

Lot 3 (formally Lot 45) Wesbrook Village

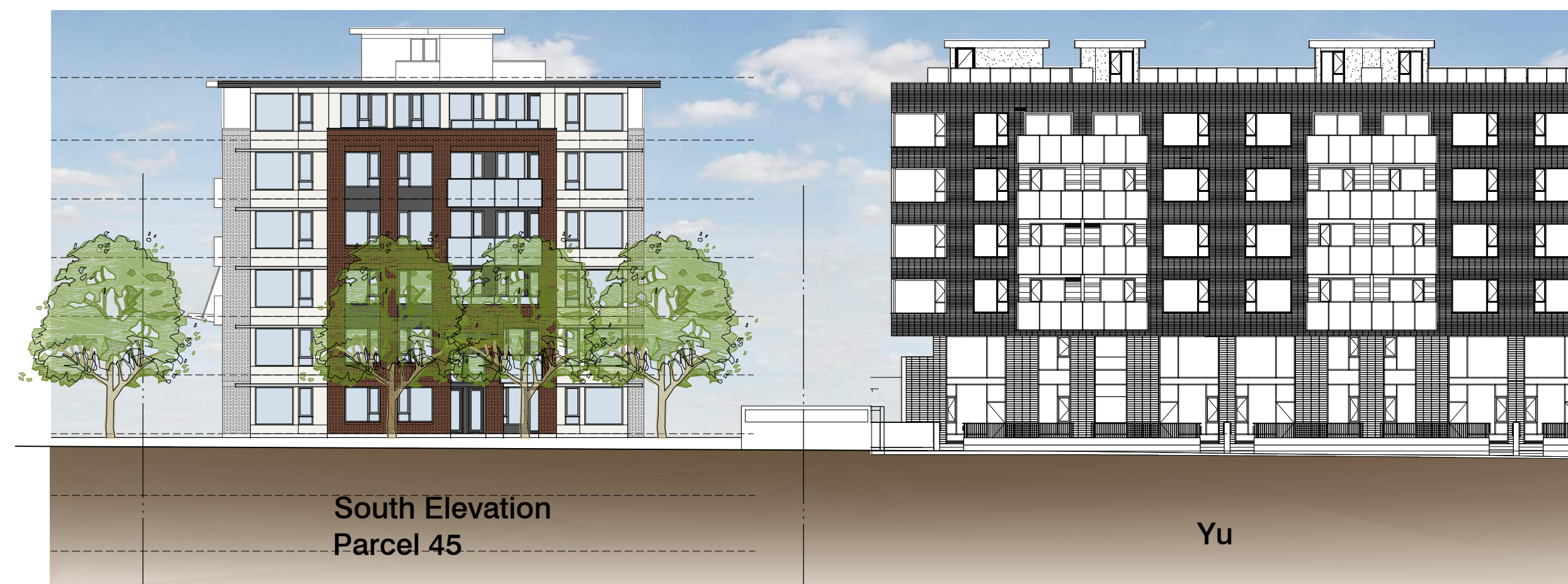
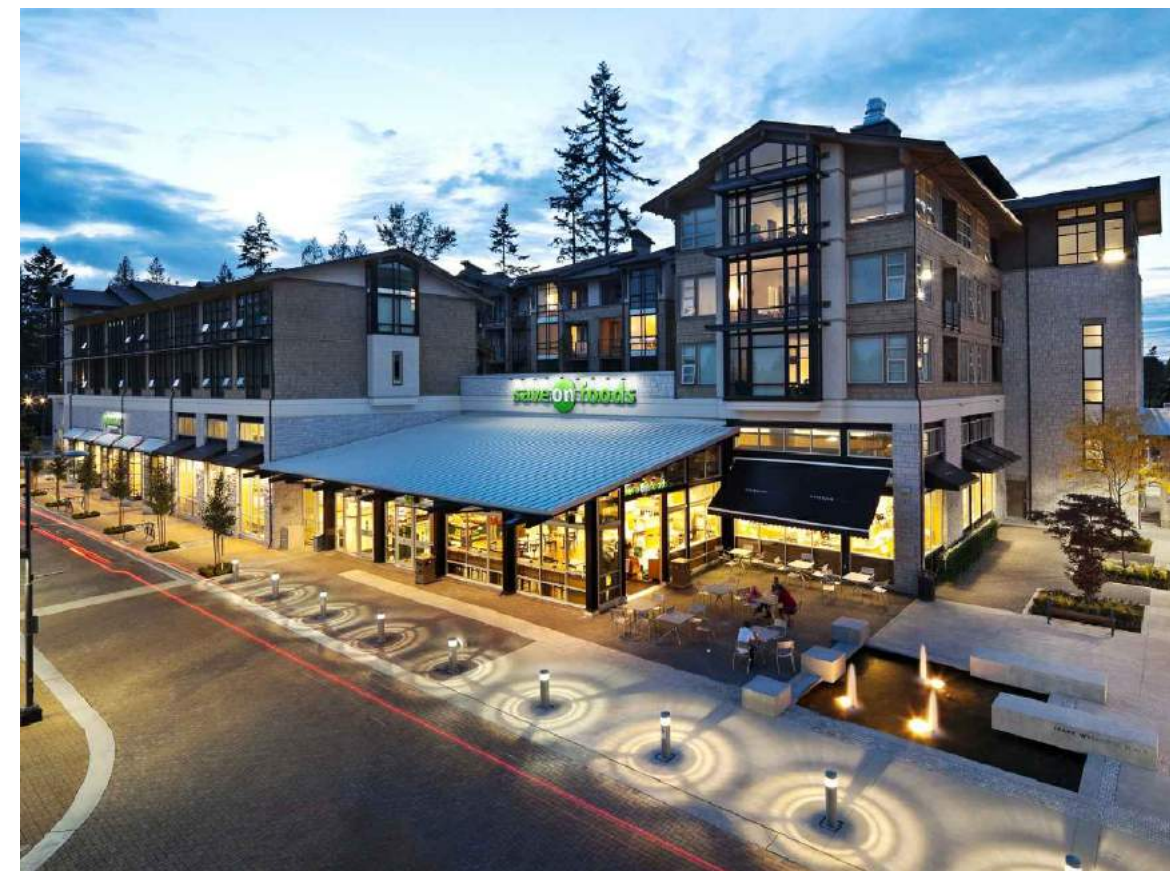
**DEVELOPMENT PERMIT RESUBMISSION
JUNE 1, 2015**



LOT 3
Wesbrook Village

DP RESUBMISSION
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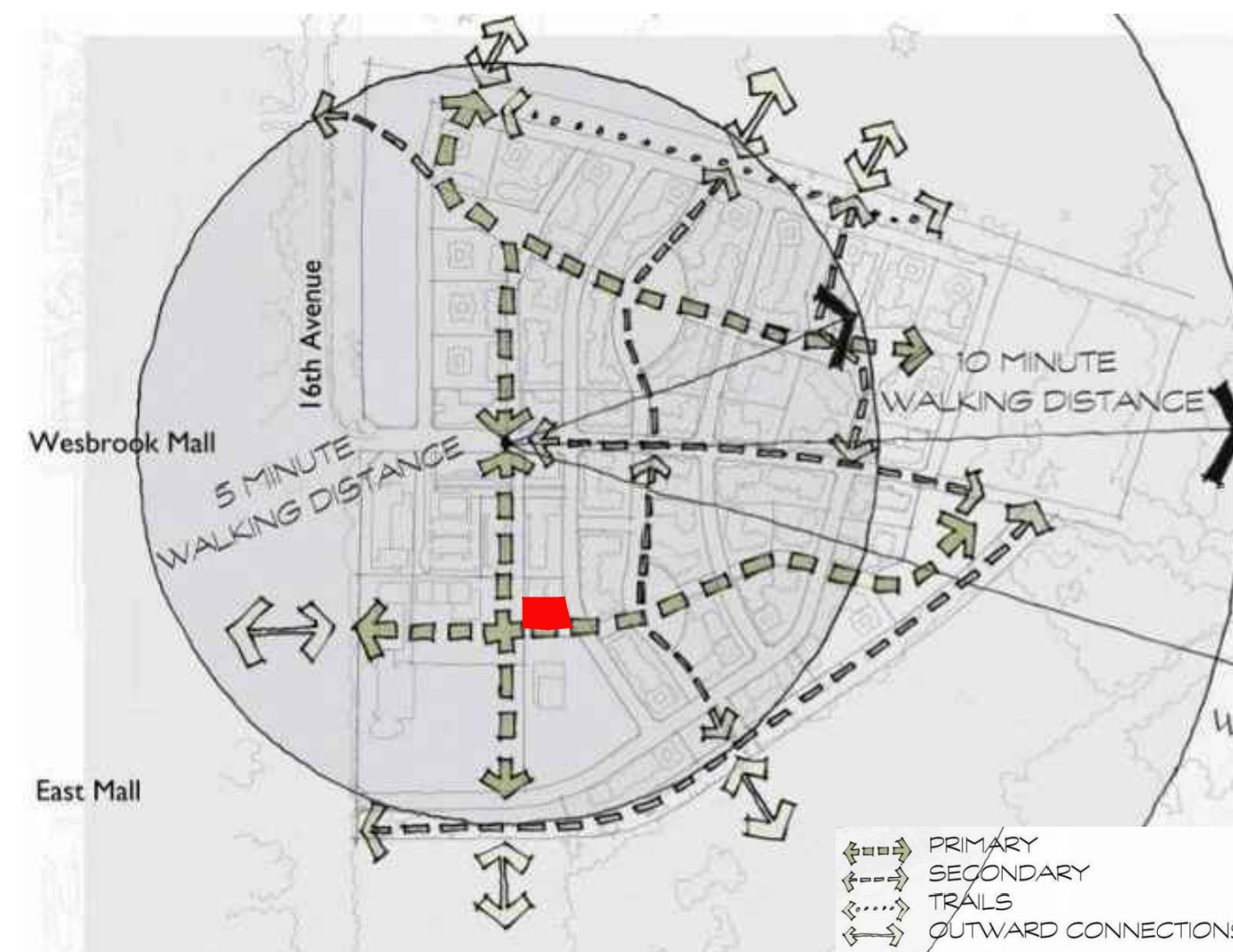
Context Plan



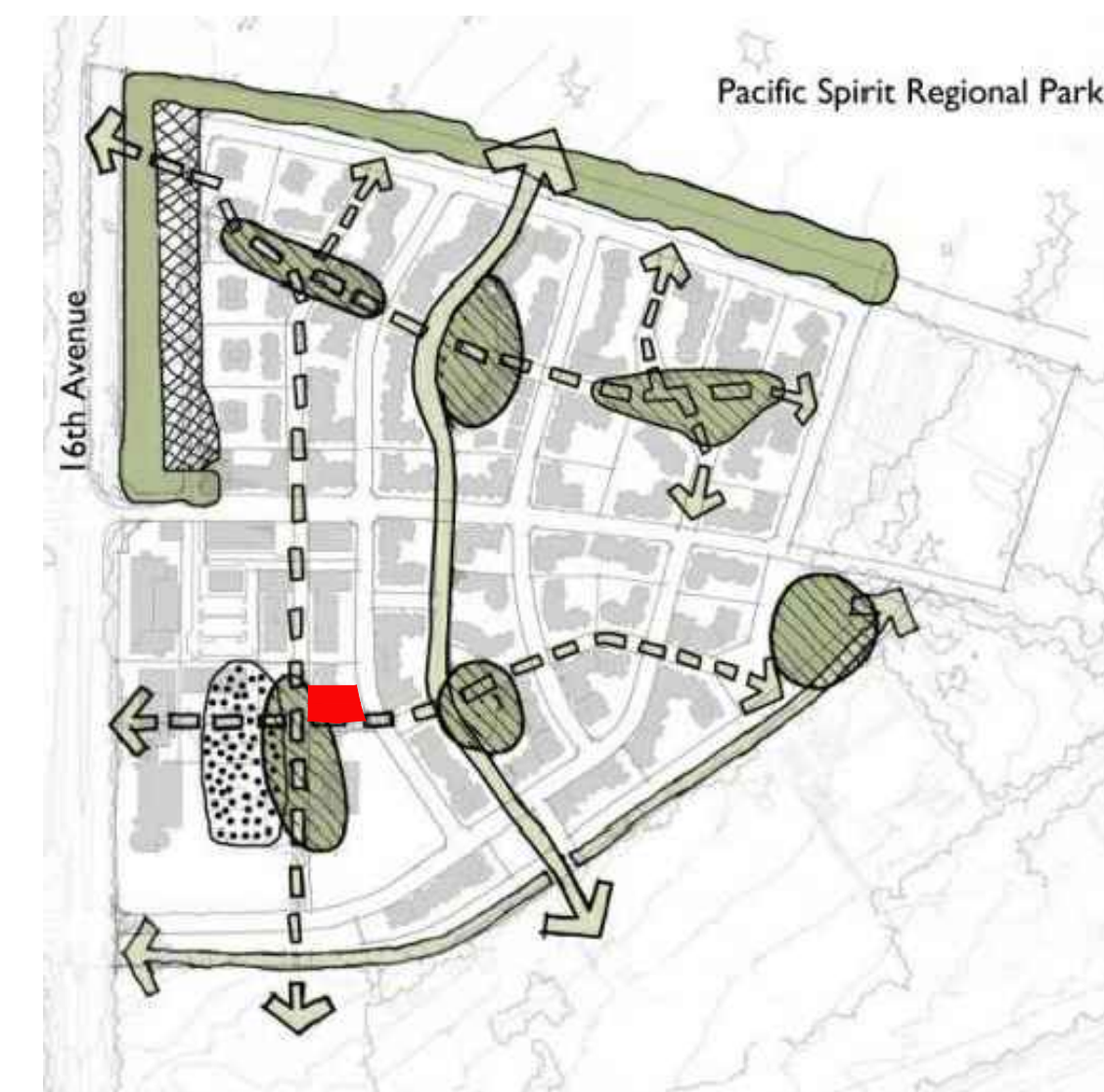
Land Use Plan



Neighbourhood Plan



Walking Map



Green Network



Site

The site is approximately 1,430 SM (15,392 SF/0.354 acres) in size having a street frontage of 46.41 M (152.26 feet) on Webber Lane to the east, 30.88 M (101.32 feet) on Birney Avenue to the south and 30.685 M (100.67 feet) on the greenway to the north.

Context

The site is located at the southwest corner of the Wesbrook Village. Yu, a six storey mixed-use building, is the immediate neighbour to the east and across Birney Avenue to the west are vacant sites for a future elementary school and adjacent greenway connection.

Development Program

This development will include approximately 43,100 SF or 2.8 FSR of residential use.

This Faculty residential development will include a range of unit types, from one bedroom to four bedroom units, to reflect the anticipated market demand for this style of accommodations.

Three bedroom units will be the primary accommodation residence type.

These new residences will take advantage of the close proximity to Wesbrook Village and two school sites. They will front on the comprehensive network of pedestrian connections, open space amenities and provide close proximity to the existing and future schools and community centre which is now under construction.



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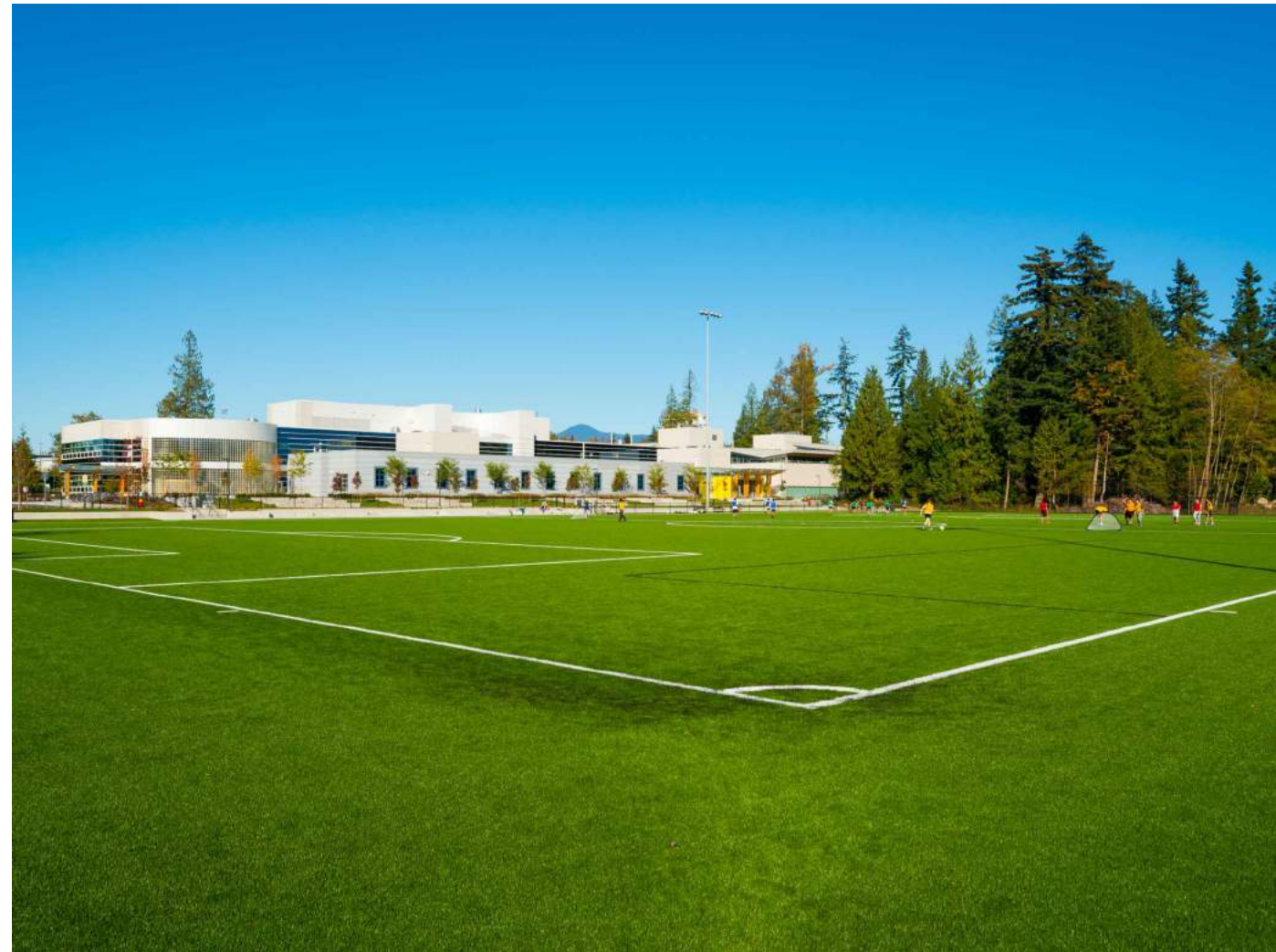
Site Context



4. Yu



5. Yu



6. Brockhouse Park



7. University Hill Secondary



1. Pacific



2. Sail



3. Wesbrook Place Community Centre



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Neighbour Context

WWW.DISCOVERWESBROOK.COM

SK - 1.3

Design Response

The proposed building massing closely conforms to the intent of the Wesbrook Place Neighbourhood Plan objectives.

The adjacent street and open space frontages have well defined perimeter edges and direct access for the ground floor units to take advantage of this urban street context at the southerly edge of the Wesbrook Village.

This building will be six storeys in height, built in frame construction, with its two storey entrance lobby fronting Webber Lane.

The access ramp to the parking garage, which has already been constructed, will be shared with the Yu development located to the east.

Careful design attention has been considered for the relationships of the ground floor residences to the adjacent sidewalks and street frontages. Inclusion of varied wall elements, gates, fencing and soft landscaping will extend the already established street and pedestrian characters for Wesbrook Place.

The ground floor garden homes will be expressed in a brick facade to reinforce the sense of desirability and building quality to compliment the established character for Wesbrook Place.

The clear articulation of the facade elements forms an interesting collection of complimentary and distinct building forms. The selection of the facade materials, extensive glazing, varied roof profiles and bay forms further define this design intent.

Three bedroom homes are located at the building corners having glazed great rooms on two sides to take advantage of views and to provide a building “transparency” at these corner locations.

The composition of these building components and selection of materials and colours is intended to express an interesting and well composed building massing with having a simple articulation of the building facades in a contemporary manner.

The Gold REAP rating, as defined by the UBC Residential Environmental Assessment Program, will be achieved by this development.



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Design Response

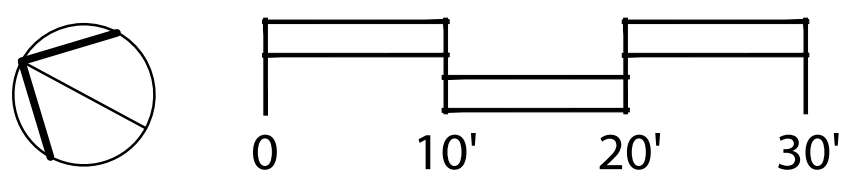


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Site Plan



3/32"=1'-0" SK - 1.5

LOT 3 (Updated Total FSR)

DEVELOPMENT SUMMARY

Room Type	Parking	Main	2nd floor	3rd Floor	4th Floor	5th Floor	6th Floor	Total Units	Unit Area	Total Area	Less Area Exemption	Unit Mix
A 1 Bedroom		1	1	1	1	1	1	6	672 SF	4,032 SF	632 SF	17%
B 2 Bedroom		1	1	1	1	1	1	6	930 SF	5,580 SF	890 SF	17%
C 2 Bedroom+Den		0	0	1	1	1	1	4	1,159 SF	4,636 SF	1,119 SF	11%
C1 2 Bedroom		1	1	0	0	0	0	2	1,079 SF	2,158 SF	1,039 SF	6%
D 4 Bedroom		0	0	1	1	1	1	4	1,456 SF	5,824 SF	1,416 SF	11%
E 3 Bedroom+Den		0	0	1	1	1	1	4	1,239 SF	4,956 SF	1,199 SF	11%
E1 3 Bedroom		1	1	0	0	0	0	2	1,164 SF	2,328 SF	1,124 SF	6%
F 3 Bedroom		1	1	1	1	1	1	6	1,244 SF	7,464 SF	1,204 SF	17%
H 3 Bedroom+Den		1	1	0	0	0	0	2	1,161 SF	2,322 SF	1,121 SF	6%
#UNIT / FLOOR		6	6	6	6	6	6	36	UNITS			
UNIT AREA/FLOOR		6,250 SF	6,250 SF	6,700 SF	6,700 SF	6,700 SF	6,700 SF			39,300 SF		100%
Common Area		1,392 SF	1,118 SF	938 SF	938 SF	938 SF	938 SF			6,262 SF		excluded
Bike Storage Room												excluded
Storage Locker												excluded
Garbage/ Recycling												excluded
Maintenance												excluded
Elevator Shaft		52 sf	52 sf	52 sf	52 sf	52 sf	52 sf			312 SF		excluded
Lobby		293 sf								293 SF		excluded
Service Spaces		55 sf	55 sf	55 sf	55 sf	55 sf	55 sf			330 SF		excluded
GROSS FLOOR AREA		7,642 SF	7,368 SF	7,638 SF	7,638 SF	7,638 SF	7,638 SF			45,562 SF		
NET EFFICIENCY		81.8 %	84.8 %	87.7 %	87.7 %	87.7 %	87.7 %			86.3 %		

FSR CALCULATION

GROSS AREAS	45,562 SF		2.80 FSR
STORAGE EXEMPTION OF 40 SF PER UNIT MAX. (36 UNITS)	1,440 SF		
AREAS <1.2 M ABOVE GRADE (AREAS UNDER STAIRS)	90 SF		
ELEVATOR SHAFT	312 SF		
GROUND FLOOR AMENITY LOBBY	293 SF		
SERVICE SPACES	330 SF		
TOTAL FSR	43,097 SF		

LEGAL DESCRIPTION
LOT 3, DISTRICT LOT 6494, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN EPP29484
PID: 029-436-672

SITE AREAS

TOTAL AREA	0.3532 acres	1,430.0 sm		15,393 sf
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SITE COVERAGE

AREA	15,393 sf	Permitted 55%		Proposed 52.3%
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REQUIRED PARKING

RESIDENT PARKING	1.00 CARS / UNIT	MIN.	36.0	UNDERGROUND		
VISITOR PARKING	0.10 CARS / UNIT	MIN.	3.6	ON SURFACE		
TOTAL	1.10 CARS / UNIT		39.6	CAR STALLS		39.6 CAR STALLS
SMALL CAR COUNT	PERMITTED			25%		9.90 STALLS
DISABILITY STALLS	REQUIRED	BCBC 2006 - 1 PER 100 STALLS INCLUDED IN RESI REQ. ABOVE OR 0.10 PER UNIT BASED ON UBC REQUIREMENTS				3.6 STALLS

PROPOSED PARKING

RESIDENT PARKING	1.00 CARS / UNIT		36.0	UNDERGROUND		
VISITOR PARKING	0.10 CARS / UNIT		4.0	UNDERGROUND		
TOTAL	1.10 CARS / UNIT		40	CAR STALLS		40 CAR STALLS
SMALL CAR COUNT	PROPOSED			0%		0 STALLS
DISABILITY STALLS		0.10 CARS / UNIT MIN				3 STALLS

REQUIRED BIKES

RESIDENT BIKES	1.50 BIKES / UNIT	CLASS 1	54.0	UNDERGROUND		
VISITOR PARKING	16.00 BIKES / 35 UNITS	CLASS 2	16.5	ON SURFACE/UNDERGROUND		
TOTAL	1.96 BIKES / UNIT		70	BIKES		70 BIKES

PROPOSED BIKES

RESIDENT BIKE LOCKERS	1.00 BIKES / UNIT	CLASS 1	36	UNDERGROUND	fixed	Class 1	54
RESIDENT BIKE RACK	0.50 BIKES / UNIT	CLASS 1	18	UNDERGROUND	calculated		
VISITOR PARKING		CLASS 2	16	UNDERGROUND	calculated	Class 2	24
VISITOR PARKING		CLASS 2	8	ON SURFACE	fixed		
TOTAL	2.17 BIKES / UNIT		78	BIKES			78 BIKES

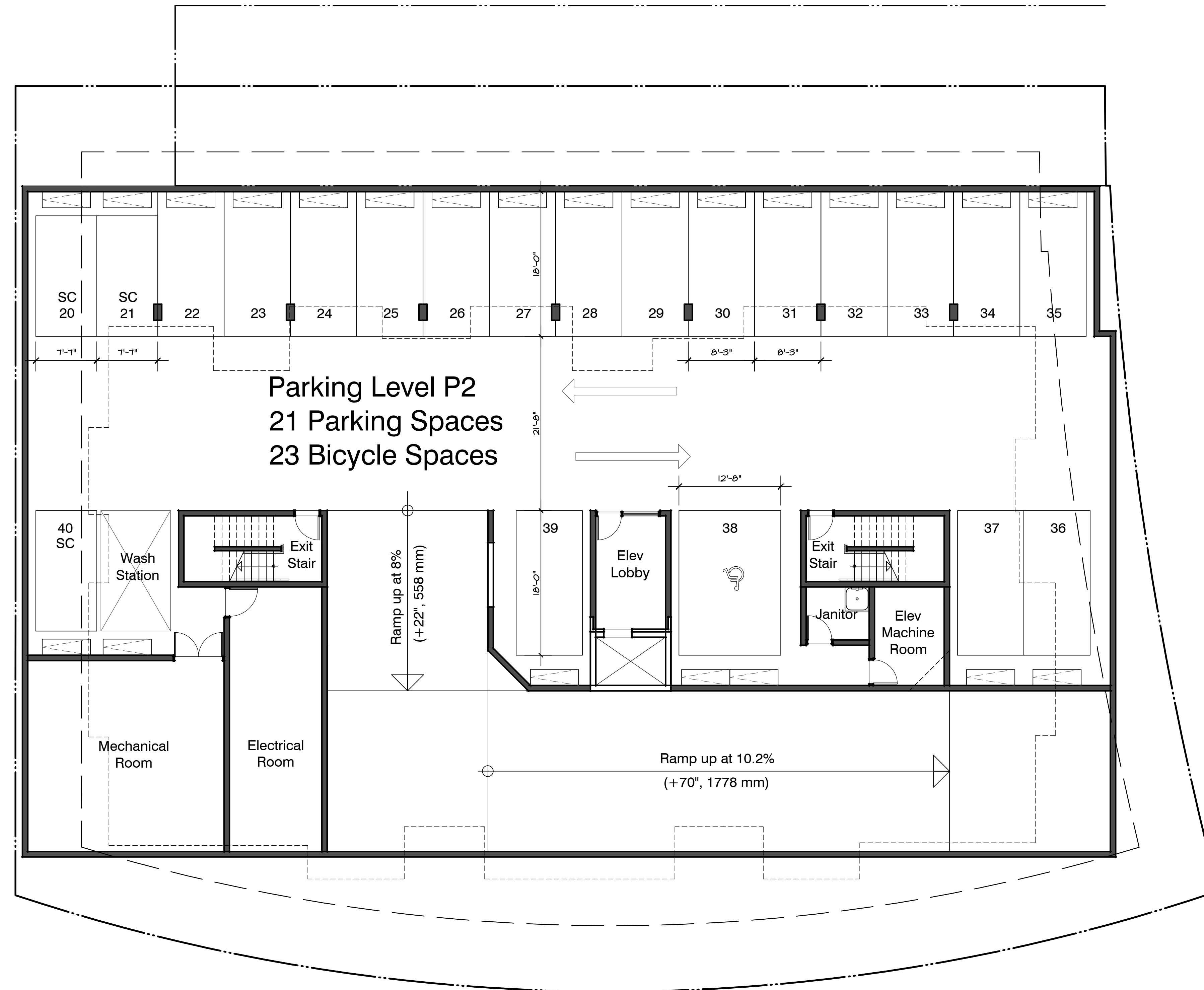


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Summary



Birney Avenue

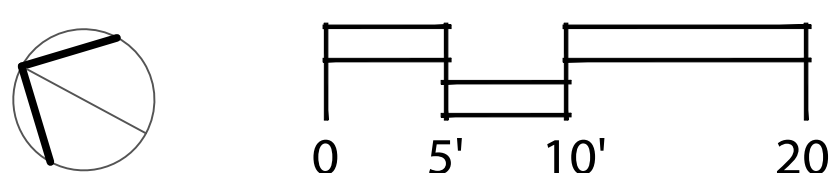
Webber Lane

Parking Plan P2



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1/8"=1'-0" SK - 2.1

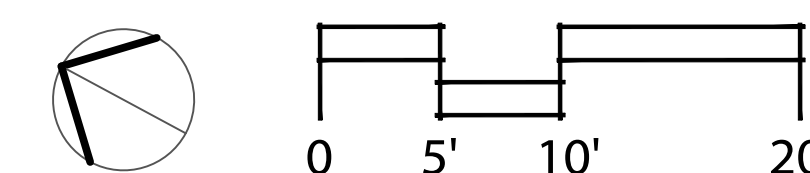


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Main Floor Plan



1/8"=1'-0" SK - 2.3



Birney Avenue

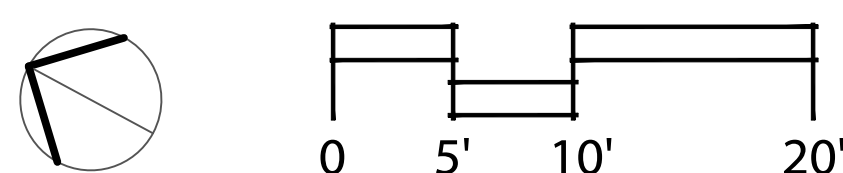
Webber Lane

2nd Floor Plan



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1/8"=1'-0" SK - 2.4



Birney Avenue

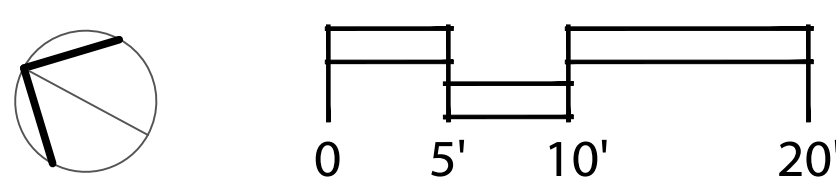
Webber Lane

3rd to 6th Floor Plan

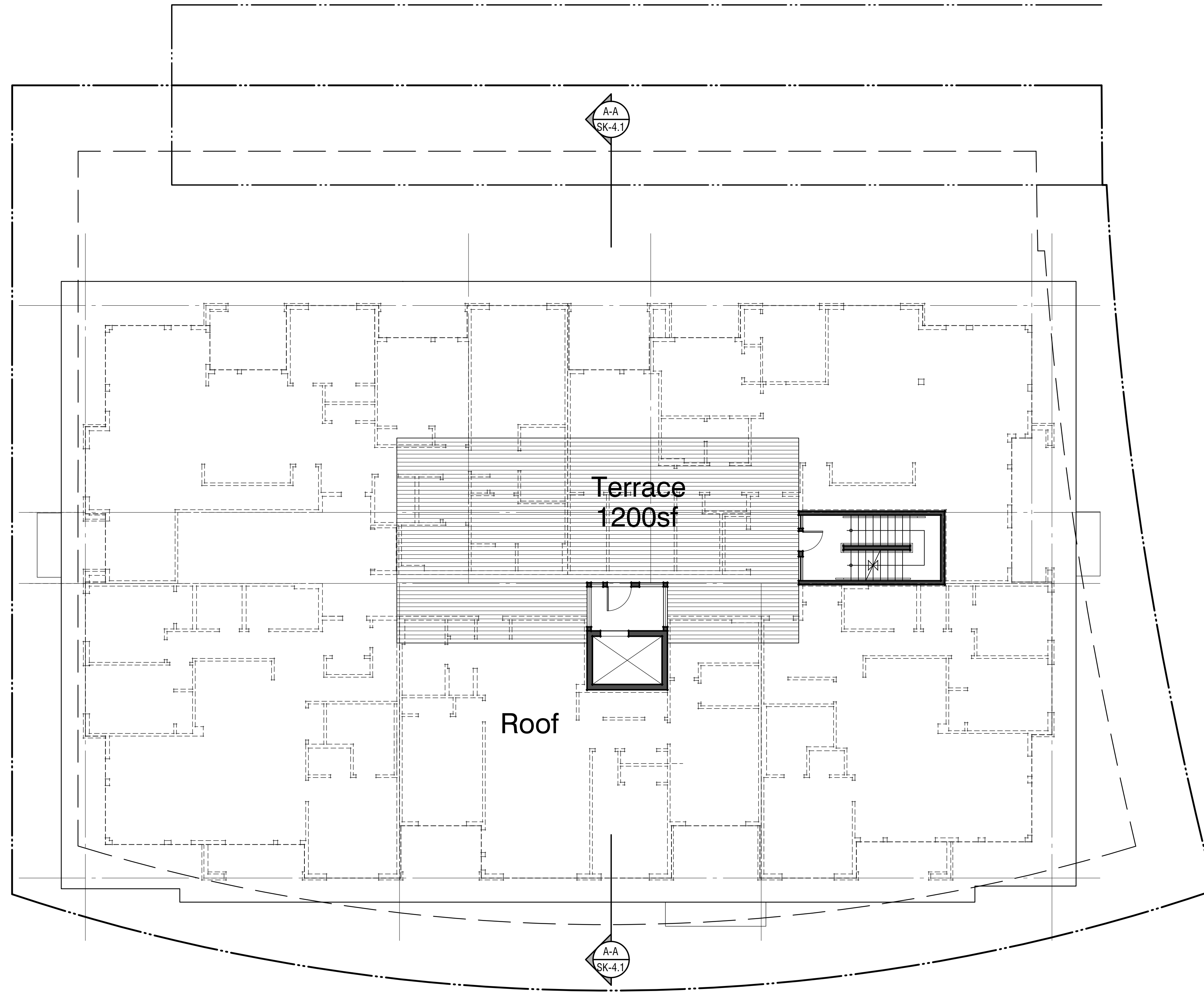


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1/8"=1'-0" SK - 2.5



Birney Avenue

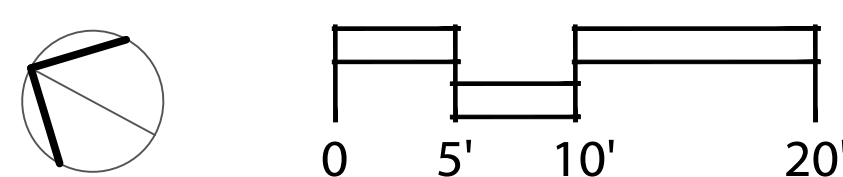
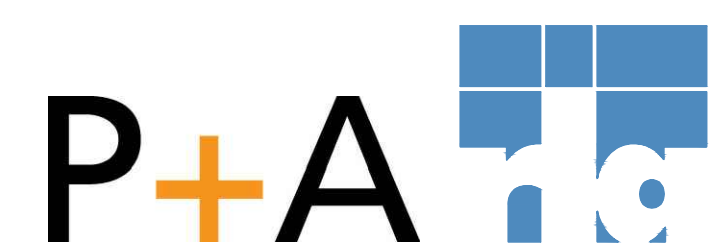
Webber Lane

Roof Plan



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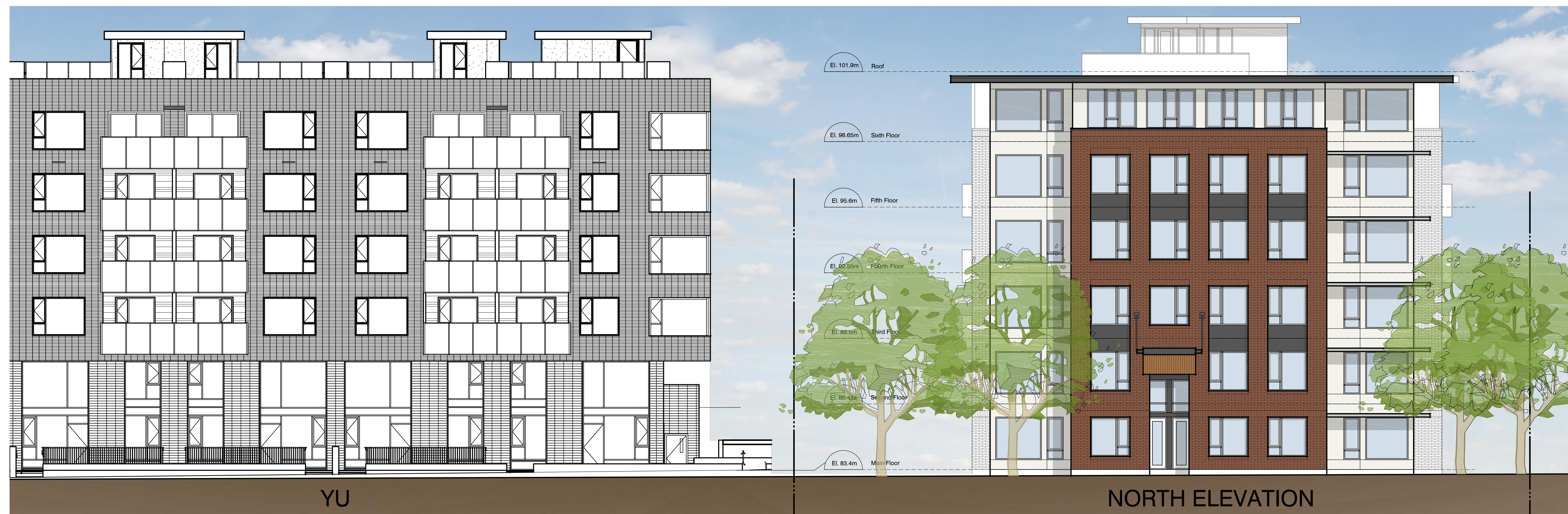
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1/8"=1'-0" SK - 2.6



WEST ELEVATION



NORTH ELEVATION

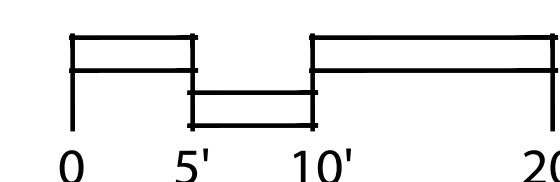
YU

Elevations



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1/8"=1'-0" SK - 3.1

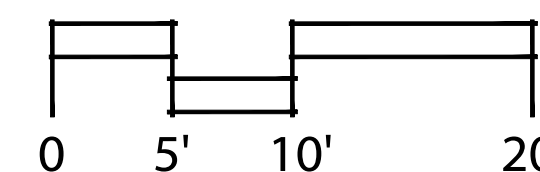


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Elevations

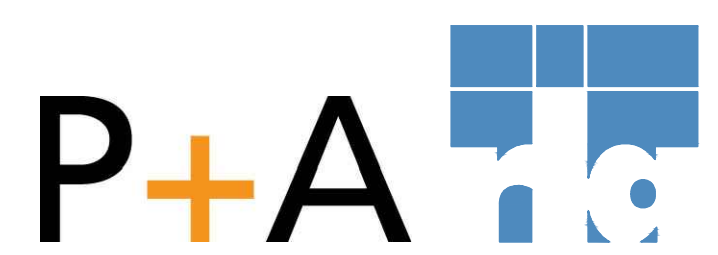


1/8"=1'-0" SK - 3.2



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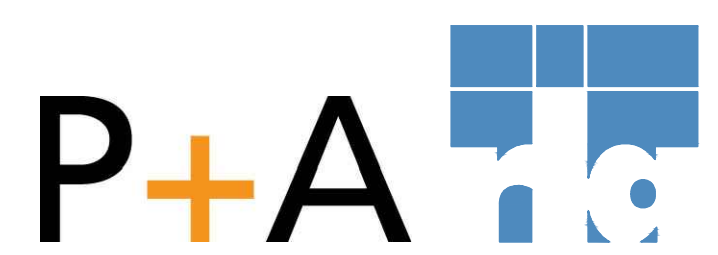


Elevations - West Entrance



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Elevations - South Entrance



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Elevations - North Entrance



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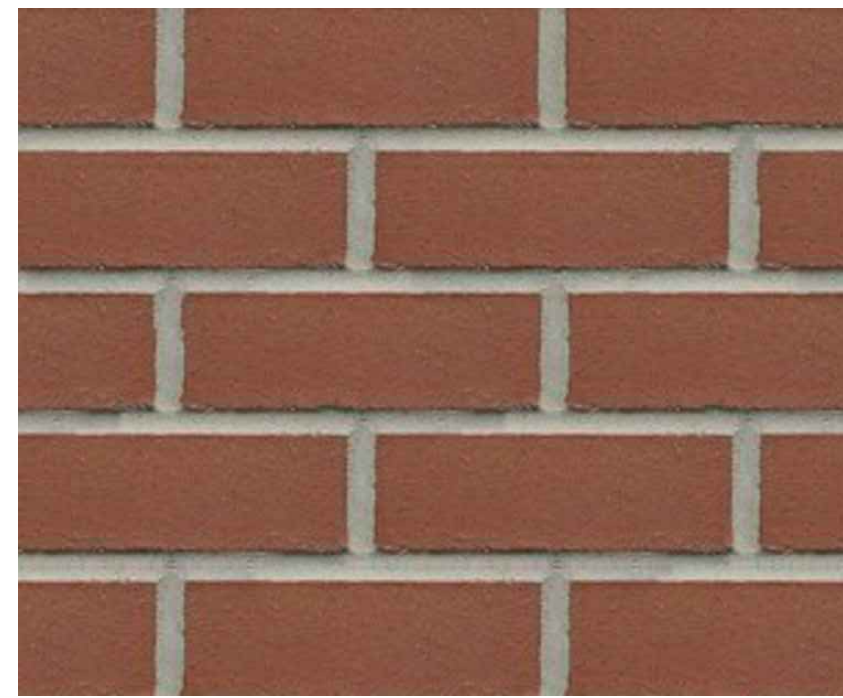
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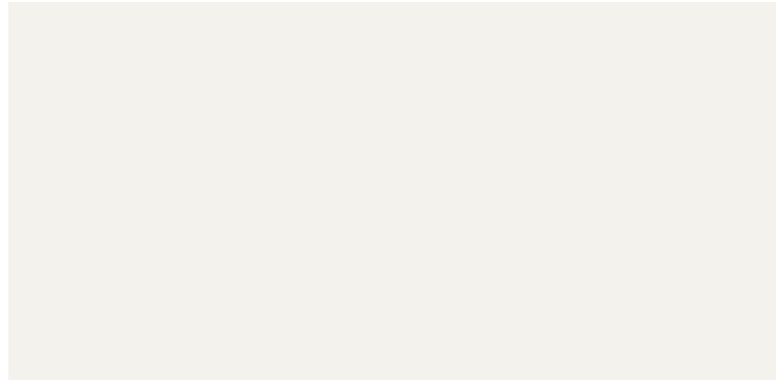
Elevations - Corner



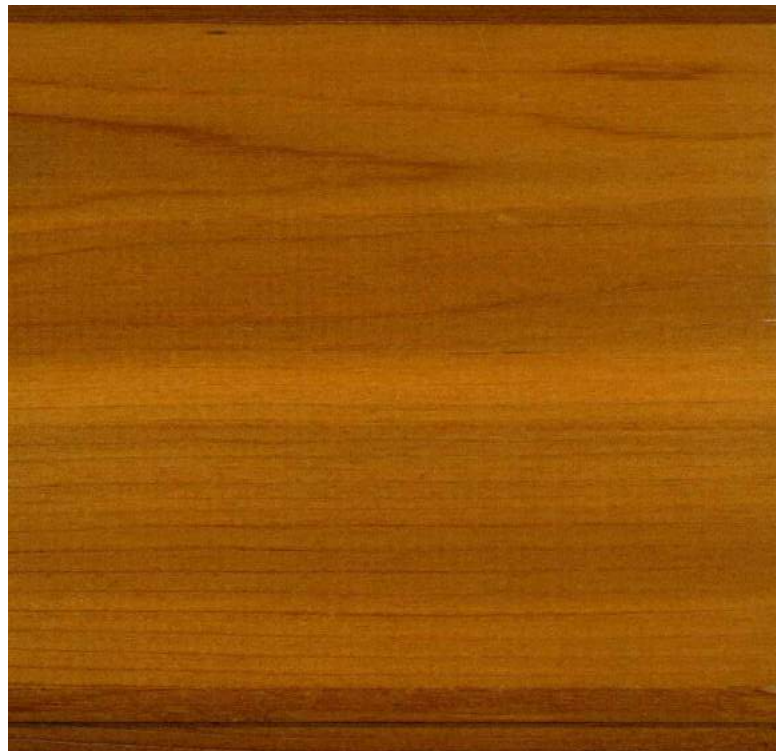
Granite Cladding



Brick Cladding
"Burgundy" Slimbrick - Mutual Materials



"White Heron"
OC-57, Benjamin Moore Paints



Cedar Soffit, Stained



"Amherst Grey"
HC-167, Benjamin Moore Paints



Guards & Railings
Clear Anodized Aluminum Finish



- Roof**
SBS Cap Sheet, Light Grey
- Roof Fascia**
Fibre Cement Board
"Amherst Gray", HC-167, Benjamin Moore Paints
- Roof Soffit**
T&G Cedar 1x4 V-joint
Stained, Natural Cedar
- Windows**
Vinyl Split Frame
Black Exterior, White Interior, Low-E Glazing
- Light Wall Panel Cladding**
Fibre Cement Board Panels
"White Heron", OC-57, Benjamin Moore Paints
White Flashing
- Guards & Railings**
Frit Glass Panels set in Aluminum Frames
Clear Anodized Aluminum Finish
- Balcony Soffit**
Fibre Cement Board
Colour to Match Adjacent Wall Cladding
- Dark Wall Panel Cladding**
Fibre Cement Board Panels
"Amherst Gray", HC-167, Benjamin Moore Paints
White Flashing
- Horizontal Louver**
Aluminum Frame w/ Aluminum Angled Slats
Clear Anodized Finish
- Brick Cladding**
Running Bond, "Burgundy", Mutual Materials
Charcoal Grey Flashing
- Doors**
Metal, Painted Black

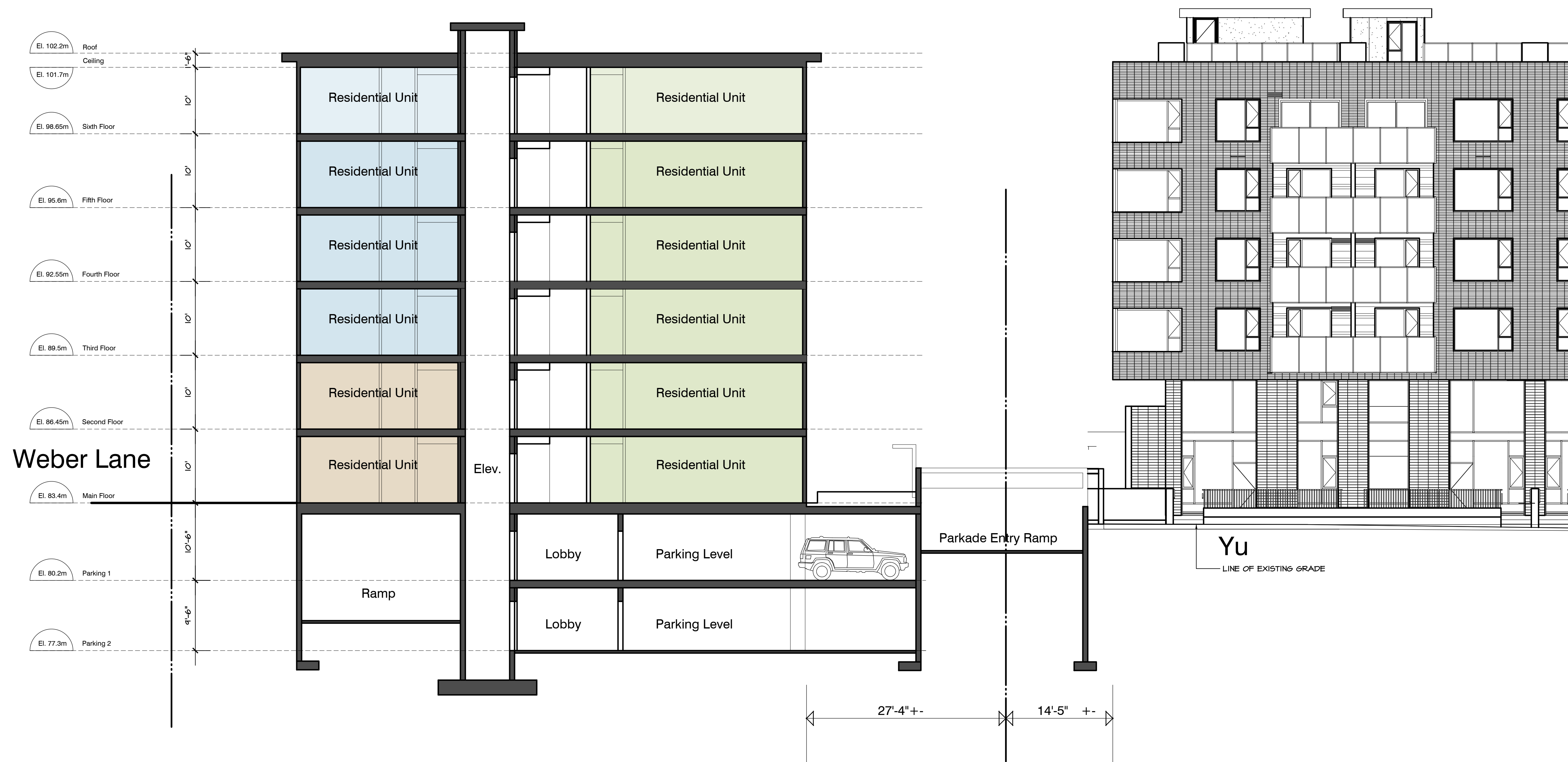


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Colour & Material Board



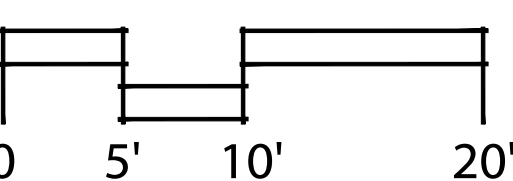
SECTION AA

Section AA

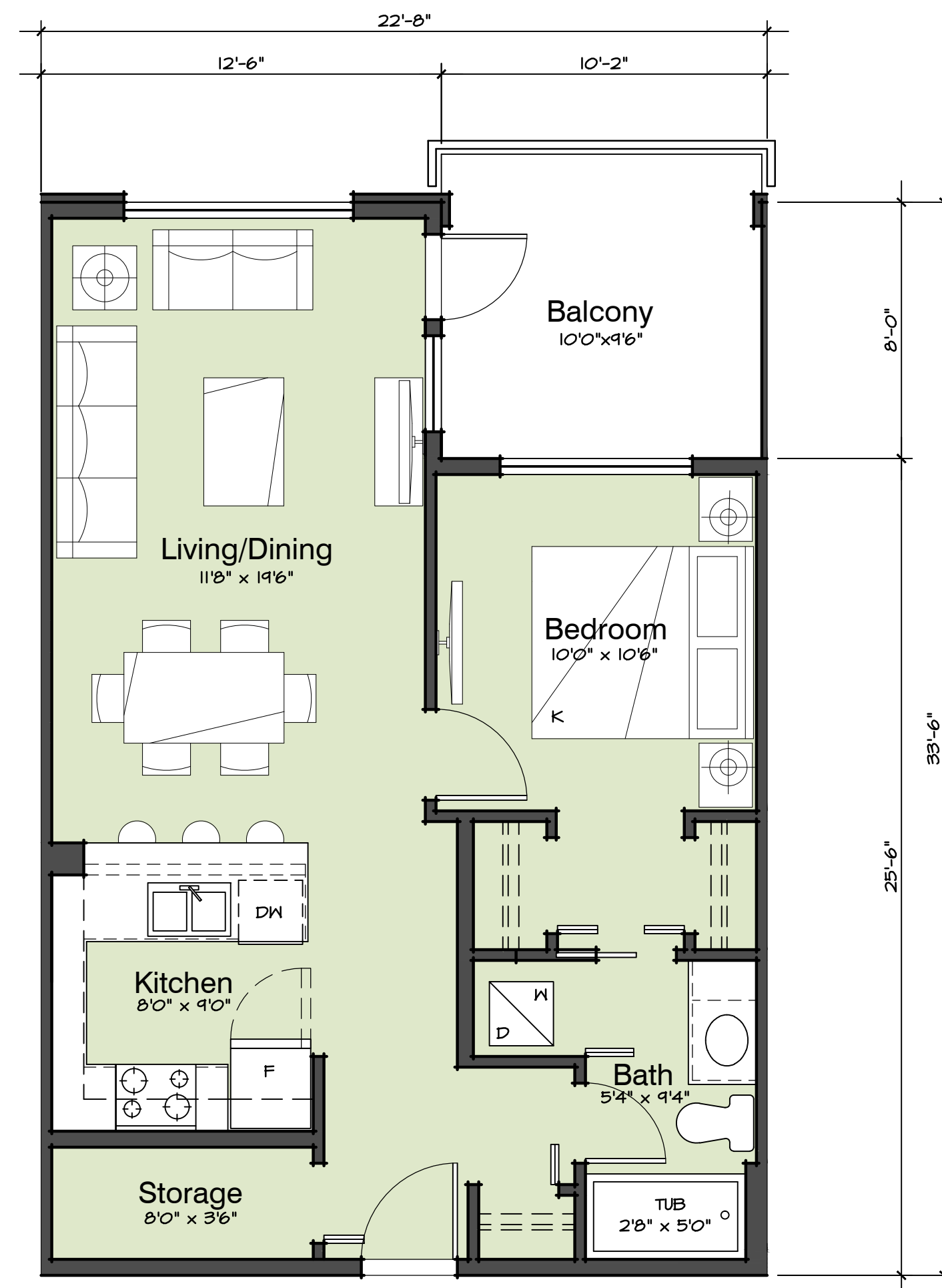


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1/8"=1'-0" SK - 4.1



Unit A
One Bedroom
Area: 672 sf
6 of 36 units



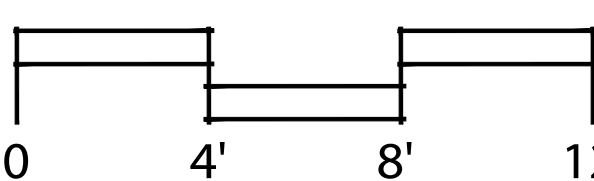
Unit B
Two Bedroom
Area: 930 sf
6 of 36 units

Unit Plans



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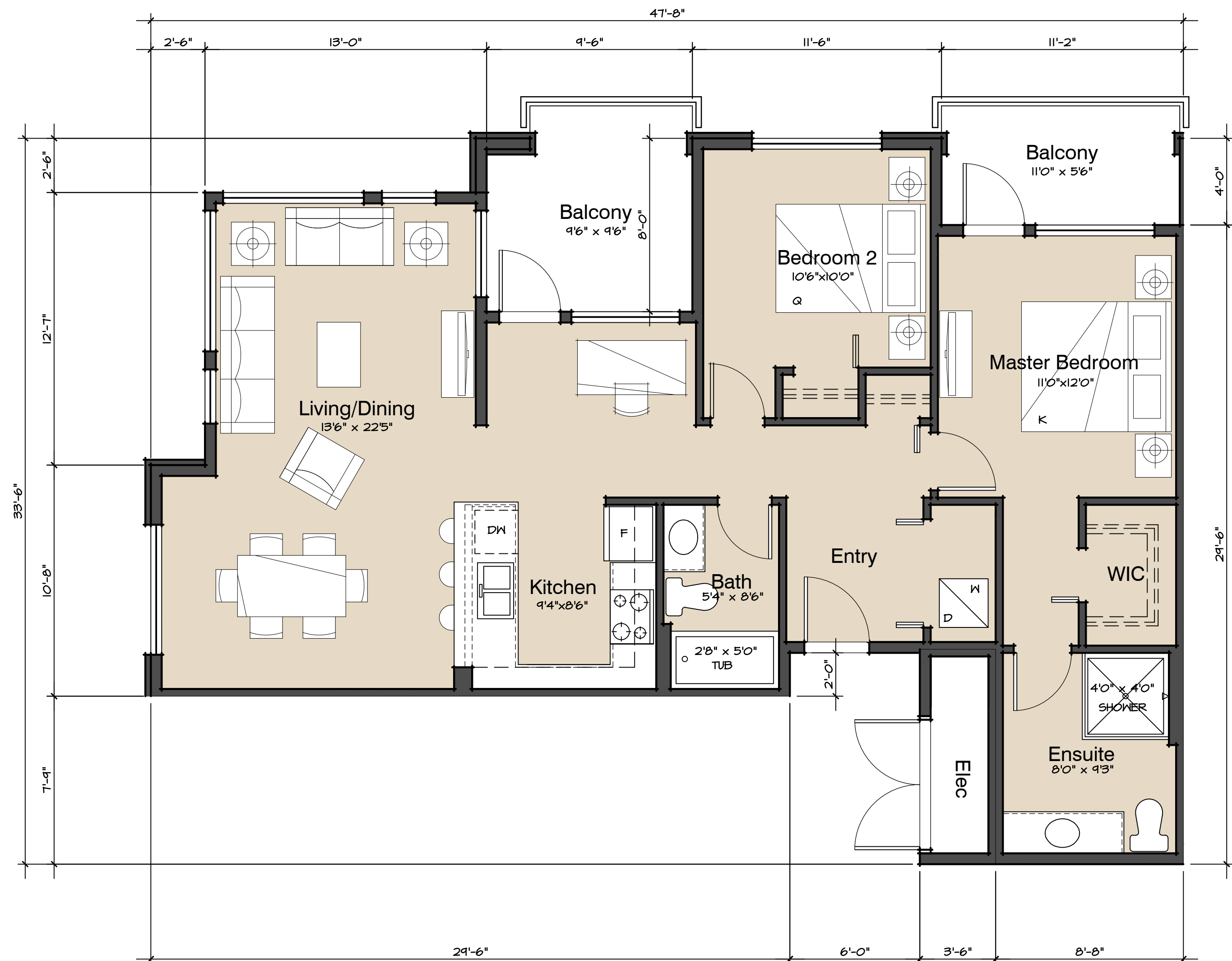
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1/4"=1'-0" SK - 5.1



Unit C
Two Bedroom + Flex
Area: 1,159 sf
4 of 36 units



Unit C1
Two Bedroom
Area: 1,079 sf
2 of 36 units

Unit Plans

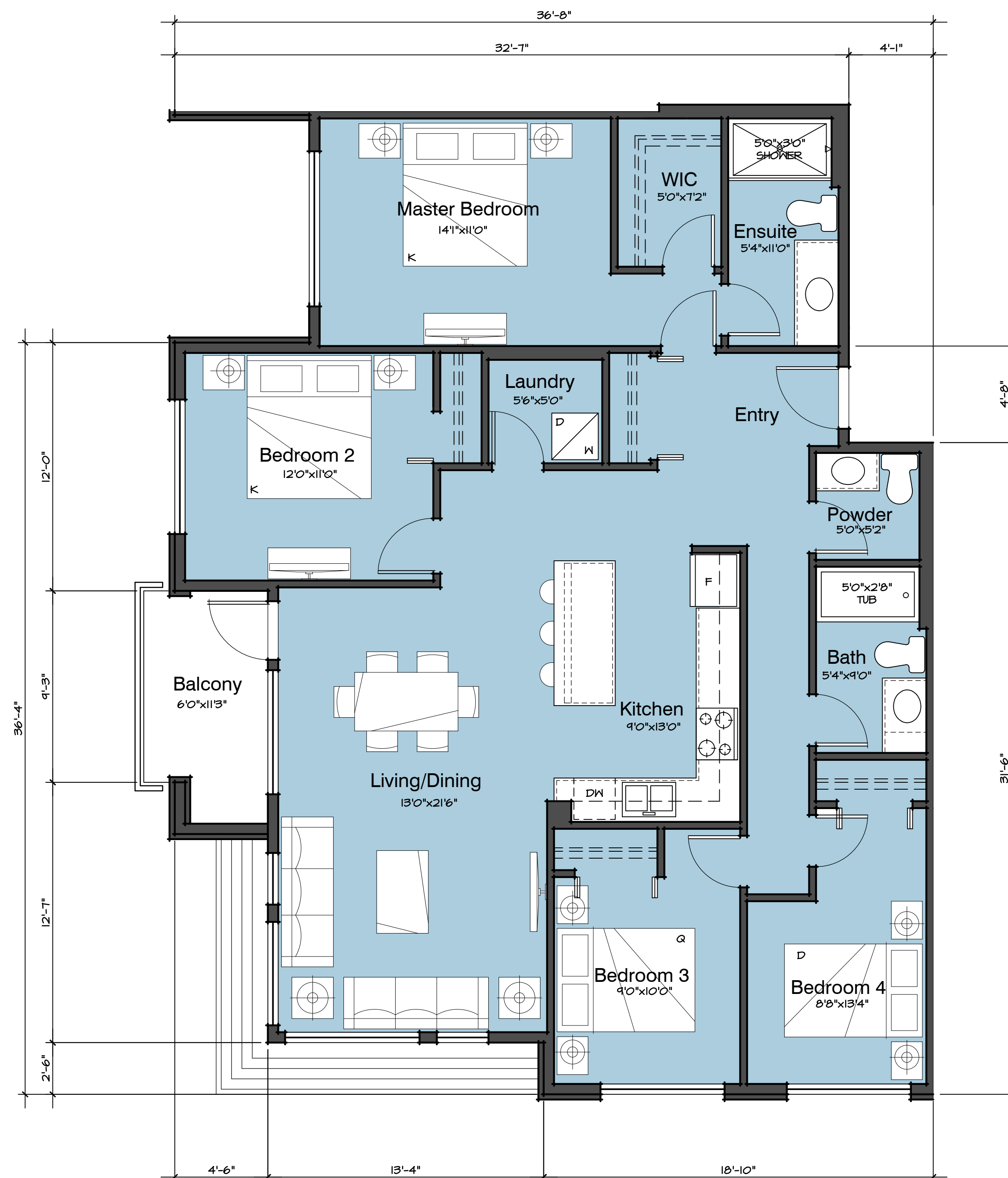


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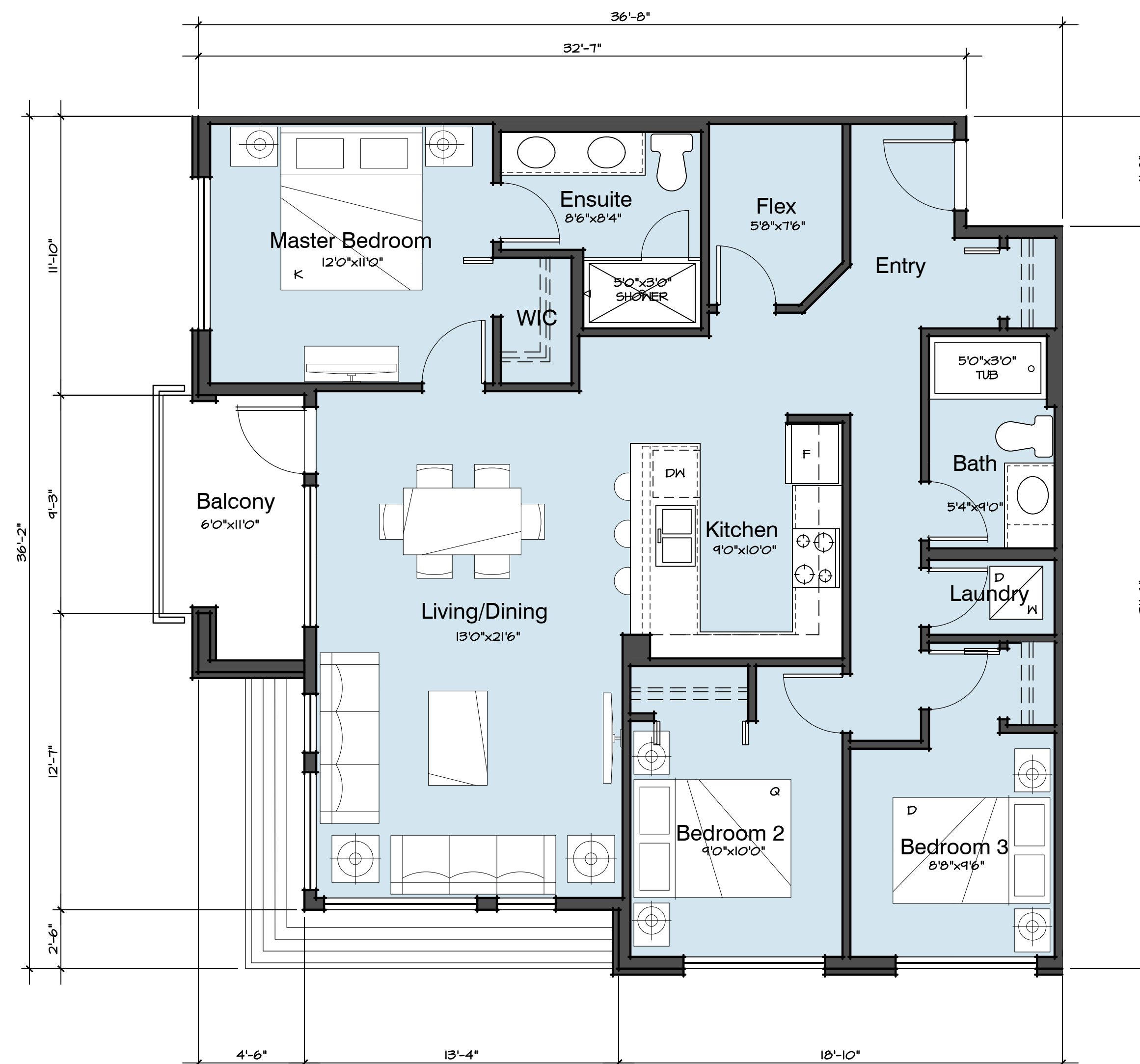
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1/4"=1'-0" SK - 5.2



Unit D
Four Bedroom
Area: 1,458 sf
4 of 36 units



Unit H
Three Bedroom + Den
Area: 1,161 sf
2 of 36 units



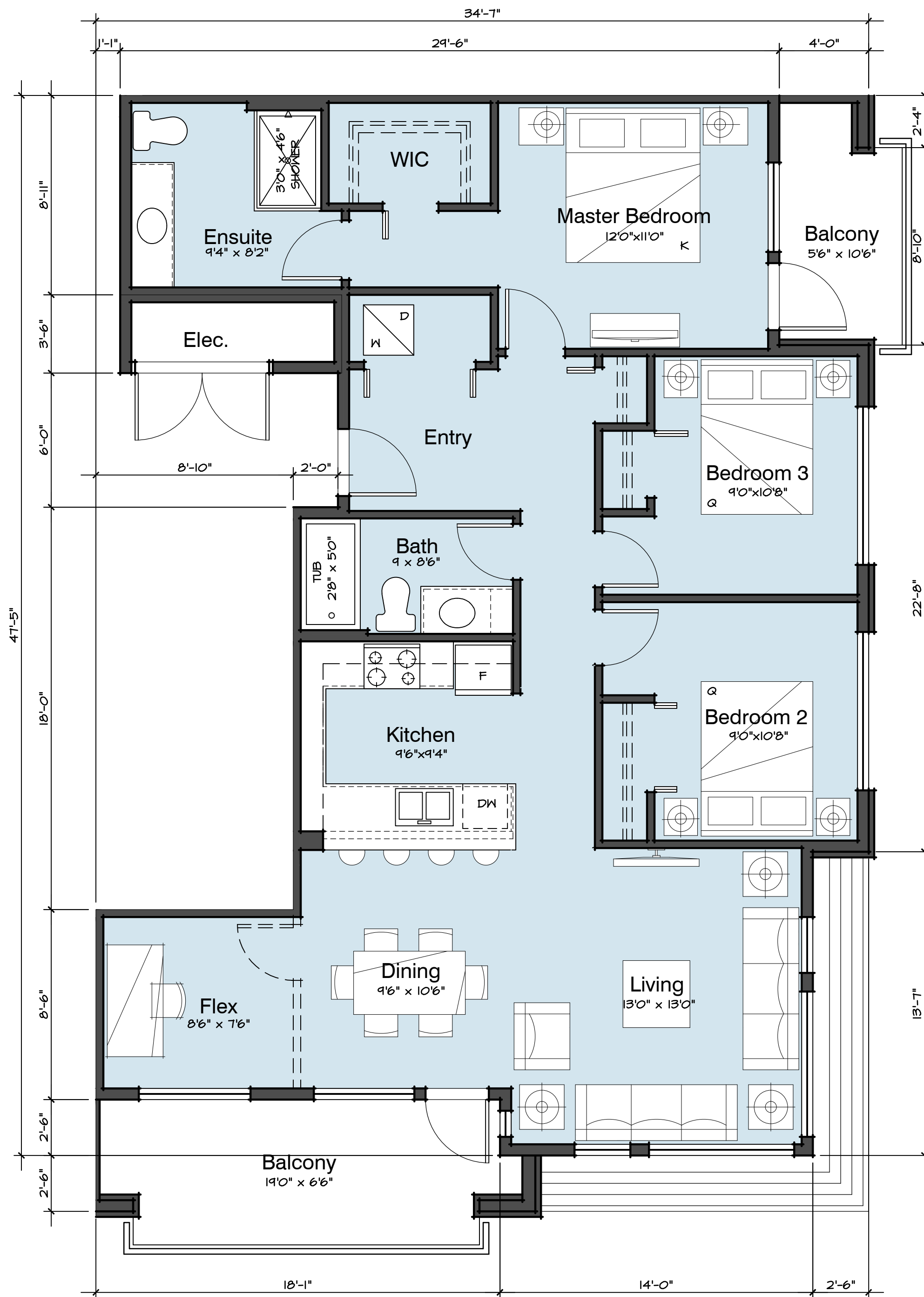
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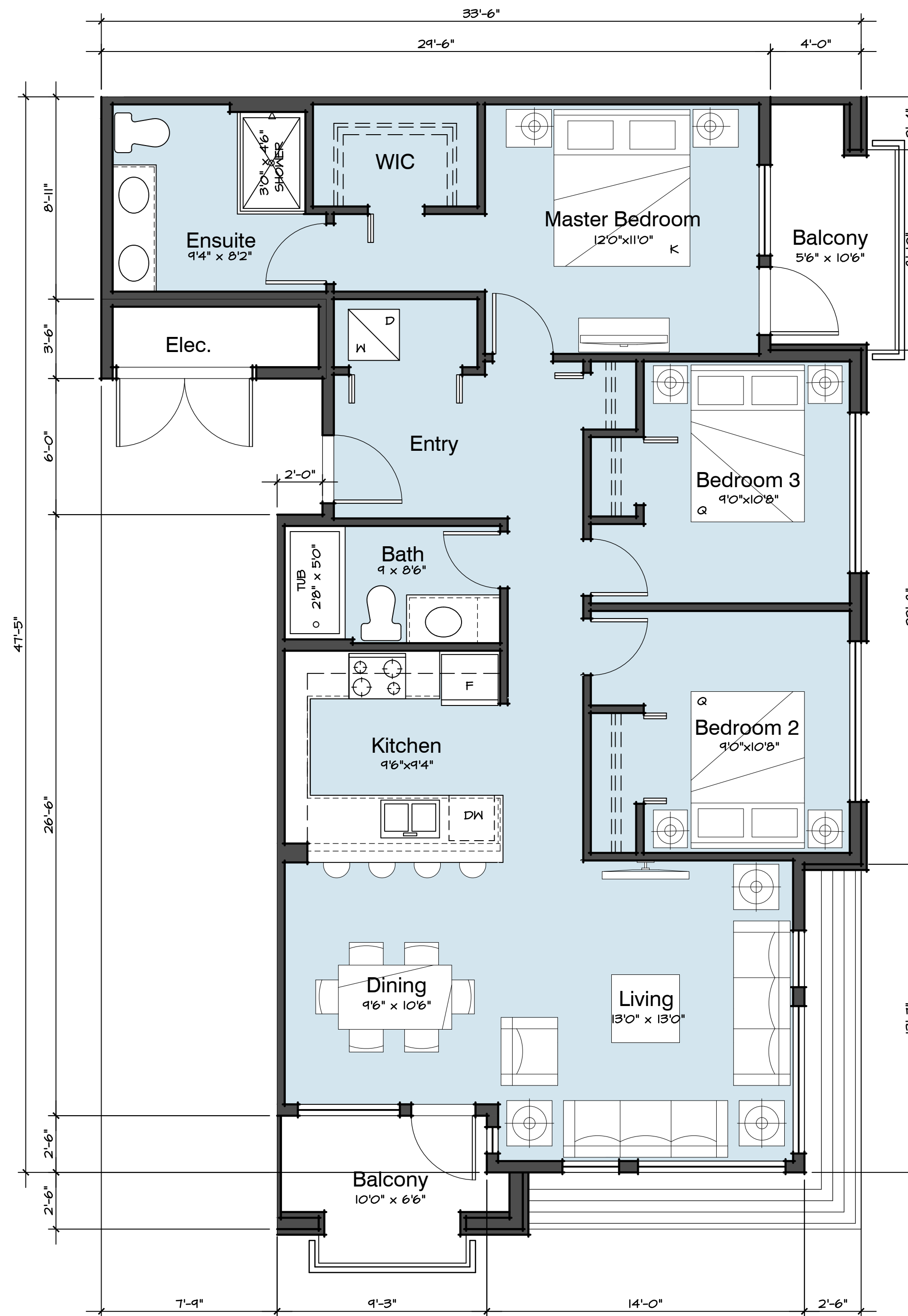


1/4"=1'-0" SK - 5.3

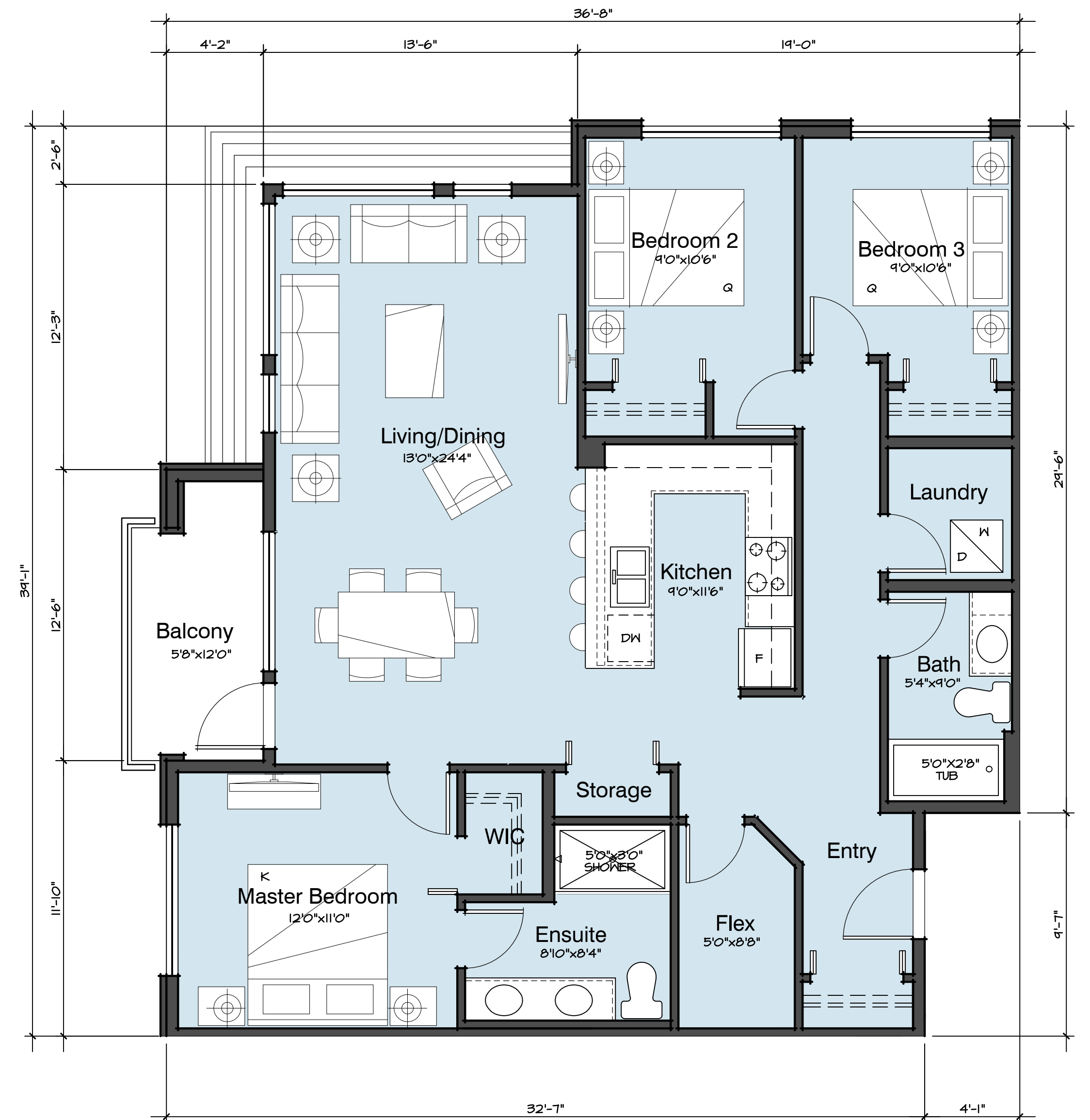
Unit Plans



Unit E
Three Bedroom + Flex
Area: 1,239 sf
4 of 36 units



Unit E1
Three Bedroom
Area: 1,164 sf
2 of 36 units



Unit F
Three Bedroom + Flex
Area: 1,244 sf
6 of 36 units

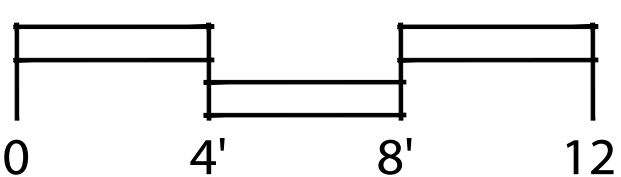


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Unit Plans



1/4"=1'-0" SK - 5.4



Model Views



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Model Views



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March 21, 9am



March 21, 12pm



March 21, 3pm



June 21, 9am



June 21, 12pm



June 21, 3pm



Sept 21, 9am



Sept 21, 12pm



Sept 21, 3pm



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Shadow Study

[illegible]

SK - 7.1

[illegible]

Utilities Record Plans

UBC Residential Environmental Assessment Program				
Project Information				
Developer:	UBCPT			
Architect:	Raymond Letkeman Architects			
Project Name:	Lot 45			
Neighbourhood:	South Campus, Wesbrook			
Lot No.:	Lot 45			
Street Address:	Birney Avenue			
Project Stage:	Development Permit			
UBC DP Reference No.:	TBD			
Date:	Updated March 19, 2014			
MANDATORY CREDITS	Max	Score	?	
Sustainable Sites (SS M)	10	10	0	
Water Efficiency (WE M)	6	6	0	
Energy & Atmosphere (EAM)	19	19	0	
Indoor Environmental Quality (IEQ M)	11	11	0	
Construction (CON M)	8	8	0	
Innovation & Design Process (ID M)	2	2	0	
Subtotal	56	56	0	
OPTIONAL CREDITS	Max	Score	?	
Sustainable Sites (SS)	10	6	1	
Water Efficiency (WE)	25	15	5	
Energy & Atmosphere (EA)	50	25	2	
Materials & Resources (MR)	27	15	0	
Indoor Environmental Quality (IEQ)	7	7	0	
Construction (CON)	4	2	0	
Innovation & Design Process (ID)	21	21	0	
Subtotal	144	91	8	
TOTAL	200	147	155	
REAP Rating: GOLD (140 – 169 pts)				
66 – 79 pts Basic Compliance				
80 – 109 pts Bronze				
110 – 139 pts Silver				
140 – 169 pts Gold				
170 – 200 pts Platinum				

PART ONE: MANDATORY DESIGN CREDITS				
		Performance Category: Sustainable Sites (SS)		
		10 Points		
		The intent of the Sustainable Sites category is to reduce the negative impacts of development, maintain the natural landscape, vegetation and environmental attributes of the site and provide new landscaping that enhances the microclimate.		
		Score: 10		
SS	M1	STORM WATER MANAGEMENT		
	M1.1	Storm Water Management Plan	2	2
		Develop a plan that integrates the on-site stormwater management system with the neighbourhood-wide stormwater management principles and strategies, including controlling of rate and/or quantity of run-off as required.		Civil
SS	M2	NEW LANDSCAPING		
	M2.1	Adapted and Ecologically Sound Planting	2	2
		Demonstrate that landscape design has minimized the need for pesticides and irrigation through the selection of adaptive and drought-tolerant plants and consideration of the principles of Integrated Pest Management and xeriscaping.		Landscape
SS	M3	ALTERNATIVE TRANSPORTATION		
	M3.1	Bicycle Storage	2	2
		Provide covered storage facilities for securing bicycles in accordance with the UBC Development Handbook.		Architect
	M3.2	Contribution to Community Car Sharing	2	2
		Contribute to the development of a community car-sharing network by funding the equivalent of one community vehicle per 100 residential units.		Developer
SS	M4	LIGHT POLLUTION REDUCTION		
	M4.1	Light Pollution Reduction	2	2
		Do not exceed Illuminating Engineering Society of North America (IESNA) illuminance requirements as stated in the Recommended Practice Manual: Lighting for Exterior Environments.		Electrical
		Performance Category: Water Efficiency (WE)		
		6 Points		
		The intent of the Water Efficiency category is to encourage strategies that reduce the amount of potable water used for landscape irrigation and building operations.		
		Score: 6		
WE	M1	WATER EFFICIENT LANDSCAPING		
	M1.1	Efficient Irrigation Technology and Rainwater Use	2	2
		Design and install a water-efficient irrigation system that includes an automated controller, rain or soil sensors and pressure regulator and for non-grass areas use a micro- or drip-feed irrigation or install a temporary irrigation system.		Landscape
WE	M2	WATER USE REDUCTION		
	M2.1	Low-Flush Toilets	2	2
		Specify and install low-flush or ultra low-flush toilets (max. 6 L per flush) for all water closets.		Interior Design
	M2.2	Low-Flow Faucet Aerators	2	2
		Specify and install low-flow faucets with aerators in all bathroom sinks (max. 3.8 L per minute) and in all kitchen sinks (max. 6.8 L per minute).		Interior Design



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Reap

Performance Category: Energy & Atmosphere (EA)				19 Points			
The intent of the Energy & Atmosphere category are to reduce depletion of non-renewable energy resources and to reduce environmental impacts of their energy use, particularly emissions of local, regional and global air pollutants and greenhouse gases.							
				Score: 19			
EA	M1	MINIMUM ENERGY EFFICIENCY MEASURES					
	M1.1	Minimum Roof Insulation		1	1		
		Design the roof assembly with a minimum insulation value of R-40 for buildings with attic space and R-28 for cathedral ceilings/flat roofs.				Architect	
	M1.2	Minimum Exterior Wall Insulation		1	1		
		Design the exterior building envelope with a minimum insulation value of R-22 for non-glazed areas.				Architect	
	M1.3	Minimum Floor Insulation		1	1		
		Design floors above non-heated parkade areas with a minimum insulation value of R-30 for framed floors and R-14 for slab floors.				Architect	
	M1.4	Energy Efficient Windows		4	4		
		Specify and install Energy Star-rated windows <i>or</i> windows with a maximum overall U-value of 0.35 for vinyl frames or 0.50 or less for aluminum frames.				Architect	
	M1.5	Minimum Furnace or Make-up Air Unit Efficiency		3	3		
		Specify and install furnaces and make-up air units with a minimum efficiency of 80%.				Mechanical	
	M1.6	Domestic Hot Water		2	2		
		Specify and install a gas DHW boiler with a minimum efficiency of 80% (mid-efficiency boiler) <i>or</i> electric DHW heaters with an Energy Factor of 0.90 or higher.				Mechanical	
	M1.7	Low-Flow Shower Heads		1	1		
		Specify and install water-saving showerheads with a maximum flow rate of 8.5 L per minute in each shower.				Interior Designer	
	M1.8	Energy Star Appliances		2	2		
		Specify and install Energy Star-labelled dishwashers and refrigerators in each unit.				Interior Designer	
	M1.9	Energy Star Clothes Washer		1	1		
		Specify and install Energy Star-labelled clothes washers for each unit <i>or</i> if clothes washers are provided only as an option, specify and offer only Energy Star models.				Interior Designer	
	M1.10	Programmable Thermostats		2	2		
		Specify and install Energy Star-labelled programmable thermostats for at least the largest heating zone in each unit.				Electrical	
	M1.11	Common Area Lighting		1	1		
		Specify and install only non-incandescent lighting, such as fluorescent, compact fluorescent or LED, in common areas.				Electrical	
Performance Category: Indoor Environmental Quality (IEQ)				11 Points			
The intent of the Indoor Environmental Quality category is to provide guidance in achieving enhanced indoor environmental quality through early design integration, the thoughtful selection of materials and effective ventilation strategies.							
				Score: 11			
IEQ	M1	LOW-EMITTING MATERIALS					
	M1.1	Adhesives and Sealants		3	3		
		Specify and use adhesives, sealants and sealant primers that do not exceed the VOC limits of the Canadian Environmental Choice/EcoLogo program <i>or</i> do not exceed the VOC limits specified in the State of California's South Coast Air Management District Rule #1168.				Interior Designer	
	M1.2	Paints		2	2		
		Specify and use paints and coatings that carry an EcoLogo label or those approved by the Master Painter's Institute as having a minimum of MPI Environmental Level 2.				Interior Designer	
	M1.3	Floor Coverings		2	2		
		Specify and install floor covering systems that do not exceed the Carpet and Rug Institute Green Label Indoor Air Quality Test Program <i>or</i> that carry the Canadian Environmental Choice/EcoLogo certification.				Interior Designer	
IEQ	M2	INDOOR AIR QUALITY					
	M2.1	Ventilation Effectiveness		4	4		
		Prepare and implement an effective air management strategy that meets the requirements of CSA F326 or ASHRAE-62.				Mechanical	

Performance Category: Construction (CON)				8 Points			
The construction process can impose significant and lasting impact on the ecology of both the site and beyond. The construction credits acknowledge and reward contractors who have followed best practice.							
				Score: 8			
CON	M1.0	REDUCE SITE DISTURBANCE					
	M1.1	Staging and Construction		1	1		
		Prepare and implement a staging and construction plan, including alternate detour information and signage for pedestrians and cyclists.				Contractor	
	M1.2	Vegetation Safeguards and Land-Clearing Debris		1	1		
		Prepare a site plan showing the sizes and locations of vegetation to be removed, retained and salvaged, including plants located on adjacent public rights-of-way (see reference guide) <i>and</i> develop a plan to effectively handle debris from land clearing and divert it from landfill disposal.				Developer	
	M1.3	Truck Management Plan		1	1		
		Prepare and implement a comprehensive truck management plan for the project that conforms to the <i>UBC Strategic Transportation Plan</i> and the <i>Neighbourhood Plan Development Guidelines</i> .				Developer	
	M1.4	Wheel Wash		1	1		
		Provide a wheel wash for vehicles leaving the site <i>or</i> a street cleaning program and catch basin protection.				Developer	
CON	M2	EROSION AND SEDIMENTATION CONTROL					
	M2.1	Erosion and Sedimentation Control		2	2		
		Prepare and implement a site sediment and erosion control plan that conforms to <i>Best Management Practices Guide for Stormwater: Appendix H – Construction Site Erosion and Sediment Control Guide</i> (GVS&DD, October 1999).				Developer	
CON	M3	CONSTRUCTION WASTE MANAGEMENT					
	M3.1	Waste Management Plan		2	2		
		Prepare and implement a waste management plan that diverts 75% (by weight) of construction, demolition and land clearing waste from landfill.				Contractor	
Performance Category: Innovation & Design Process (ID)				2 Points			
The intent of Innovation & Design Process category is to provide incentive and credit for general design and other innovative practices that improve the overall sustainability and environmental performance of the project.							
				Score: 2			
ID	M1	INTEGRATED DESIGN PROCESS					
	M1.1	Goal-Setting Workshop		2	2		
		Hold a goal setting workshop including the developer, design consultants and contractor to review the <i>Residential Environmental Assessment Program</i> , set goals for the project and assign responsibilities.				Developer	



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PART TWO: OPTIONAL DESIGN CREDITS				
Performance Category: Sustainable Sites (SS)			10 Points	
The intent of the Sustainable Site category is to reduce the negative impacts of development, maintain the natural landscape, vegetation and environmental attributes of the site and provide new landscaping that enhances the microclimate.				
			Score:	6
SS	1	RECYCLING AND COMPOSTING		
	1.1	In-Suite Recycling and Compost Separation	1	1
		Provide a space and system for simplified separation and collection of recycling and compostables in each suite or unit.		Developer
	1.2	On-Site Composting Facilities	1	
		Designate space for compost collection at the building level or identify an appropriate location on the Landscape Plan for future on-site composting.		X
	1.3	Recycling Collection	3	3
		Provide for collection of domestic paper, plastic, glass and metal recyclables by contracting with a waste management company for the service.		Developer
	1.4	Off-Site Composting	2	2
		Provide for collection of compost for delivery to a centralized composting facility.		Developer
SS	2	ALTERNATIVE TRANSPORTATION		
	2.1	Alternative Fuel Vehicles	1	?
		For every eighty parking stalls, or fraction thereof, designate two parking stalls for use by alternatively-fuelled vehicles and provide electrical service suitable for a charging station for every two parking stalls designated for alternatively-fuelled vehicles.		Architect
	2.2	Community Car Sharing Vehicle	2	
		Provide a new vehicle and parking space to a community car-sharing network that is to be parked on-site. This is over and above the requirement of SS M3.2.		X
Performance Category: Water Efficiency (WE)			25 Points	
The intent of the Water Efficiency category is to encourage strategies that reduce the amount of potable water used for landscape irrigation and building operations.				
			Score:	15
WE	1	WATER EFFICIENT LANDSCAPING		
	1.1	Reduce Potable Water Use	3	3
		Reduce potable water use for site irrigation needs by 50%.		Landscape
	1.2	Eliminate Potable Water Use	5	
		Eliminate potable water use for site irrigation needs.		X
WE	2	WATER USE REDUCTION		
	2.1	Dual-Flush Toilets	3	3
		Specify and install ultra low-flow toilets (max. 4 L per flush) or dual-flush toilets (max. 6 L & 3 L per flush) for all water closets.		Interior Designer
	2.2	Water Efficient Dishwasher	3	3
		Specify and install water-efficient dishwashers that use less than 20 L per normal wash cycle.		Interior Designer
	2.3	Water Efficient Clothes Washer	3	3
		Specify and install water-saving clothes washers with a maximum water consumption of 62 L per standard cycle or if washers are available only as an option, offer only compliant water-saving models.		Interior Designer
	2.4	Comprehensive Water Use Reduction Package	3	3
		Additional credit for achieving all credits from WE 2.1 to WE 2.3.		Developer
WE	3	WATER METERING		
	3.1	Hot Water metering	3	?
		In units with central hot water, provide individual hot water metering.		Mechanical
	3.2	Cold-Water metering	2	?
		Provide for individual cold water meters for all units.		Mechanical

Performance Category: Energy & Atmosphere (EA)			50 Points	
The intention of the energy and atmosphere category are to reduce depletion of non-renewable energy resources and to reduce the environmental impacts of energy use, particularly emissions of local, regional and global air pollutants and greenhouse gases.				
			Score: 25	
EA	1	BASIC ENERGY EFFICIENCY MEASURES		
	1.1	Roof Insulation	1	1
		Design the roof assembly with a minimum insulation value of R-60 for buildings with attic space and R-40 for cathedral ceilings/flat roofs.		Architect
	1.2	Exterior Wall Insulation	1	1
		Design exterior building envelope with a minimum insulation value of R-28 for non-glazed areas.		Architect
	1.3	Energy Star Windows	2	2
		Specify and install Energy Star-rated windows with a maximum overall U-value of 0.31 for vinyl frames or 0.46 for aluminum frames.		Architect
	1.4	Furnace or Make-Up Air Unit Efficiency	2	2
		Specify and install furnaces and make-up air units with a minimum efficiency of 85%.		Mechanical
	1.5	Domestic Hot Water	2	2
		Specify and install a modulating DHW gas boiler with a minimum efficiency of 85% (mid-efficiency boiler) or electric DHW heaters with an Energy Factor of 0.94 or higher.		Mechanical
	1.6	Boiler Management System	2	2
		Install and implement a boiler management system to match the boiler operation to the building loads and optimize the boiler controls for maximum energy savings or specify electric DHW heaters with an Energy Factor of 0.96 or higher.		Mechanical
	1.7	Low-Flow Shower Heads	2	2
		Specify and install low-flow showerheads (max. 5.7 L per minute) in each unit.		Interior Designer
	1.8	Compact Fluorescent Lights	2	2
		Specify and install compact fluorescent lamps for lighting of in-suite circulation areas such as corridors, entries, landings, etc.		Electrical
	1.9	Occupancy Sensors for Parkade Lighting	2	2
		Install occupancy sensors for lighting over parking areas of the parkade. Lighting over the drive-aisle and exits, as well as other emergency or security lighting should remain unswitched.		Electrical
	1.10	Bundle Bonus (25% < MNECB)	3	3
		Achieve credits EA 1.1 to EA 1.9, which is roughly equivalent to reducing energy use by 25% below the <i>Model National Energy Code for Buildings</i> or demonstrate equivalent achievement with energy modeling (see Note on page 44 of the REAP Reference Guide).		Developer
EA	2	ADDITIONAL ENERGY EFFICIENCY MEASURES		
	2.1	Minimum Floor Insulation	1	1
		Design floors above non-heated parkade areas with a minimum insulation value of R-42 for framed floors and R-20 for slab floors.		Architect
	2.2	High-Performance Energy Star Windows	2	?
		Specify and install Energy Star-rated windows with a maximum overall U-value of 0.26 for vinyl frames or 0.42 for aluminum frames.		Architect
	2.3	Heat Recovery System	2	X
		Design and install a heat recovery system with a minimum 50% overall effectiveness.		
	2.4	GeoeXchange DHW Heating System	5	3
		Design and install a geoeXchange DHW heating system to supply a minimum of 25% of the peak DHW heating load and 70% of the total DHW energy load.		District Energy
	2.5	Bundle Bonus (40% < MNECB)	3	X
		If Credit EA 1.10 (25% < MNECB) has been achieved, this credit is available for also achieving credits EA 2.1 to EA 2.4, which is roughly equivalent to reducing energy use by 40% below the <i>Model National Energy Code for Buildings</i> or demonstrate equivalent performance with energy modeling (see Note on page 44 of the REAP Reference Guide).		



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EA	3	ADVANCED ENERGY EFFICIENCY MEASURES			
	3.1	Domestic Hot Water	2	2	Mechanical
		Specify and install a condensing DHW gas boiler with a minimum efficiency of 92% (high-efficiency boiler) or electric DHW heaters with an Energy Factor of 1.00 or higher.			
	3.2	Advanced Energy Performance (50% < MNECB)	5		
		Demonstrate that energy use is 50% below the <i>Model National Energy Code for Buildings</i> .		X	
EA	4	ENERGY METERING			
	4.1	Gas Sub-Metering	2		
		Provide separate metering for measuring natural gas consumption in individual units.		X	
EA	5	RENEWABLE ENERGY			
	5.1	Solar Access Study	1		
		Undertake shading and solar access studies to evaluate the potential for the installation or retrofit of solar energy collection systems.		X	Architect
	5.2	Future Solar Technologies	2		
		Pre-plumb buildings for future adoption of solar hot water or photovoltaic technologies.		X	Mechanical
	5.3	Install Solar Technologies	3		
		Utilize solar technologies such as photovoltaic panels or solar domestic hot water heating systems.		X	
	5.4	Green Power Certificates	3		
		Contract with BC Hydro to purchase Green Power Certificates equivalent to the electricity use of the building for the first two years following occupancy.		X	

		Performance Category: Materials & Resources (MR)	27 Points		
		The intent of the Materials & Resources category is to encourage design strategies that reduce and reuse material resources, reduce construction waste, and to select building materials that are environmentally preferable.			
		Score: 15			
MR	1	RECYCLED CONTENT AND REUSED MATERIALS			
	1.1	Reused Building Materials	2		
		Use salvaged, refurbished, or reused materials for at least 5% of the total cost of building materials.		X	
	1.2	Reused Building Materials	3		
		Use salvaged, refurbished, or reused materials for at least 10% of the total cost of building materials.		X	
	1.3	Recycled Content Materials	10	10	
		Specify and use building materials with the following recycled content levels (one point per recycled material, with a bonus 10th point for including all nine materials).			
		<input type="checkbox"/> Common area carpet with minimum 25% recycled content	Y/N	y	Contractor
		<input type="checkbox"/> Dimensional wall lumber with minimum 75% recycled content	Y/N	y	Contractor
		<input type="checkbox"/> Drywall with minimum 15% recycled content	Y/N	y	Contractor
		<input type="checkbox"/> Batt insulation with minimum 40% recycled content	Y/N	y	Contractor
		<input type="checkbox"/> Doors contain minimum 15% recycled material	Y/N	y	Contractor
		<input type="checkbox"/> Concrete with min. 20% fly ash content, excluding suspended slabs	Y/N	y	Contractor
		<input type="checkbox"/> Concrete with min. 40% fly ash content, excluding suspended slabs	Y/N	y	Contractor
		<input type="checkbox"/> Cabinetry with minimum 20% recycled content	Y/N	y	Contractor
		<input type="checkbox"/> MDF products with minimum 50% recycled content	Y/N	y	Contractor
MR	2	REGIONAL MATERIALS			
	2.1	Regionally Manufactured Building Materials	2	2	
		Use a minimum of 20% (by value) of building materials and products that are manufactured within a radius of 800 km (500 miles).			Contractor
	2.2	Regionally Sourced Building Materials	2		
		Of the materials from Credit MR 2.1, use a minimum of 50% (by value) of building materials and products that are extracted, harvested or recovered (as well as manufactured) within a radius of 800 km (500 miles).		X	
MR	3	CERTIFIED AND NON-ENDANGERED FOREST PRODUCTS			
	3.1	Dimensional Lumber	3	3	
		Demonstrate that a minimum of 50% of the total value of dimensional lumber is certified in accordance with either the <i>Forest Stewardship Council (FSC)</i> or the <i>Canadian Standards Association Z809 (CSA)</i> .			Contractor
	3.2	Plywood	2		
		Demonstrate that a minimum of 50% of the total value of plywood used is certified in accordance with either the <i>Forest Stewardship Council (FSC)</i> or the <i>Canadian Standards Association Z809 (CSA)</i> .		X	
	3.3	Renewable Hardwood Floors	3		
		Specify and install bamboo floors or hardwood floors certified in accordance with the <i>Forest Stewardship Council</i> or <i>CSA Z809</i> . If floors are offered only as an option, specify and offer only bamboo or renewable products with third-party certification.		X	



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Performance Category: Indoor Environmental Quality (IEQ)			7 Points		
The intent of the Indoor Environmental Quality category is to achieve enhanced indoor environmental quality through the thoughtful selection and application of materials and effective ventilation strategies.					
			Score: 7		
IEQ	1	LOW-EMITTING MATERIALS			
	1.1	Low VOC Paints	3	3	
		Specify and use paints approved by the Master Painter’s Institute as having a minimum of MPI Environmental Level 3.			Interior Designer
	1.2	Urea Formaldehyde-Free Cabinetry	2	2	
		Specify and install interior cabinetry doors and boxes that are urea formaldehyde-free.			Interior Designer
	1.3	Urea Formaldehyde-Free Composite Wood Products	2	2	
		Specify and install interior composite wood products, such as flooring, doors, trim, etc., that are urea formaldehyde-free.			Interior Designer
Performance Category: Construction (CON)			4 Points		
The construction process can impose significant and lasting impact on the ecology of both the site and beyond. The Construction credits acknowledge and reward contractors who have followed best practices.					
			Score: 2		
CON	1	CONSTRUCTION IAQ MANAGEMENT PLAN			
	1.1	Indoor Air Quality Management Plan	2	2	
		Prepare and implement an Indoor Air Quality (IAQ) Management Plan for the construction and pre-occupancy phases of the building.			Contractor
	1.2	Flushout	2		
		Conduct a minimum two-week continuous building flushout with new filtration media at 100% outside air after construction ends and prior to occupancy or conduct a baseline indoor air quality test.		X	

Performance Category: Innovation & Design Process (ID)			21 Points		
The intent of the Innovation & Design Process category is to provide incentive and credit for general design and other innovative practices that improve the overall sustainability and environmental performance of the project.					
			Score: 21		
ID	1	INTEGRATED DESIGN			
	1.1	Green Building Specialist	2	2	
		Engage an expert in green buildings and sustainable construction practices to provide advice on effective green building strategies to the design team.			Developer
	1.2	Energy Performance Screening	1	1	
		Utilize Natural Resource Canada’s online CBIP screening tool (http://cbipscreen.nrcan.gc.ca/) to determine the general energy performance of the building design.			Developer
	1.3	Energy Modeling Workshop	2	2	
		Model the energy performance of the building and hold a workshop with the design team and contractor to evaluate the results and optimize the design of the building.			Developer
ID	2	UNIVERSAL DESIGN			
	2.1	Design for Safety and Accessibility	1	1	
		Demonstrate that at least 25% of the units in the building have been designed to meet the SAFERhome standards (http://www.saferhomesociety.com/), which address issues of accessibility, children’s safety, seniors and aging in place.			Architect
	2.2	Design for Security and Crime Prevention	2	2	
		Demonstrate that the design has been reviewed by an accredited Crime Prevention Through Environmental Design (CPTED) practitioner (http://www.designcentreforcpted.org/).			Architect
ID	3	MARKET TRANSFORMATION			
	3.1	Educate the Sales Staff	1	1	
		Develop marketing materials based on the environmental performance of the project and ensure the sales staff is aware of and knowledgeable about the green building features.			Developer
	3.2	Educate the Homeowner	1	1	
		Develop a homeowner’s manual that describes all of the sustainable features of the project.			Developer
ID	4	ACADEMIC LINKS			
	4.1	Enhance Research or Further Student Development	5	5	
		Collaborate with UBC students and/or faculty on a research project or other opportunities to enhance the academic mission of the University and integrate it with the community.			Developer
ID	5	INNOVATIVE DESIGN			
	5.1	Innovative Design or Exemplary Achievement	2	2	
		Demonstrate exceptional performance above the requirements set by one of the existing credits or the implementation of an innovative design strategy not specifically addressed by any of the existing credits.			
	5.2	Innovative Design or Exemplary Achievement	2	2	
		Demonstrate exceptional performance above the requirements set by one of the existing credits or the implementation of an innovative design strategy not specifically addressed by any of the existing credits.			
	5.3	Innovative Design or Exemplary Achievement	2	2	
		Demonstrate exceptional performance above the requirements set by one of the existing credits or the implementation of an innovative design strategy not specifically addressed by any of the existing credits.			



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