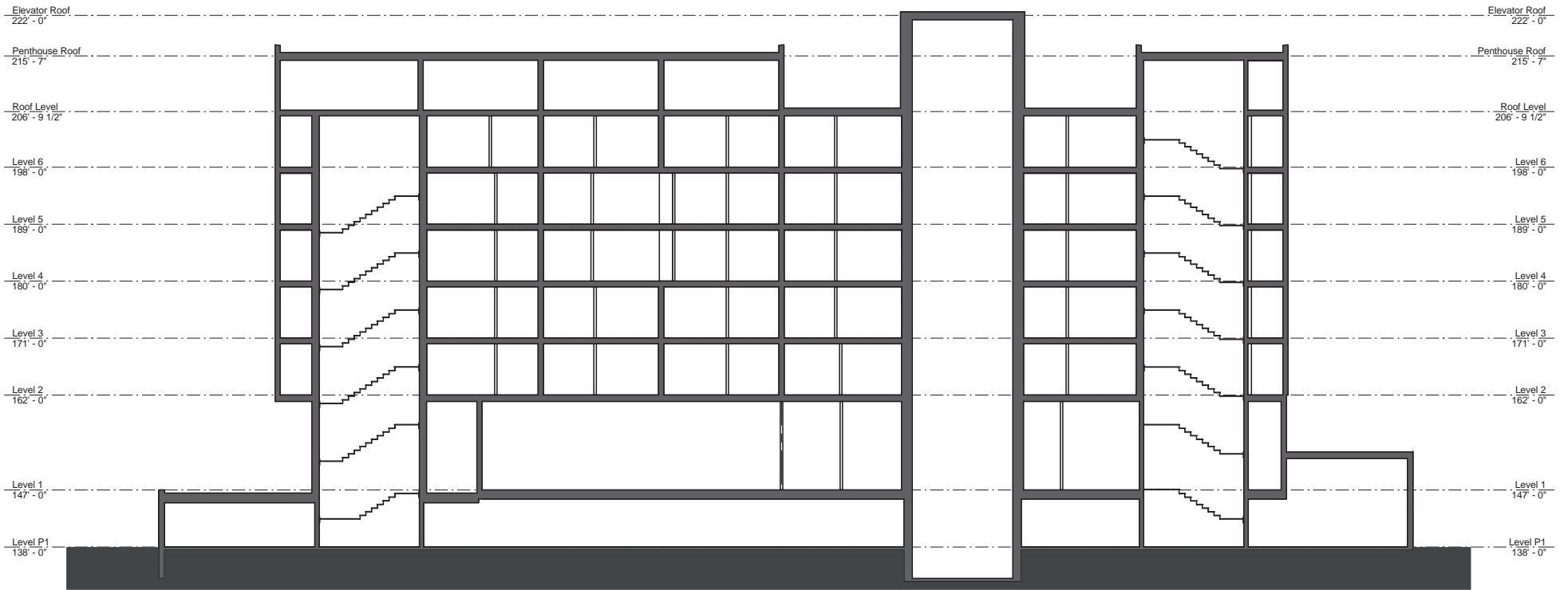




### Rentable Area Legend

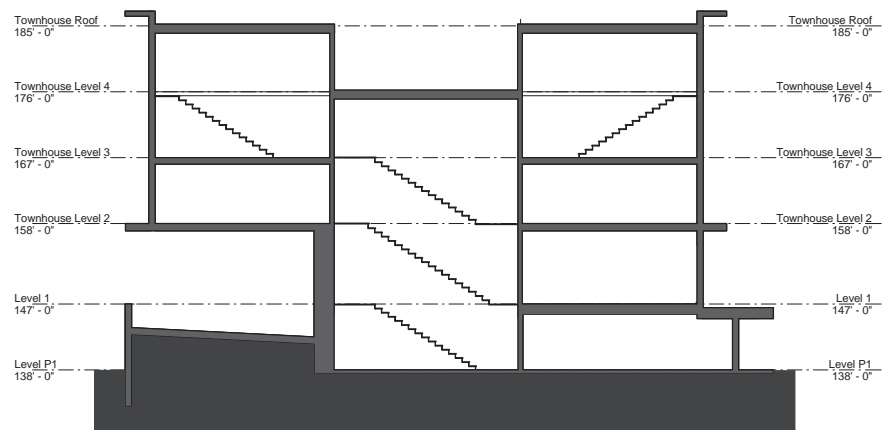
- 1 Bedroom - Type B (Mezz.)
- 1 Bedroom - Type C (Mezz.)
- Main Building Roof Deck





## Main St. Building Building Section

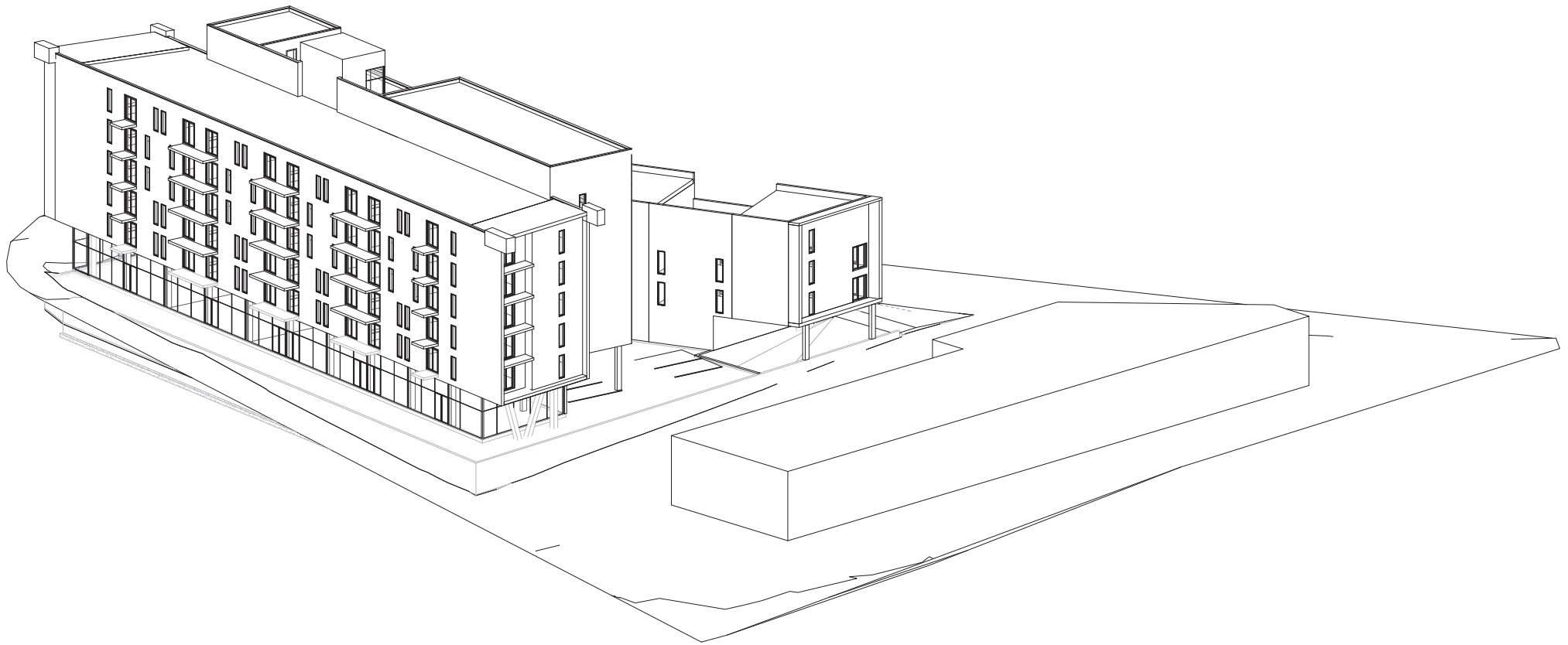




**Tacoma Dr. Building  
Building Section**

	MAIN STREET BUILDING										TACOMA DRIVE BUILDING								
	2 BR				1 BR			Studios	Restaurant	Office	Rentable Residential	Gross	2 BR		Office	Rentable Residential	Gross		
	A	B	C	D	A	B	C	A	sf/floor	sf/floor	sf/floor	sf/floor	E	F	sf/floor	sf/floor	sf/floor		
rentable sq.ft. / unit (nsf)	780	900	965	805	585	470	425	470	910	3200			820	820	975				
						165	200			1275				215					
Level 1									1	1		8,510			1		1,470		
Level 2	1	2			1			10			7,865	11,095	2			1,640	2,170		
Level 3	1	2		1	1			10			8,670	11,095		2		1,640	2,170		
Level 4	1	2	5	1	1						8,795	11,095				430	1400		
Level 5	1	2	5	1	1						8,795	11,095							
Level 6	1	1		1	1	3	1	8			8,665	11,095							
Roof Level											695	2,638							
TOTAL UNITS PER TYPE	5	9	10	4	5	3	1	28					2	2					
TOTAL 2BR, 1BR, STUDIO		28				9		28					4						
TOTAL PROJECT UNITS	69																		
TOTAL RENTABLE RESIDENTIAL AREA (nsf) PER BUILDING											43,485							3,710	
TOTAL PROJECT RENTABLE RESIDENTIAL AREA (nsf)													47,195						
TOTAL PROJECT RENTABLE OFFICE AREA (on level 1) (nsf)													5450						
TOTAL PROJECT RENTABLE RESTAURANT AREA (on level 1) (nsf)													910						
TOTAL BUILDABLE AREA (gsf) PER BUILDING											66,623							7,210	
TOTAL PROJECT BUILDABLE AREA (gsf) (excluding parking garage)													73,833						
TOTAL UNDERGROUND GARAGE AREA INCLUDING RAMP (gsf)													22,770						
TOTAL CAR PARKING BAYS IN UNDERGROUND GARAGE													58						
TOTAL CAR PARKING BAYS IN ABOVE GROUND COURT													11						
TOTAL CAR PARKING BAYS FOR PROJECT													69						
TOTAL RESIDENTIAL CAR PARKING BAYS													49						
TOTAL RESTAURANT, VISTOR, AND OFFICE CAR PARKING BAYS (9 UNDERGROUND, 11 ABOVE)													20						



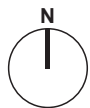
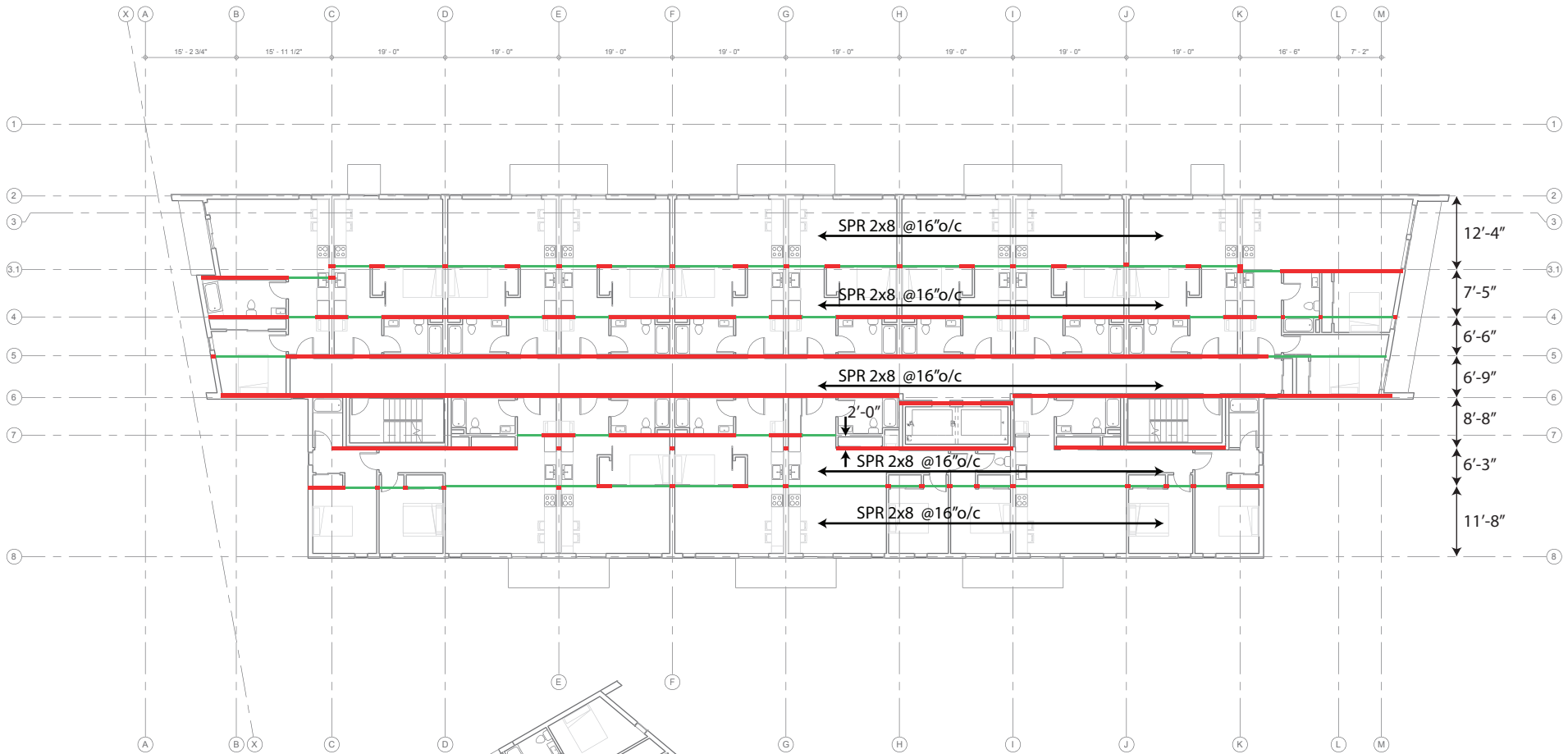


**Aerial View  
Looking Southeast**

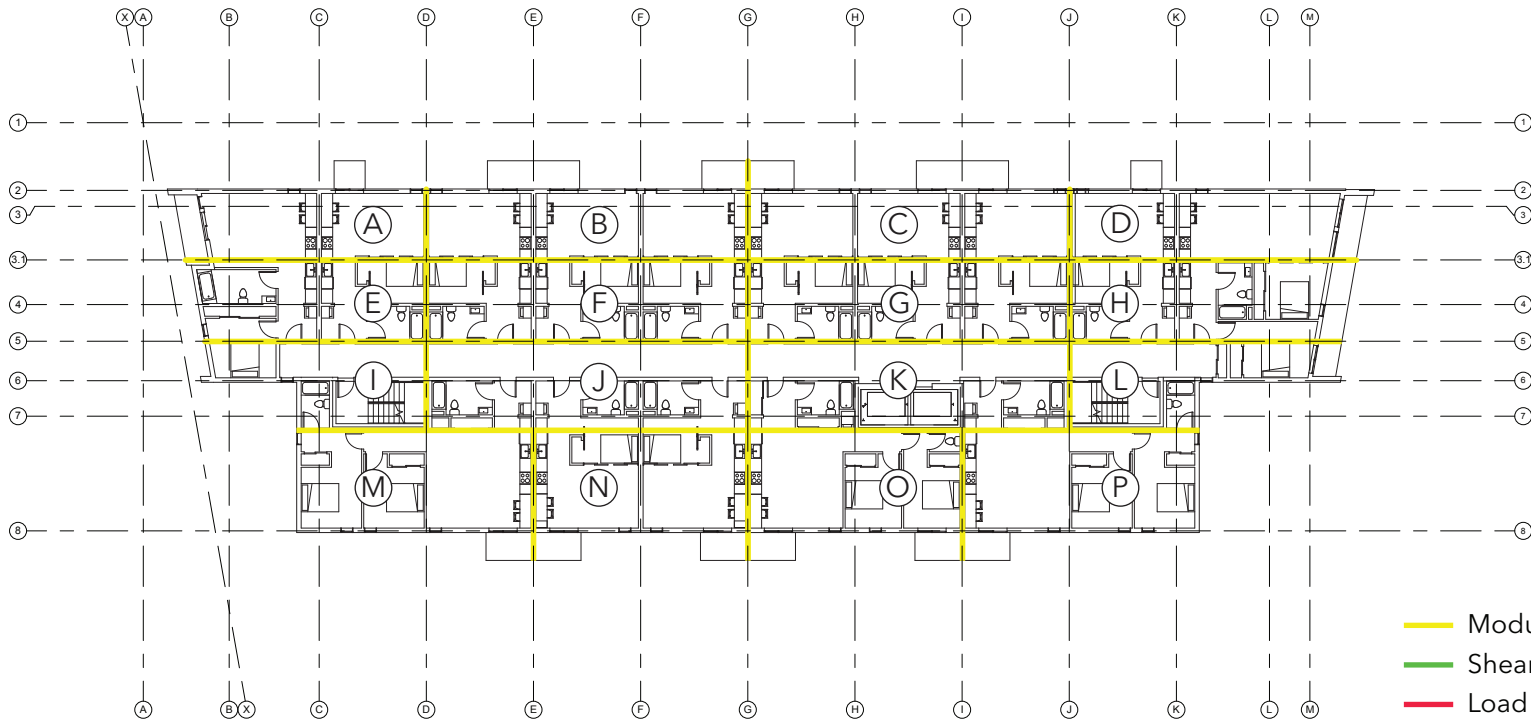
GardenView - Dartmouth  
Canadian Wood Council | Ontario WoodWORKS  
February 21-22, 2017





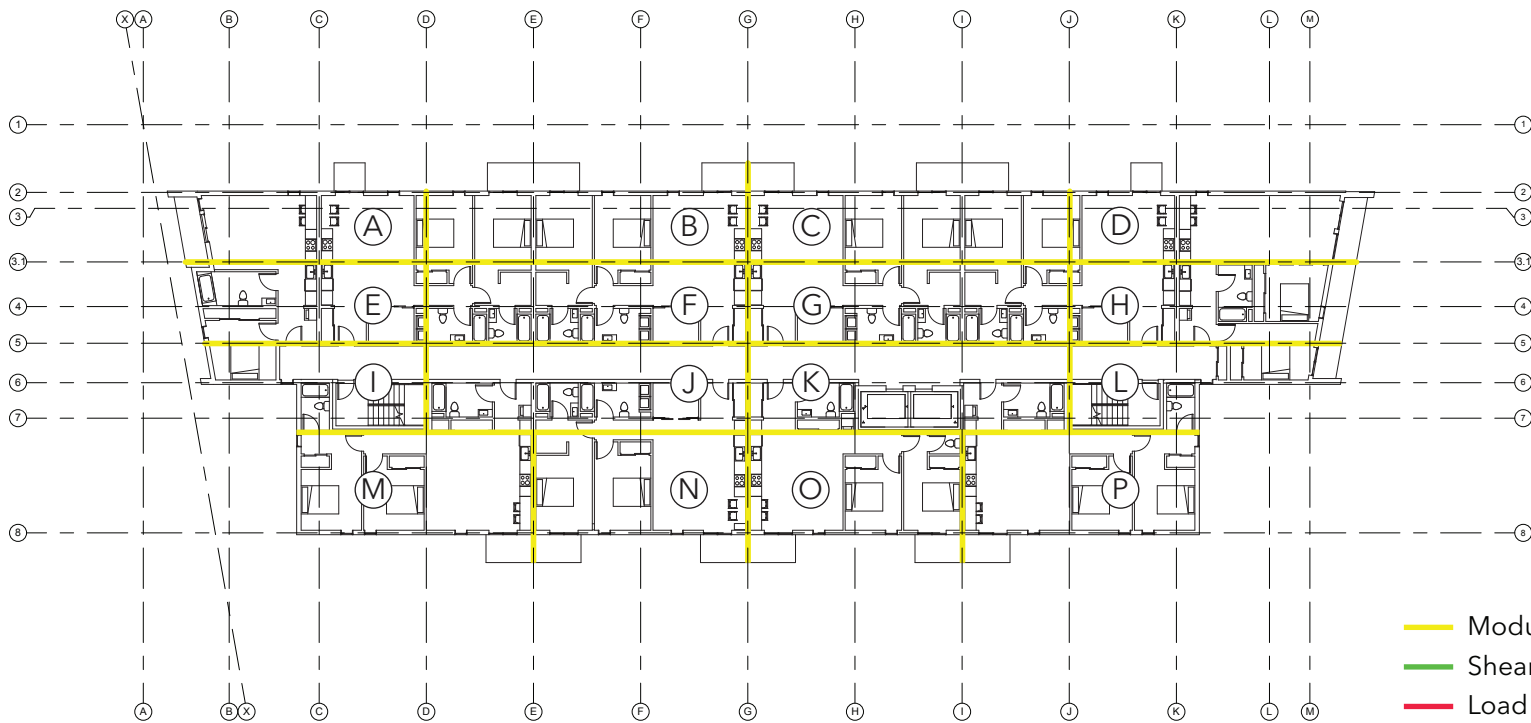
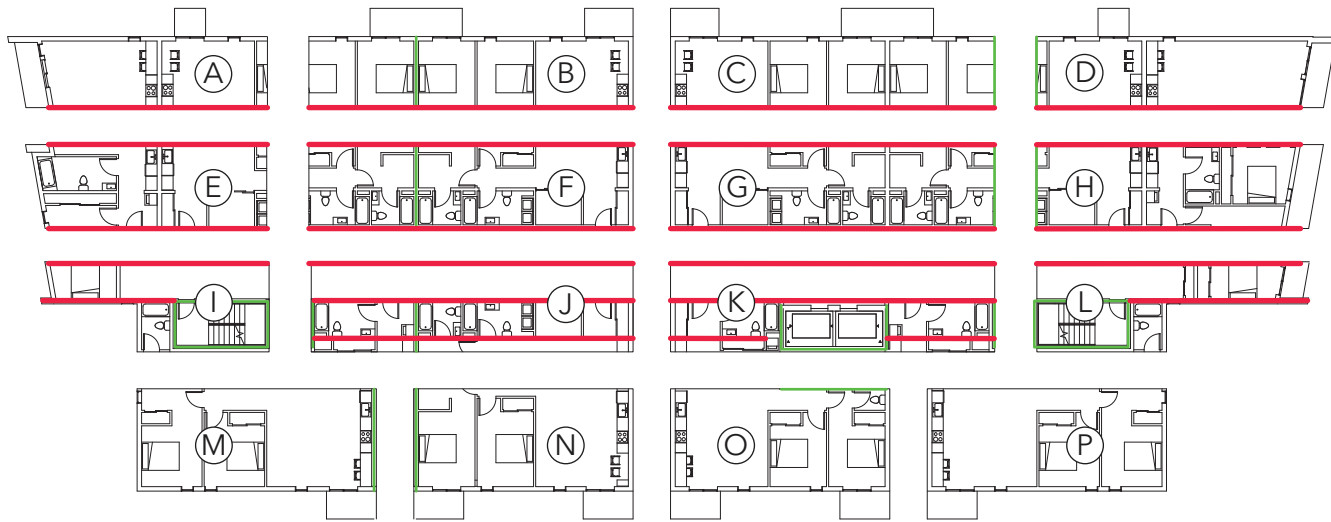


BEAM TABLE	
SPAN	MATERIAL
UP TO 5'-6"	2-PLY 2x8 SPF
UP TO 7'-0"	3-PLY 2X8 SPF
UP TO 8'-0"	4-PLY 2X8 SPF
UP TO 8'-6"	2-PLY 2X8 2.0E VL
UP TO 10'-0"	3-PLY 2X8 2.0E VL
UP TO 11'-0"	4-PLY 2X8 2.0E VL
V.L - VERSA LAM	



- Modular Units
- Shear Walls
- Load Bearing Walls



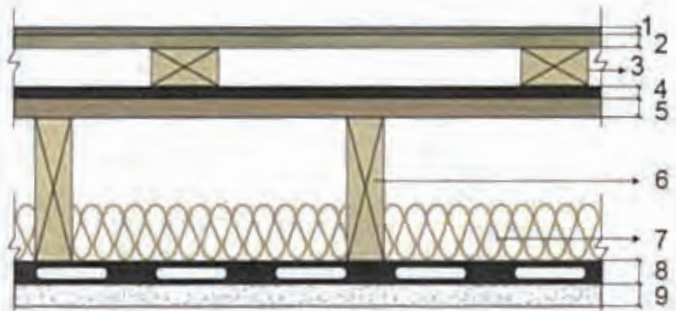


- Modular Units
- Shear Walls
- Load Bearing Walls





**Table 12 Industry solutions for joisted floor/ceiling assemblies with STC>50 and IIC>55**

Side view of cross-section of assembly	Details from top to bottom	STC	IIC	Source
	<ol style="list-style-type: none"> <li>1. 2-mm vinyl</li> <li>2. 12.5-mm APA T&amp; G plywood</li> <li>3. 19-mm x 70-mm sleepers glued, halfway between joists</li> <li>4. 12.5-mm insulation board stapled to subfloor</li> <li>5. 15.5-mm APA-rated sheathing subfloor</li> <li>6. 38-mm joists at 400 mm O.C.</li> <li>7. 76-mm fibreglass</li> <li>8. RC at 600 mm O.C.<sup>(1)</sup></li> <li>9. 15.9-mm gypsum wallboard</li> </ol>	57	56	Case 4 in Table 2 of APA (2000)

Note:

<sup>(1)</sup> Caution should be taken when selecting RC to attach gypsum board to studs, because the RC properties vary from product to product, and the variation in RC affects their effectiveness in improving sound insulation. More data is needed to quantify the effects of various RC products on floor sound insulation.

Source: Mid-rise Wood-Frame Construction Handbook, First Edition 2015



Carbon Calculation						
Project Information	Project Name: Gardenview					
	Location: Halifax, NS					
	GFA: Main Building 74,000 ft <sup>2</sup> + Auxiliary Building 7,240 ft <sup>2</sup>					
	69 Units Main Building + 4 Units Auxiliary Building					
Total Wood Use (899,894 bft)						
	<b>Unit</b>	<b>Floor</b>	<b>Roof</b>	<b>Wall</b>	<b>Core</b>	<b>Total</b>
<b>Lumber</b>	bft	189,509	47,214	283,265	19,948	539,936
<b>Panels</b>	ft <sup>2</sup>	78,962	19,673	118,027	8,313	224,975
<b>Engineered Wood Products</b>	bft	47,378	11,803	70,816	4,987	134,984
Product Breakdown						
	<b>Unit</b>	<b>Product</b>	<b>% of Total</b>	<b>Quantity</b>		
<b>Lumber</b>	bft	2x4x8	50%	269,968		
	bft	2x6x8	30%	161,981		
	bft	2x8x10	20%	107,987		
<b>Panels</b>	ft <sup>2</sup>	1/2" Ply	50%	112,488		
	ft <sup>2</sup>	1/2" OSB	50%	112,488		
<b>EWP</b>	bft	I-Joists	75%	101,238		
	m <sup>3</sup>	PSL	15%	47.61		
	m <sup>3</sup>	LVL	10%	31.74		
Notes and References						
<b>Note:</b>	Calculations include wood quantities for siding decking and					
<b>References:</b>	OPTS, CWC/FP wood volumes calculator CWC Carbon Calculator					



## Results



Volume of wood products used:  
1,314 cubic meters (46,408 cubic feet)



U.S. and Canadian forests grow this much wood in:  
4 minutes



Carbon stored in the wood:  
1113 metric tons of carbon dioxide



Avoided greenhouse gas emissions:  
2365 metric tons of carbon dioxide



Total potential carbon benefit:  
3477 metric tons of carbon dioxide

## Equivalent to:



735 cars off the road for a year



Energy to operate 367 homes for a year

Project Name: Gardenview | Dartmouth, NS

Date: January 12, 2017

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Results from this tool are based on wood volumes only and are estimates of carbon stored within wood products and avoided emissions resulting from the substitution of wood products for non-wood products. The results do not indicate a carbon footprint or global warming potential and are not intended to replace a detailed life cycle assessment (LCA) study. Please refer to the References and Notes' for assumptions and other information related to the calculations.

Canadian  
Wood  
Council

Conseil  
canadien  
du bois







**Render**  
**Looking Southwest**

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Render  
Looking East

GardenView - Dartmouth  
Canadian Wood Council | Ontario WoodWORKS  
February 21-22, 2017





**Render**  
**Looking Southeast**

GardenView - Dartmouth  
Canadian Wood Council | Ontario WoodWORKS  
February 21-22, 2017



current total Class C estimate	\$11,048,000
researching to reduce construction costs by	\$ 500,000
<hr/>	
concrete + masonry structure	15.7%
wood structure	8.2%
	23.9%
<hr/>	
if all concrete an assumed 10% increase which in our case would be	2.4% \$265,000
<hr/>	
cladding	9.2%
looking for options to reduce to 8.2%	\$100,000
<hr/>	
balconies including dry sprinkler system looking to eliminate altogether	\$200,000
<hr/>	
other design changes	\$200,000





**Preliminary Budget - Class C Estimate  
Garden View Apartments**



Updated: February 20, 2017

<u>Division</u>	<u>Budget</u>	<u>69</u> Units	<u>86.41%</u> % of total leasable space that is residential
<b>Design &amp; Testing</b>		\$0 /unit	\$0 /unit
Architectural Design			
Code Consultant			
Civil Engineering			
Geotechnical Consultant			
Structural Engineering			
Sprinkler Design			
Mechanical Engineering			
Electrical Engineering			
<b>Permits</b>		\$0 /unit	\$0 /unit
Building permit			
Plumbing Fee			
Development Permit Fee			
Occupancy Permit			
Solid waste ccc,commercial			
Solid waste residential			
Waste water			
Waste water-commercial			
<b>Insurance</b>		\$600 /unit	\$500 /unit
General Liability	\$11,434		
Builder's Risk	\$31,760		
<b>Construction Management</b>		\$5,100 /unit	\$4,400 /unit
PM, Super, PC	\$266,960		
Project Vehicles, fuel	\$48,960		
Mobile	\$2,880		
Project Administrator / Office OH	\$34,000		
<b>Site Conditions</b>		\$4,200 /unit	\$3,600 /unit
Site Office	\$38,000		
Site Control	\$84,000		
Temp Power, Lights, Fans, Dehumidifiers	\$22,100		
Periodic and Final Clean-up	\$61,000		
Safety supplies, program, extinguishers	\$7,000		
Hoisting	\$24,000		
Small Tools	\$4,000		
Winter Heat & Protection	\$51,000		
<b>Surveying</b>		\$200 /unit	\$200 /unit
Initial Survey	\$2,500		
Points	\$5,000		
Location Certificate	\$2,500		
Point Maintenance	\$5,000		
<b>Testing</b>		\$200 /unit	\$200 /unit
Concrete Testing	\$10,500		
Soils Testing	\$3,500		
<b>Site excavation, backfill, asphalt, landscaping</b>		\$10,500 /unit	\$9,100 /unit
Sitework/Paving/Concrete Sidewalks	\$688,000		
Landscaping & Fencing	\$25,000		
Misc Site Concrete	\$13,375		
<b>Concrete Works</b>		\$24,700 /unit	\$21,300 /unit
Formwork - Parkade Level	\$388,780		
Formwork - Main Level	\$126,950		
ICF - Main Level	\$119,150		
SOG - Parkade	\$149,140		
SOG - Main Floor	\$137,340		
Suspended Slab - Main	\$481,910		
Suspended Slab Garage	\$10,060		
Suspended Slab - 2nd	\$288,860		

**Preliminary Budget - Class C Estimate  
Garden View Apartments**



<b>Masonry</b>			<b>\$32,000</b>	\$500 /unit	\$27,651	\$400 /unit
<b>Steel &amp; Misc Metals</b>			<b>\$122,000</b>	\$1,800 /unit	\$105,418	\$1,500 /unit
<b>Framing</b>			<b>\$903,000</b>	\$13,100 /unit	\$780,268	\$11,300 /unit
	Framing (Main)	\$815,000				
	Framing (Tacoma)	\$88,100				
<b>Waterproofing</b>			<b>\$136,000</b>	\$2,000 /unit	\$117,515	\$1,700 /unit
<b>Firestopping</b>			<b>\$30,000</b>	\$400 /unit	\$25,923	\$400 /unit
<b>Roofing</b> (Not including green roof)			<b>\$247,000</b>	\$3,600 /unit	\$213,429	\$3,100 /unit
<b>Cladding</b>			<b>\$1,014,000</b>	\$14,700 /unit	\$876,181	\$12,700 /unit
<b>Insulation</b>			<b>\$202,000</b>	\$2,900 /unit	\$174,545	\$2,500 /unit
<b>Windows &amp; Doors</b>			<b>\$247,000</b>	\$3,600 /unit	\$213,429	\$3,100 /unit
	PVC Windows & Doors	\$236,700				
	Overhead Doors & Operators	\$10,200				
<b>Decking/ Railing Systems</b>			<b>\$142,000</b>	\$2,100 /unit	\$122,700	\$1,800 /unit
	Decking	\$12,100				
	Railings	\$130,200				
<b>Glazing</b>			<b>\$243,000</b>	\$3,500 /unit	\$209,972	\$3,000 /unit
<b>Equipment</b>			<b>\$232,000</b>	\$3,400 /unit	\$200,468	\$2,900 /unit
	Appliances	\$192,000				
	Garbage Room Lift	\$40,000				
<b>Elevators</b>			<b>\$280,000</b>	\$4,100 /unit	\$241,944	\$3,500 /unit
<b>Mechanical</b>			<b>\$1,054,000</b>	\$15,300 /unit	\$910,745	\$13,200 /unit
	Sprinkler	\$246,000				
	Plumbing	\$560,000				
	Ventilation	\$248,000				
<b>Electrical/ communication/ access control</b>			<b>\$826,000</b>	\$12,000 /unit	\$713,734	\$10,300 /unit
	Electrical/Comms/Access Control	\$775,664				
	Emergency Back-up Generator	\$50,000				
<b>Common Area &amp; Unit Finishes</b>			<b>\$1,820,000</b>	\$26,400 /unit	\$1,572,633	\$22,800 /unit
	Trim & Interior doors	\$345,000				
	Millwork	\$220,500				
	Drywall	\$602,591				
	Flooring	\$296,900				
	Painting	\$222,600				
	Specialties	\$45,500				
	Division Installs	\$87,034				
<b>Fee</b>	3.5%	\$10,674,000	<b>\$374,000</b>	\$5,400 /unit	\$323,167	\$4,700 /unit
<b>CONTINGENCY</b>	0.0%	\$10,674,000	<b>\$0</b>	\$0 /unit	\$0	\$0 /unit
<b>Budget Construction Costs</b>			<b>\$11,048,000</b>	\$160,100 /unit*	<b>\$9,546,402</b>	\$138,400 /unit**

\* Cost per unit has commercial space and parkade averaged in

\*\*Commercial space cost removed