

 **dys** architecture

 **POLYGON**

THE CONSERVATORY

Development Permit Submission

Revised 11 February 2020

C L I E N T

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LANDSCAPE

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MECHANICAL

WILLIAMS ENGINEERING CANADA INC.
1100 Melville St #740,
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ELECTRICAL

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2009 W 4th Ave,
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SUSTAINABILITY

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Burnaby, BC V5J 5M8
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ENERGY MODELING

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4321 Still Creek Dr #310,
Burnaby, BC V5C 6S7
T: 604 454 0402

CIVIL

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GEOTECHNICAL

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PROJECT STATISTICS

CIVIC ADDRESS	5728 BERTON AVENUE, VANCOUVER, B.C.				
LEGAL DESCRIPTION	LOT 5, DISTRICT LOT 6494, GROUP 1, N.W.D, PLAN BCP24848				
CURRENT ZONING	SC3A				

	Allowed		Proposed	
SITE AREA	49,117 sq.ft. [.45631 ha]			
FSR	3.5		3.50	
BUILDING AREA	171,910	sq.ft	171,885.8	sq.ft
SETBACKS	Allowed		Proposed	
FRONT YARD SETBACK	2.5m	8.20 ft.	14.66 ft.	
SIDE YARD SETBACK	2.5m	8.20 ft.	15.75 ft. - 20.42 ft.	
REAR YARD SETBACK	2.5m	8.20 ft.	37.66 ft.	
SITE COVERAGE			Proposed	
BUILDINGS & STRUCTURES	45%		26%	

BUILDING HEIGHT	Allowed	Proposed
BUILDING HEIGHT	59m	193.6 ft.
NO. OF STOREYS	20	*200.66 ft.
	(excludes mech. penthouse)	
TOTAL NO. OF FLOORS		20
TOTAL NO. OF PARKING LEVELS	(BELOW GRADE)	3
TOTAL NO. OF RESIDENTIAL FLOORS		20
TOTAL NO. OF AMENITY FLOORS		1
TOTAL NO. OF MECH FLOORS		2

RESIDENTIAL UNIT SUMMARY						Proposed
RESIDENTIAL UNITS	1 BR	1 BR + DEN	2BR	3 BR		
LEVEL 1 (1 STOREY)	3	0	5	0		8
LEVEL 2 (1 STOREY)	3	0	5	0		8
LEVEL 3 - 19 (17 STOREYS)	5	1	5	0		187
LEVEL 20 (1 STOREY)	0	0	0	4		4
CITY HOMES		0	0	4		4
TOTAL	0	0	0	0		211

PARKING SUMMARY - RENTAL TOWER	Required	Proposed
CITY HOMES	Max. 2 Spaces Per Residential Unit	8
RESIDENTIAL STALLS	Max. 1 Stall Per 753 sq.ft.	228
	TOTAL REQUIRED PARKING	236
VISITOR STALLS	Min. 0.1 Space Per Principal Dwelling Unit	22
TOTAL PARKING SPACES	258	258
DISABLED STALLS (included in total)	Min 0.1 Space Per Principal Dwelling Unit	22
SMALL CARS (included in total)	Max. 25% of Required # of Parking Spaces	65
ELECTRIC CAR (included in total)		2

BICYCLE STORAGE SUMMARY	Required	Proposed
RESIDENT STALLS - CLASS I	1.5 Bicycle Spaces Per Dwelling Unit	305
VISITOR STALLS - CLASS II	0.5 Bicycle Spaces Per Dwelling	106
TOTAL BICYCLE STORAGE	411	411

LEVEL	BUILDING AREA to exterior face of stud wall (sq.ft)	GROSS FLOOR AREA external face (sq.ft)	INDOOR AMENITY & LOBBY (sq.ft)	STORAGE EXCLUSION (sq.ft)	EXCLUSIONS (mech / elec) (sq.ft)	F.A.R AREA (sq.ft)
1	9372.3	9535.3	1866.0	285.1	128.1	7093.1
2	7555.9	7693.4		300.7	101.0	7154.2
3	9012.2	9172.3		416.4	139.6	8456.2
4	9012.2	9172.3		416.4	139.6	8456.2
5	9012.2	9172.3		416.4	139.6	8456.2
6	9012.2	9172.3		416.4	139.6	8456.2
7	9012.2	9172.3		416.4	139.6	8456.2
8	9012.2	9172.3		416.4	139.6	8456.2
9	9012.2	9172.3		416.4	139.6	8456.2
10	9012.2	9172.3		416.4	139.6	8456.2
11	9012.2	9172.3		416.4	139.6	8456.2
12	9012.2	9172.3		416.4	139.6	8456.2
13	9012.2	9172.3		416.4	139.6	8456.2
14	9012.2	9172.3		416.4	139.6	8456.2
15	9012.2	9172.3		416.4	139.6	8456.2
16	9012.2	9172.3		416.4	139.6	8456.2
17	9012.2	9172.3		416.4	139.6	8456.2
18	9012.2	9172.3		416.4	139.6	8456.2
19	9012.2	9172.3		416.4	139.6	8456.2
20	6777.7	6915.6		160	67.0	6550.7
Mech / Elev. Overrun						
Mech / Elev. Machine Room						
TOTAL	176,913.3	180,073.40	1866.0	7,824.60	2669.3	164,553.4

RESIDENTIAL AREA SUMMARY - CITY HOMES
LEVEL
1
2
3
TOTAL

TOTAL TOWER & CITY HOMES	188,223.60	BUILDING AREA	184,450.5
		FAR (PROPOSED)	171,885.8
		FAR (ALLOWED)	171,910
		Variance	-23.7

*VARIANCE REQUEST

Request height variance of 7'-3" due to the significant slope in the site from North to South. While the building entry currently sits approx. 2'-0" down from the north sidewalk to try and minimise the overall height. Any lower would result in the entrance being non-accessible.

UNIT BREAKDOWN

TYPICAL FLOOR LEVEL 3-19		
UNIT TYPE	UNIT AREA (SF)	TOTAL
TYPE A1 - 1 BED	555.3	34
TYPE A2 - 1BED	546	17
TYPE B - 2 BED	957.5	17
TYPE C - 2 BED	918.6	17
TYPE D - 2 BED	869.1	17
TYPE E - 1 BED	561.3	17
TYPE F - 1 BED + DEN	615	17
TYPE G - 2 BED	902.5	17
TYPE H - 1 BED	565.9	17
TYPE J - 2 BED	839.2	17

LEVEL 1		
TYPE K - 2 BED	826.8	1
TYPE L - 2 BED	749.7	1
TYPE M- 1 BED	528	1
TYPE B - 2-BED	957.5	1
TYPE C - 2 BED	918.6	1
TYPE D - 2 BED	869.1	1
TYPE E - 1 BED	561.3	1
TYPE H - 1 BED	565.9	1

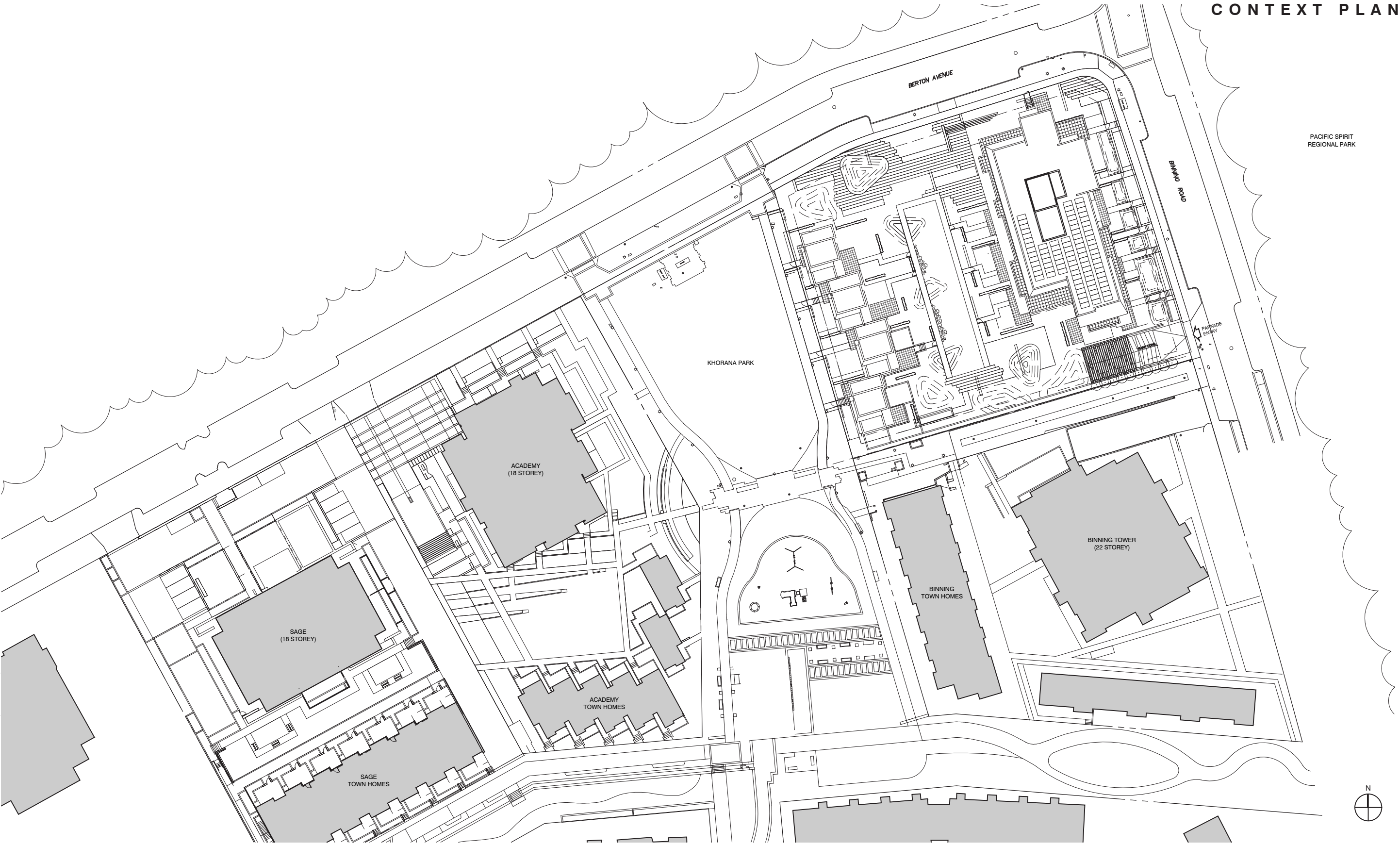
LEVEL 2		
TYPE K - 2 BED	826.8	
TYPE N - 3 BED	1012.3	1
TYPE A2 - 1 BED	546	1
TYPE B - 2 BED	957.5	1
TYPE C - 2 BED	918.6	1
TYPE D - 2 BED	869.1	1
TYPE E - 1 BED	561.3	1
TYPE H - 1 BED	565.9	1

PH LEVEL 20		
TYPE PH-A - 3 BED	1317.6	1
TYPE PH-B - 3 BED	1521	1
TYPE PH-C- 3 BED	1523.5	1
TYPE PH-D - 3 BED	1481.2	1
		4

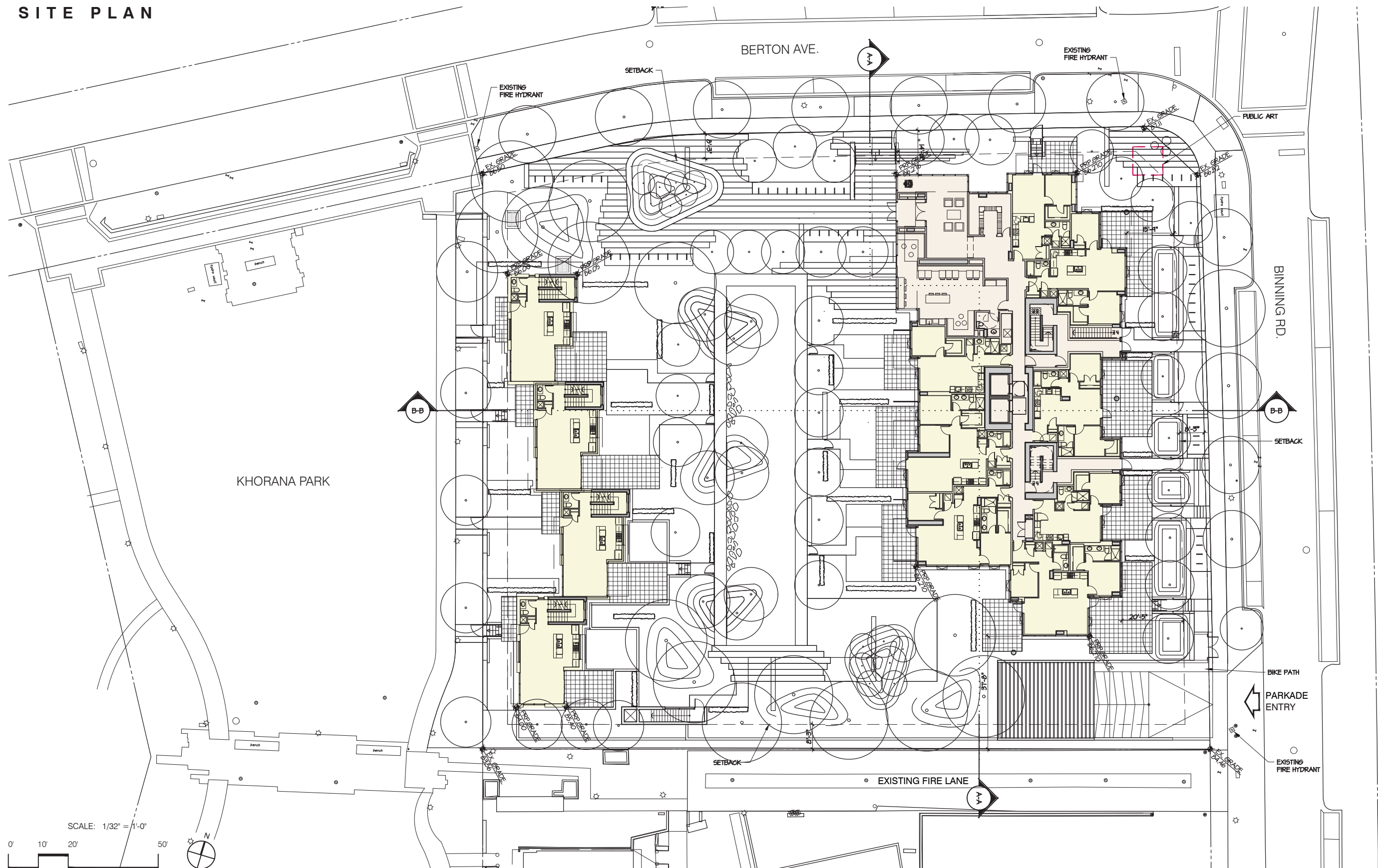
CITY HOMES		
CH-1	1884.3 (not including flex)	1
CH-2	1884.3 (not including flex)	1
CH-3	1884.3 (not including flex)	1
CH-4	1884.3 (not including flex)	1
		4
TOTAL NO. UNITS		211
TARGET NO. UNITS		212

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CONTEXT PLAN

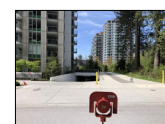


SITE PLAN



SURVEY PLAN

SKETCH SHOWING TOPOGRAPHIC SURVEY OF
LOT 5, DISTRICT LOT 6494, GROUP 1,
NEW WESTMINSTER DISTRICT, PLAN BCP24848



PICTURE #1



PICTURE #4



PICTURE #7



PICTURE #2



PICTURE #5



PICTURE #8



PICTURE #



PICTURE #6



NOTES :
ALL ELEVATIONS AND DISTANCES SHOWN ARE IN METRES.
ELEVATIONS ARE DERIVED FROM UBC MONUMENT W-W, LOCATED ON EAST WALL IN FRONT OF THE COLLEGE BUILDING (BETWEEN AGRONOMY ROAD AND UNIVERSITY BOULEVARD).
GEODETIC ELEVATION = 93.631
THIS PLAN SHOWS THE LOCATION OF VISIBLE FEATURES ONLY, AND DOES NOT INDICATE BURIED SERVICES THAT MAY EXIST ON OR AROUND THE SUBJECT SITE.
TREE SPECIES AND DIMENSIONS SHOULD BE CONFIRMED BY A QUALIFIED ARBORIST. TREE STRENGTH ARE NOT AN INDICATION OF DRIP LINE LOCATION UNLESS SPECIFICALLY LABELLED.
CONTOUR INTERVAL = 0.25 METRES

 **MURRAY & ASSOCIATES**
PROFESSIONAL LAND SURVEYORS
201-12448 82nd AVENUE
SURREY, BC V3W 3E9
(604) 597-9189

May 6, 2019
FILE 8613ca-285

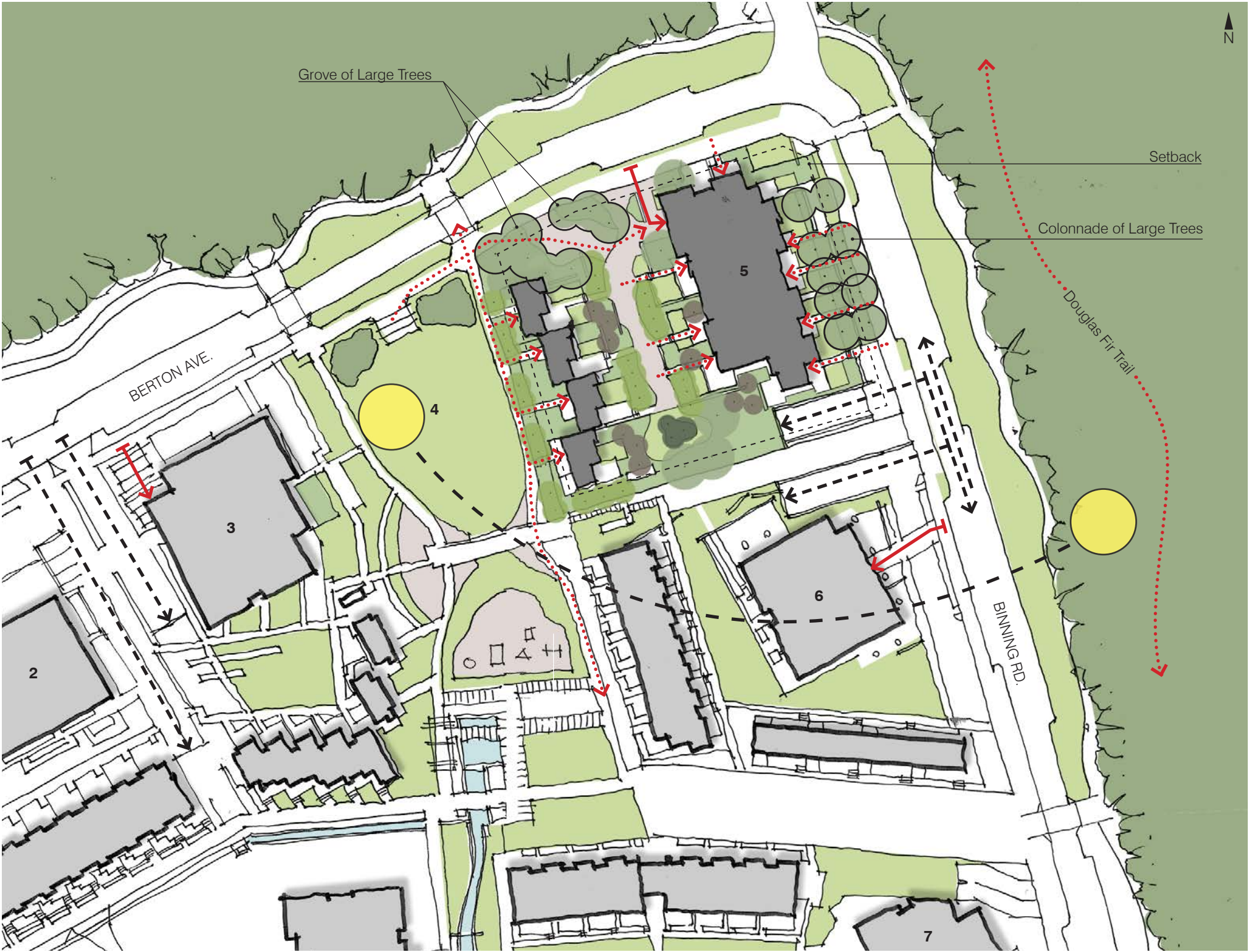
SITE ANALYSIS

Site - Lot 5 of Wesbrook Place is a 4,563m² (49,117 sq.ft) site that sits at the corner of Berton Avenue (to the north) and Binning Road (to the east). To the south is the 20-storey residential Binning Tower. To the west is Khorana park complete with a pedestrian throughway connecting Khorana park to Michael Smith Park. Across Berton Avenue and Binning Road, to the North and the East, is the naturally forested Pacific Spirit Regional Park. The park borders the length of Berton Ave. and Binning Road creating a 40m high wall of trees. In contrast to this, the interior south-west edges of the site open to the park, and on the upper floors, to uninterrupted views to the Salish Sea. The topography for Lot 5 slopes from its highest point at the north east corner of the site down to the south west corner with a total drop of just over 3.5m.

Context - The Lot 5 site has a prominent corner position between the forest and Wesbrook Place with the Salish Sea beyond. This site is the final link in the chain of towers that run down Burton Ave. and Binning Rd. The existing developments between Wesbrook Mall and Binning Rd. range from mid-rise mixed-use buildings to townhomes and residential mid-rise to 20+ storey residential towers defining the north and east borders of Wesbrook place neighborhood. The projects massing and site orientation falls within the Wesbrook neighborhood plan with townhomes located on the west of the site adjacent to Khorana Park and a 20-storey tower on the north east portion of the site.



SITE ANALYSIS



	Primary Building Entrance	Key	4. Khorana Park
	Pedestrian Access		5. TheConservatory
	Vehicle Access		6. Binning Tower
			7. Ivy on the Park
		1. Wesbrook	
		2. Sage	
		3. Academy	

Program - The project consists of a 20-storey residential tower which is orientated north to south to take advantage of the views and solar exposure from east to west. It is positioned 37.7 meters off the west property line and 11.8 meters off the east property line to allow for maximum separation between the tower and the city homes to the west and to maximize space for the proposed colonnade of large trees at the east. The main pedestrian entry for the tower is located on Berton Ave which is the main pedestrian and vehicular approach to the site, and is a continuation of tower entries along Berton Ave. The tower is oriented closer to the east property line which not only reinforces the corner siting but visually allows a continuation of Khorana Park to 'spill' into a landscaped accessible plaza procession from the park to the tower's main entry. The parkade entry is off Binning Rd. and located at the southeast corner of the site beside the existing fire lane and Binning tower parkade entry. The parkade entry location allows for the tower and city homes to capitalize on the rest of the site with uninterrupted landscape elements that have direct access to the street and overall refined views. The parkade entry is designed to incorporate an overhead trellis structure to allow for climbing vegetation to help reduce its visual impact. The tower contains 207 suites, predominantly 1-2 bedroom units with four 3 bedroom penthouse suites at the upper most floor. There are ground oriented residences along Binning Road that provide a continuous street edge of individual entrances complete with landscaped terraces and a colonnade of tall focal trees which will help to reference the existing site vegetation.

There are four 3-storey city homes arranged along the western property line with direct street level access to Khorana Park. They have private ground level patios to the east and private south facing terraces at the 3rd level. These city homes subtly shift east and west to allow for more natural landscaped areas to provide privacy for the terraces to the east, and to create a sense of individuality for the city home owners. In their siting they also relate to the siting of the city homes at Academy on the other side of Khorana Park.

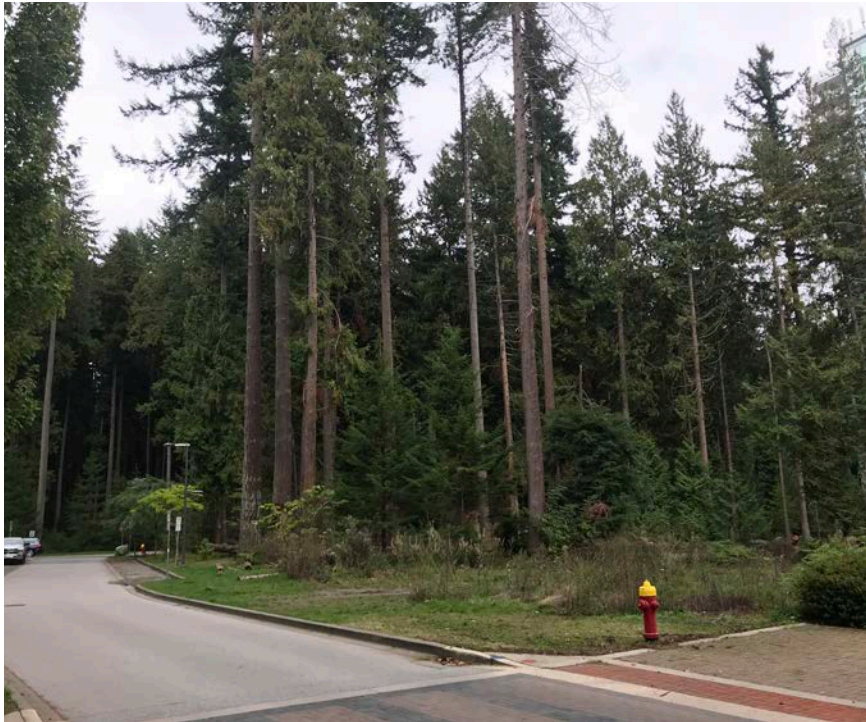
Underground parking will provide spaces for both residents and visitors, and private garages for the city homes. The parkade will also house bike storage, garbage and recycling facilities and service rooms.

The development is designed to REAP Gold standards and Step 2 of the BCBC Energy Code.

SITE PHOTOS



1. Berton Avenue looking south towards Khorana park



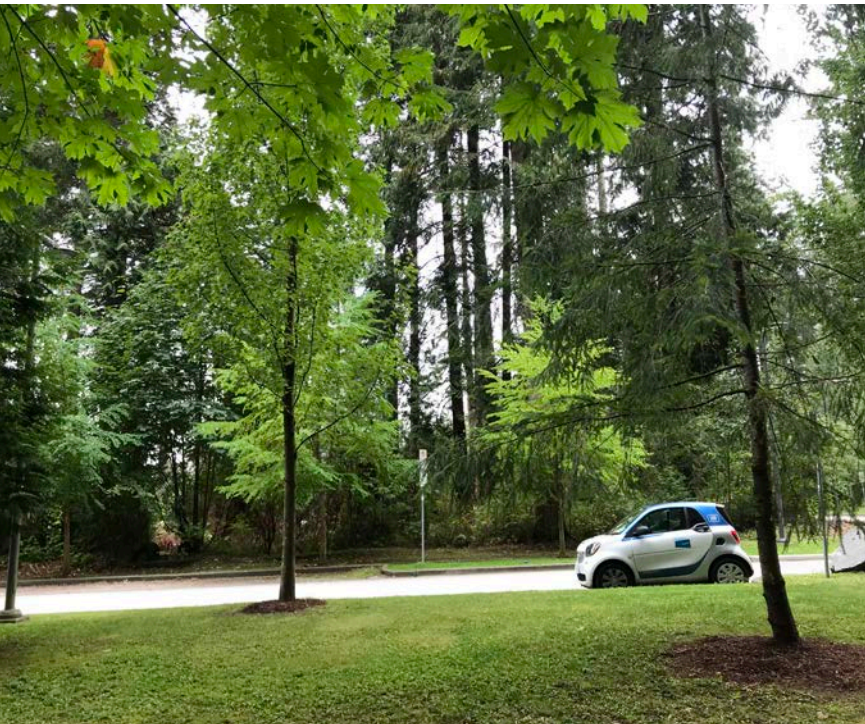
2. Berton Avenue looking south east towards the site



3. Khorana Park looking East towards the site



4. Corner of Berton Ave. and Binning Rd. looking south towards the site

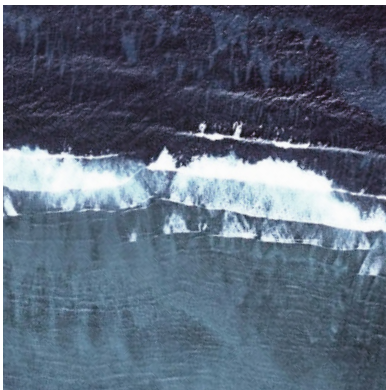
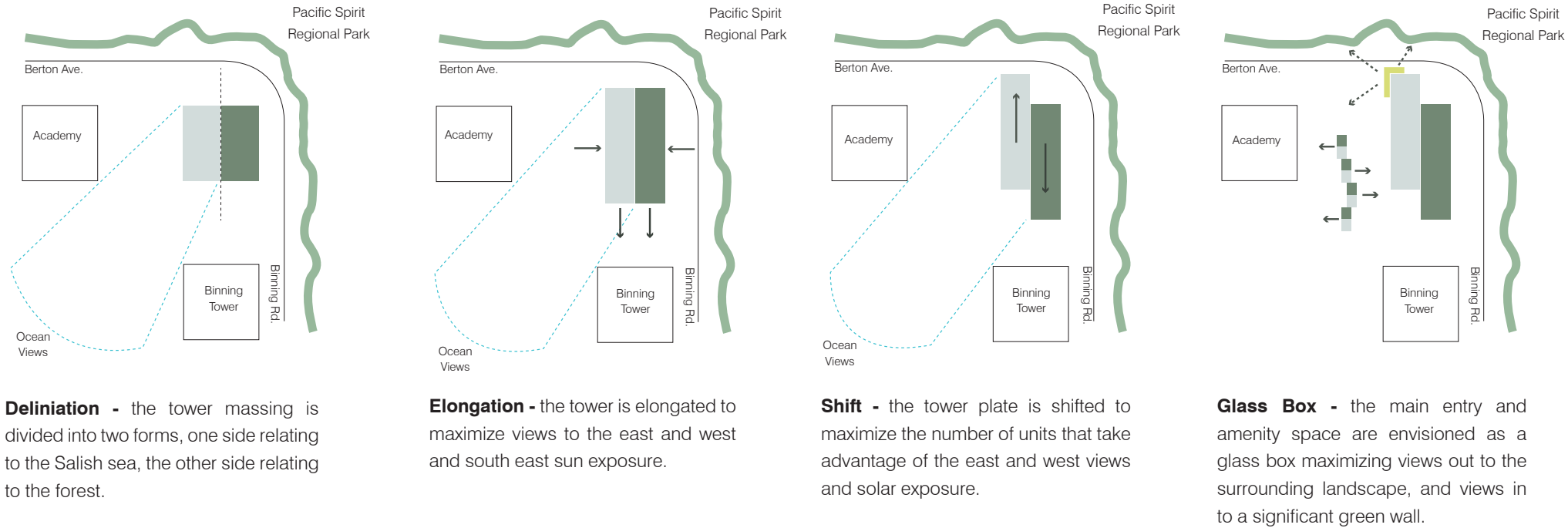


5. Binning Rd. looking west towards the site

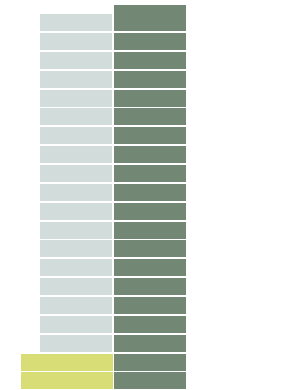
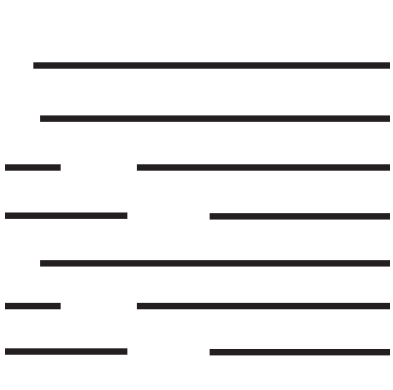
DESIGN RATIONALE

Wesbrook Place Neighbourhood has a unique campus context bound by forest to the north and east, and the distant Salish Sea to the south and west. At the pinnacle of this interface sits the Lot 5 site. It is this siting from which the design has been derived. The architectural expression responds to the contrast between the natural dynamic of forest with its wall of trees and the vast energetic ocean.

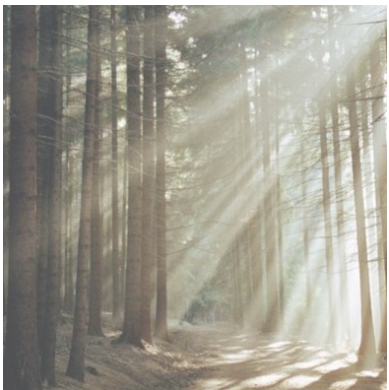
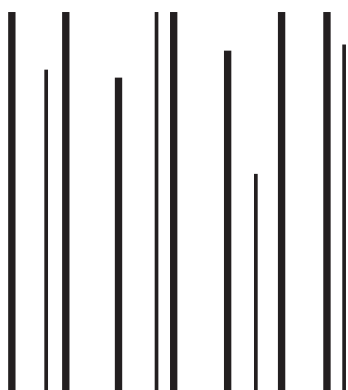
Given the juxtaposition of forest and ocean, the buildings massing responds directly to its unique context by creating a delineation within the building form – one side relates to the forest and the other side relates to the ocean. The building is then elongated and the two sides slide to maximize the prime ocean views and southwest sun exposure. At the ground level, a large two-storey glass box is inserted into the northwest corner of the building creating a ‘jewel box’ lobby to blur the line between interior and the natural landscape. The landscape becomes the showcase for the residents, heightening the importance of our environment by providing a glazed viewing box from the lobby and amenity spaces.



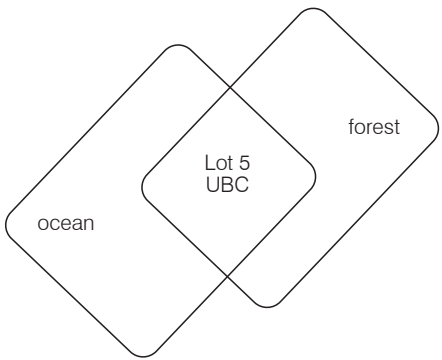
ocean



Lot 5 UBC
The Conservatory



forest



DESIGN RATIONALE

Ocean - the ocean is dynamic and permeable in its ever-changing undulating forms. It takes on a horizontal and segmented form with its constant linear waves. These attributes are the inspiration for the ocean side of the tower.

The main form of the ocean side consists of white window wall with glazed white spandrel panels generating a simple, clean back drop for the balcony designs. It is the balconies which begin to capture the horizontal and segmented forms of ocean waves. There are three different sizes of balconies that shift their way up the tower alluding to the movement of ocean waves. This is emphasized by face-mounted glass guards with a white frit pattern that are a metaphor for the cresting waves. The underside of each balcony type is painted a different blue tone reinforcing the dynamic quality of ocean. The ocean side's color palette of cool tones are sharp and crisp yet will reflect light playfully.

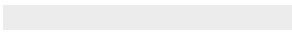
City Homes - The four city homes border the west property line to complete the string of city homes from Binning Tower to Berton Ave. The city homes also relate to the tower and the forest theme through the use of the copper/bronze colored metal spandrel panels and charcoal panels for the tall vertical elements of the stair. A scaled down ocean side is expressed through the use of a textured white brick façade.



Painted underside of balconies - blue tones



White glass spandrel panel



Face mounted balcony guards with white frit



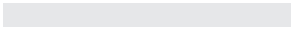
Two storey lobby/ & amenity box charcoal colored curtain wall



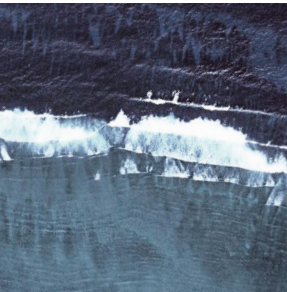
Copper/bronze colored metal spandrel panel



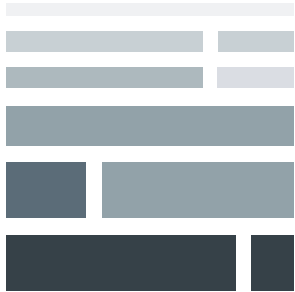
Charcoal colored panel



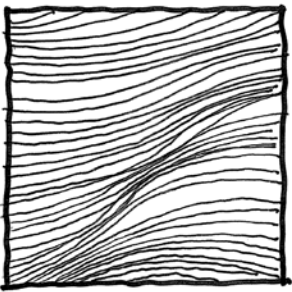
white colored brick



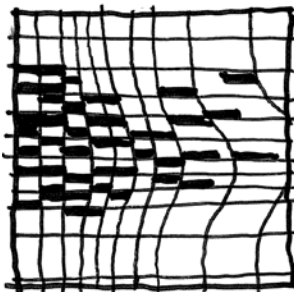
ocean



crisp cool tones



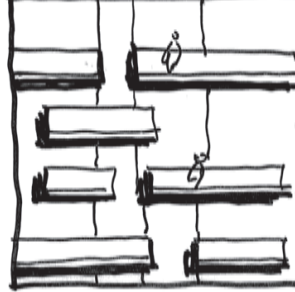
wave form simplified



concentration of balcony spacing emphasizes movement

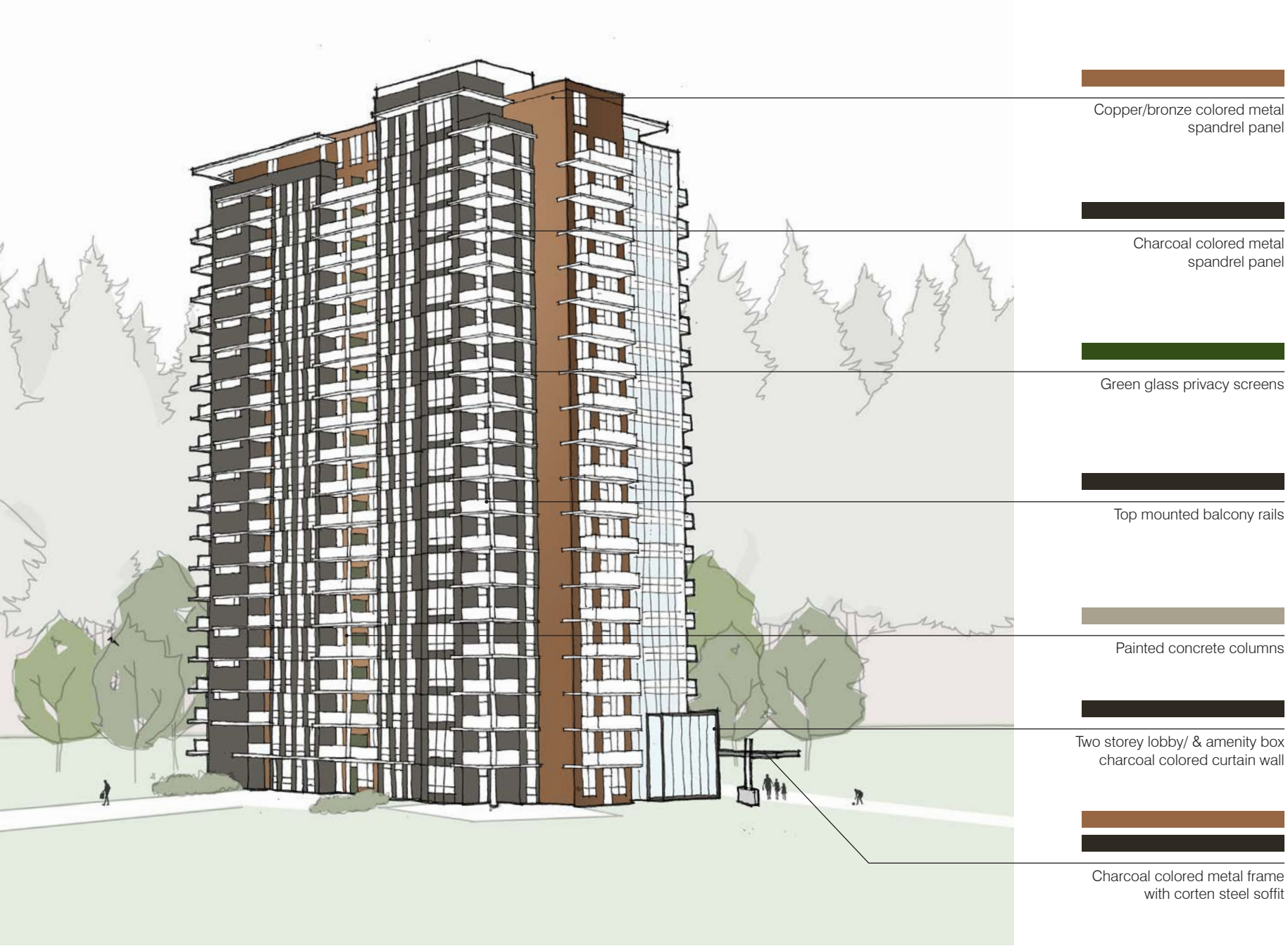


segmented wave form



oscillating balcony sizes allude to wave crests forming

DESIGN RATIONALE



Forest - the forest is a dense form made up of many forty-meter vertical trunks. It is robust and rigid in its limbs, yet soft in its foliage. It expresses solidity, it is dark, it is quiet, it is stoic. Its colors are warm, its texture is rough and the light is streaked. The forest side of the tower relates directly to the dense and solid nature of the vertical trunks by expressing the verticality through the use of dark brown, almost black, metal panel and exterior round columns. The windows on these dark forms stagger similar to the bark and texture of tree trunks. The dark forms protrude from a copper/bronze colored metal panel spine reminiscent of the soft earth tone colors found in the forest. The balconies become part of the form of the building to empathize the verticality of this facade versus the horizontality of the opposite facade. All the balcony guards on the forest side are top mounted with clear glass which allows the colors and forms of the building to predominate. The forest side's color palate is warm tones of dark brown, copper/bronze, and green creating a stark contrast to the cool tones of the ocean side.

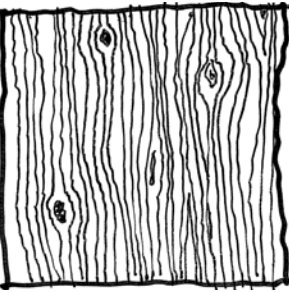
Entry Canopy - The entry canopy design is an abstraction taken from the view looking up through a forest canopy. A charcoal metal frame will house lazer cut corten steel panels to create the abstract forest canopy at the soffit and glazed panels at the roof. The sunlight will pass through the metal screen creating the dynamic scattered lighting effects seen through a forest canopy.



forest canopy from below



abstract



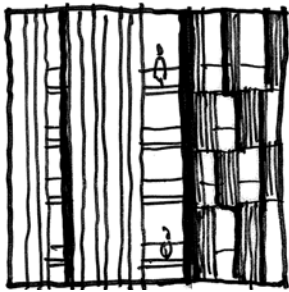
tree bark texture



dense mass with voids



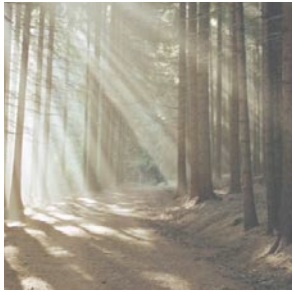
vertical staggering of forms and voids



vertical and staggered forms on building facade



warm earth tones



forest

SHADOW STUDIES



Spring Equinox - 10:00



Spring Equinox - 12:00



Spring Equinox - 14:00



Summer Solstice - 10:00

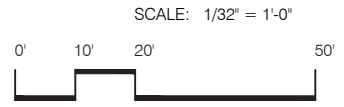
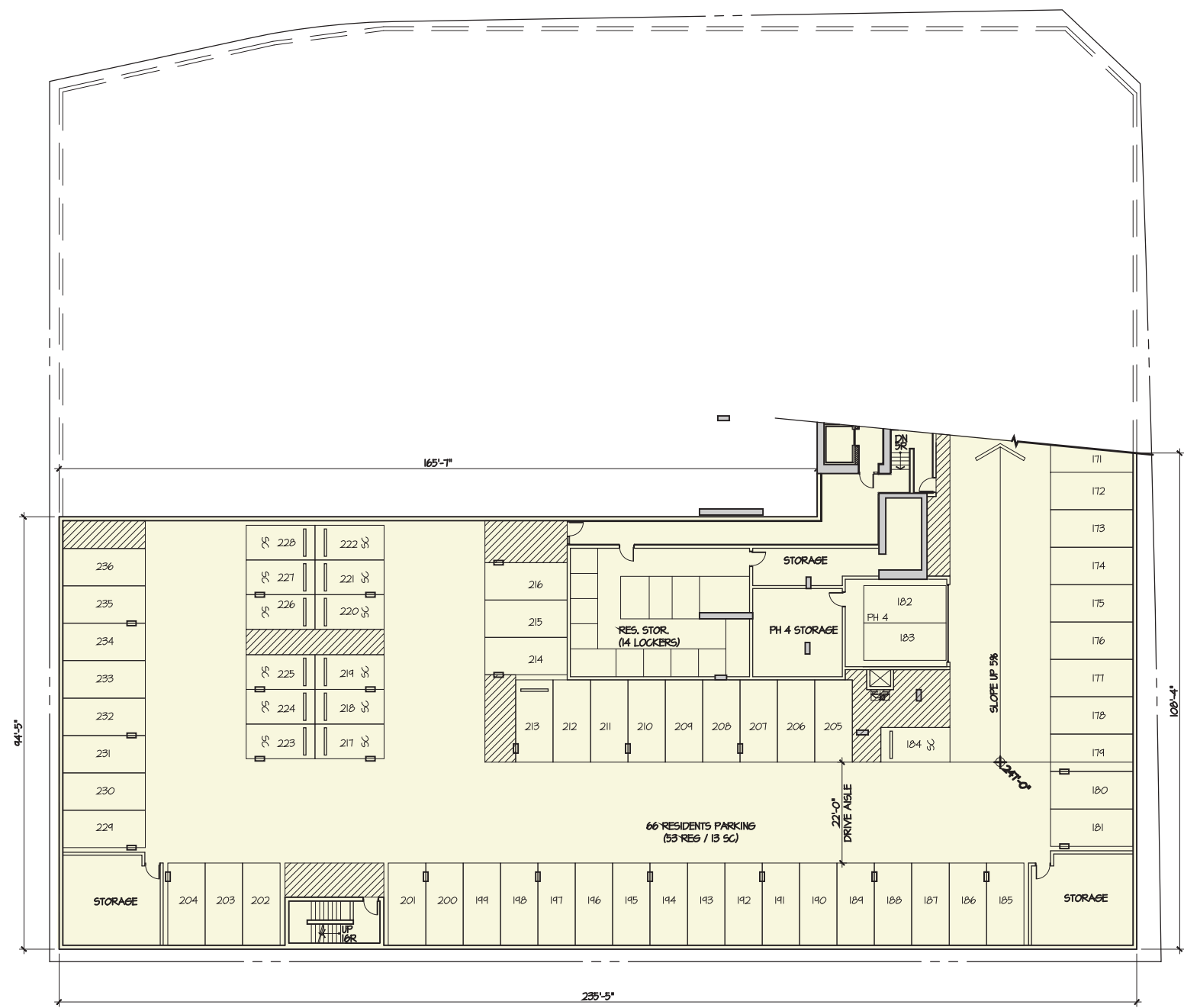


Summer Solstice - 12:00

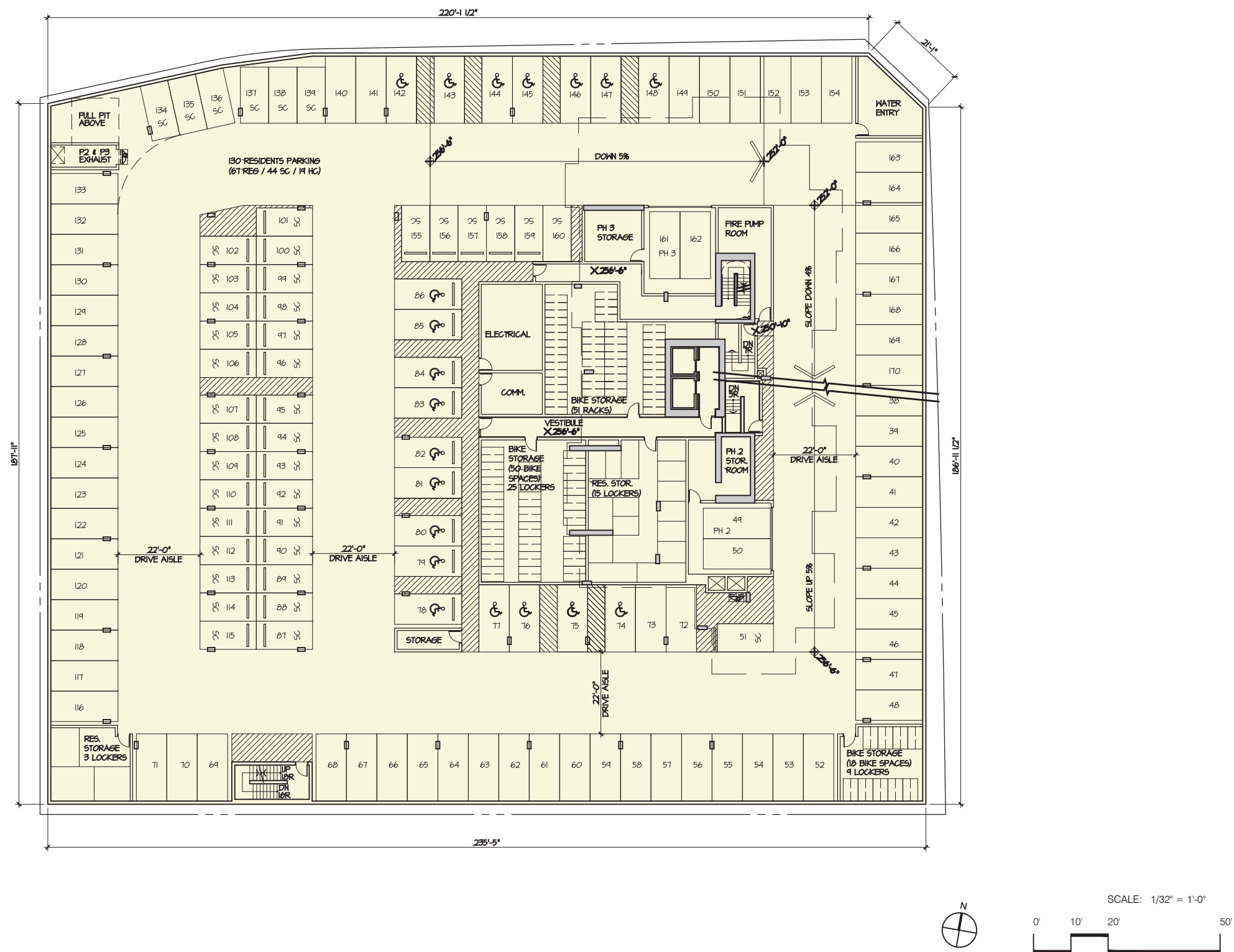


Summer Solstice - 14:00

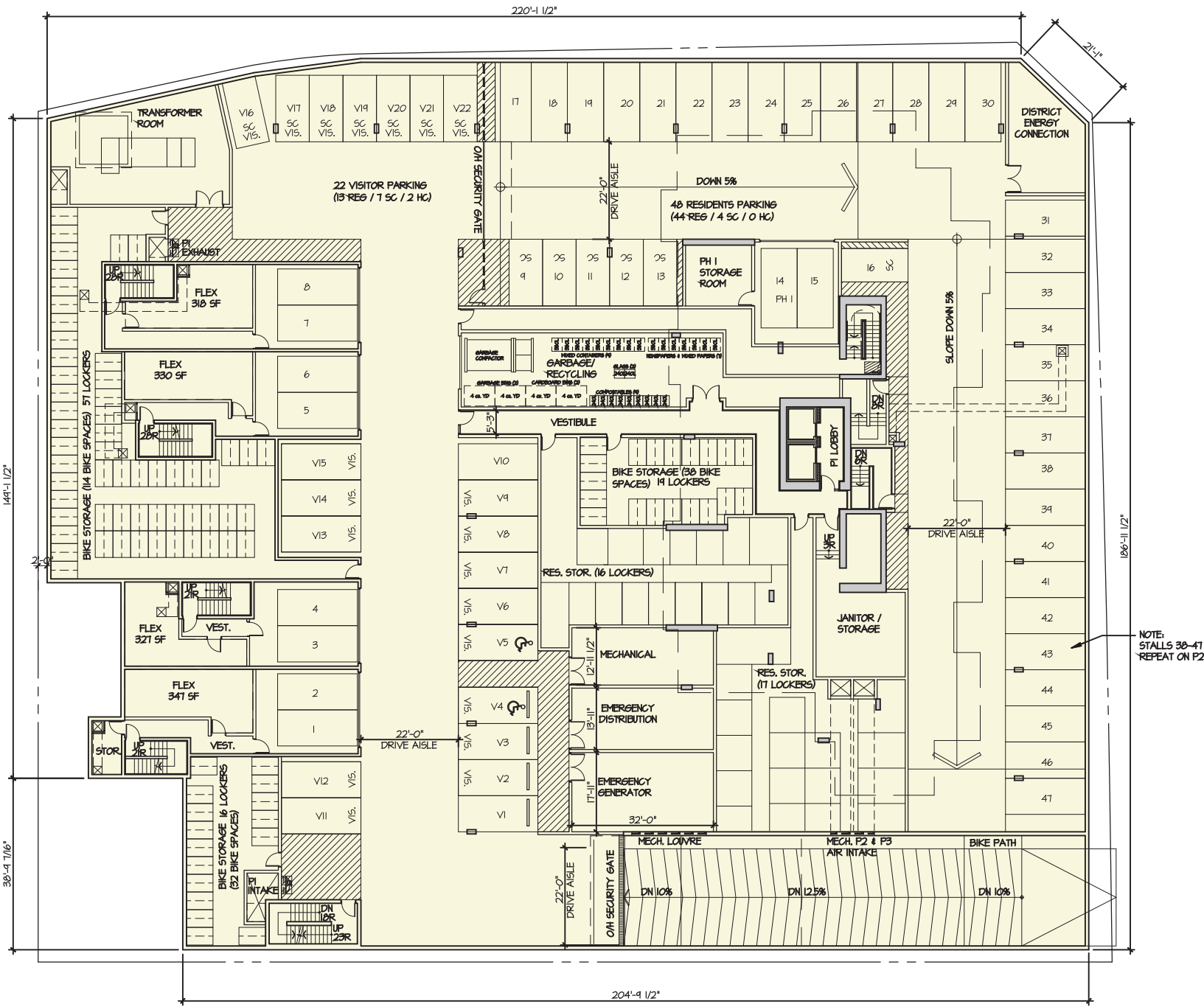
FLOOR PLANS
level P3



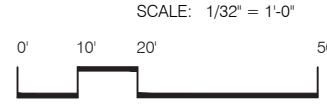
FLOOR PLANS
level P2



FLOOR PLANS
level p1

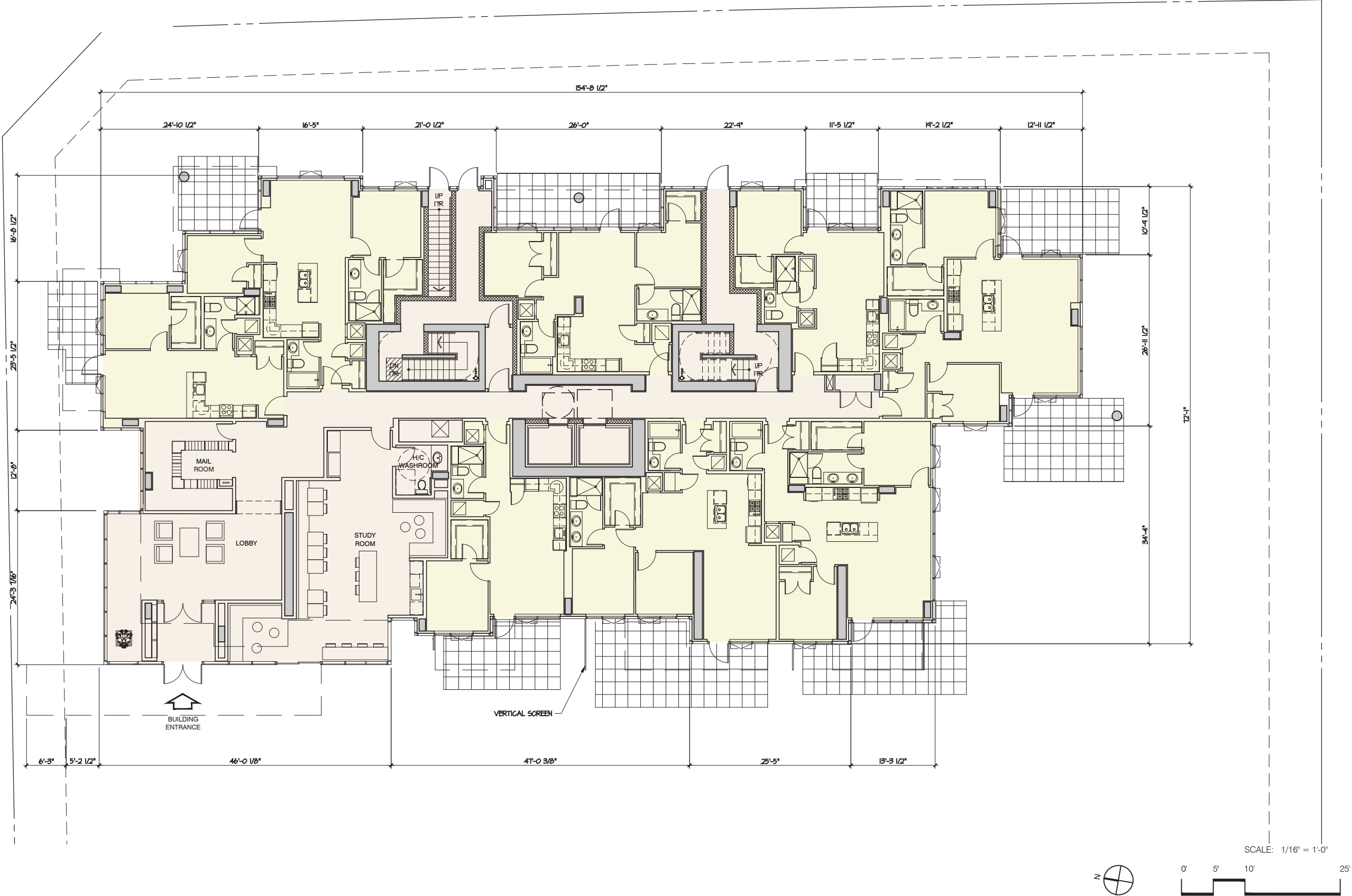
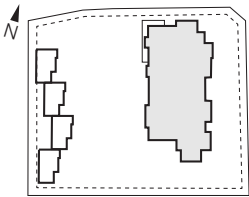


NOTE:
STALLS 38-41
REPEAT ON P2

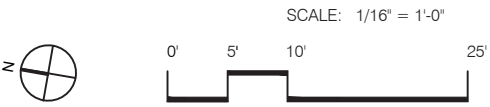
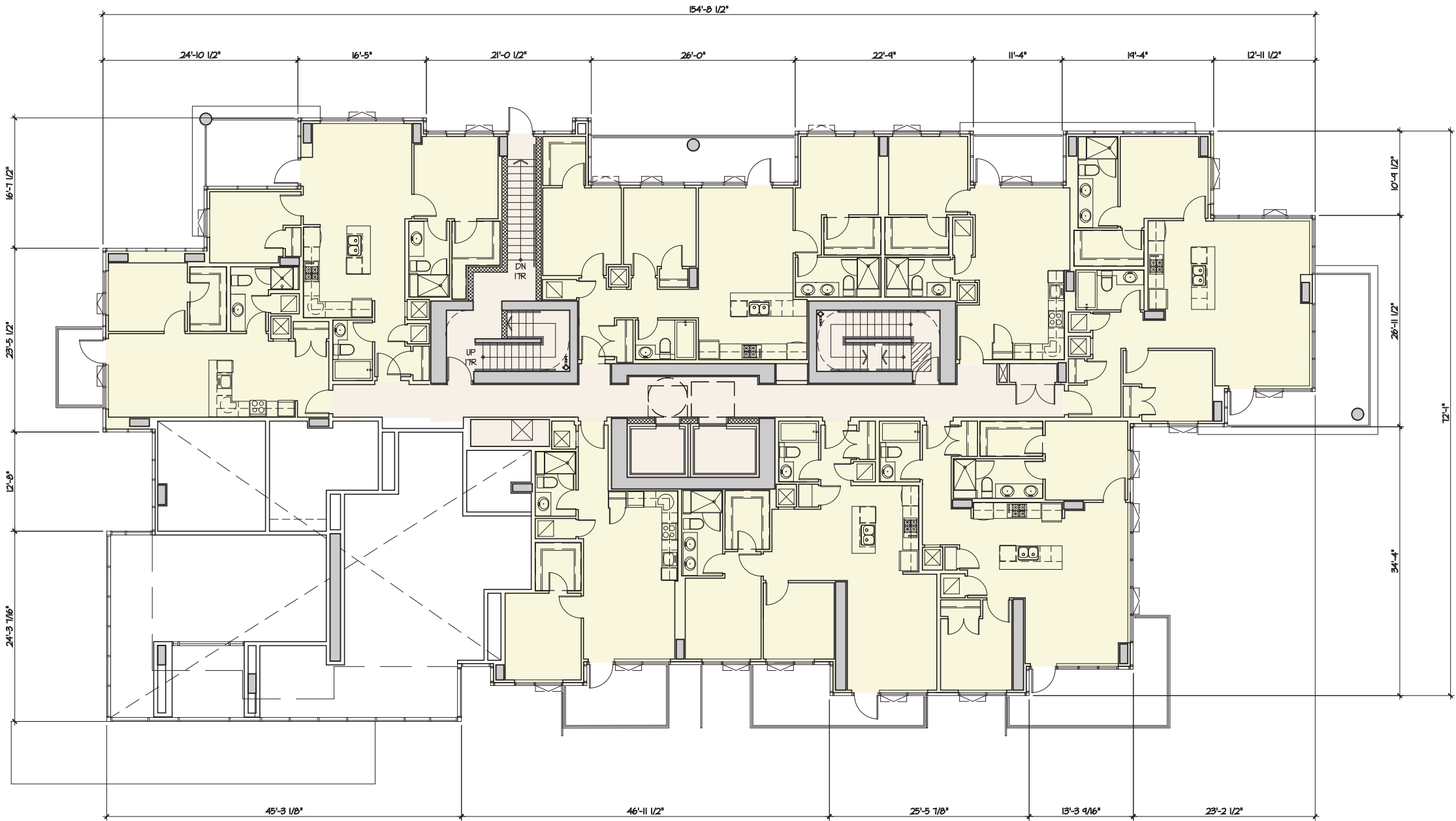
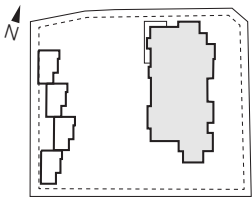


FLOOR PLANS

level 01

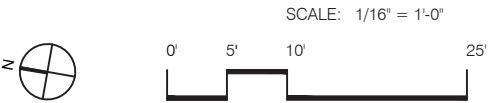
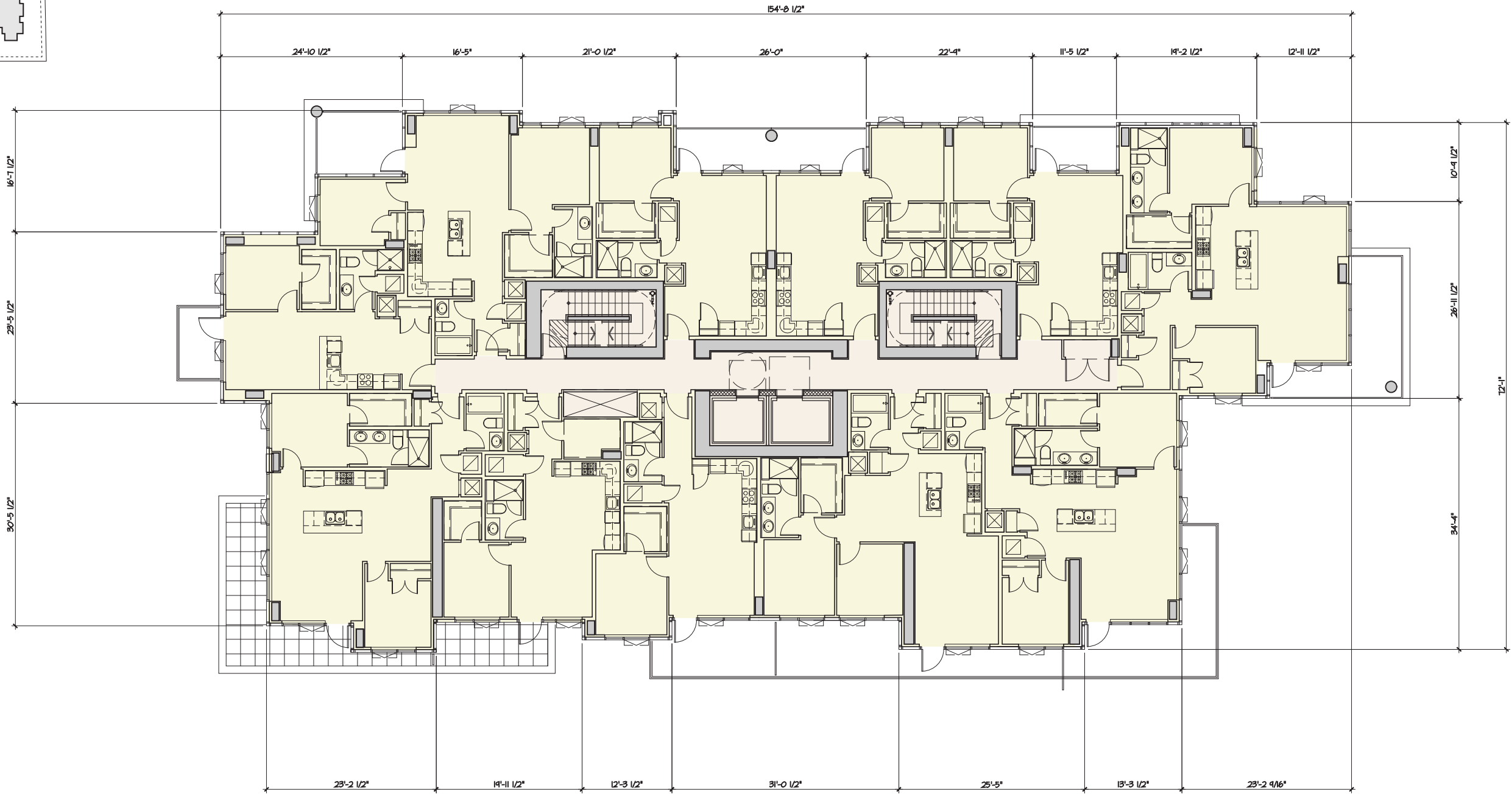
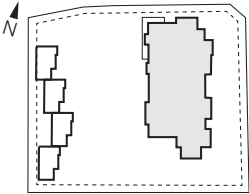


FLOOR PLANS
level 02

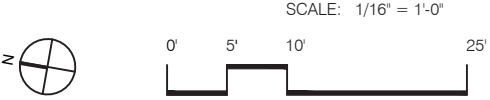
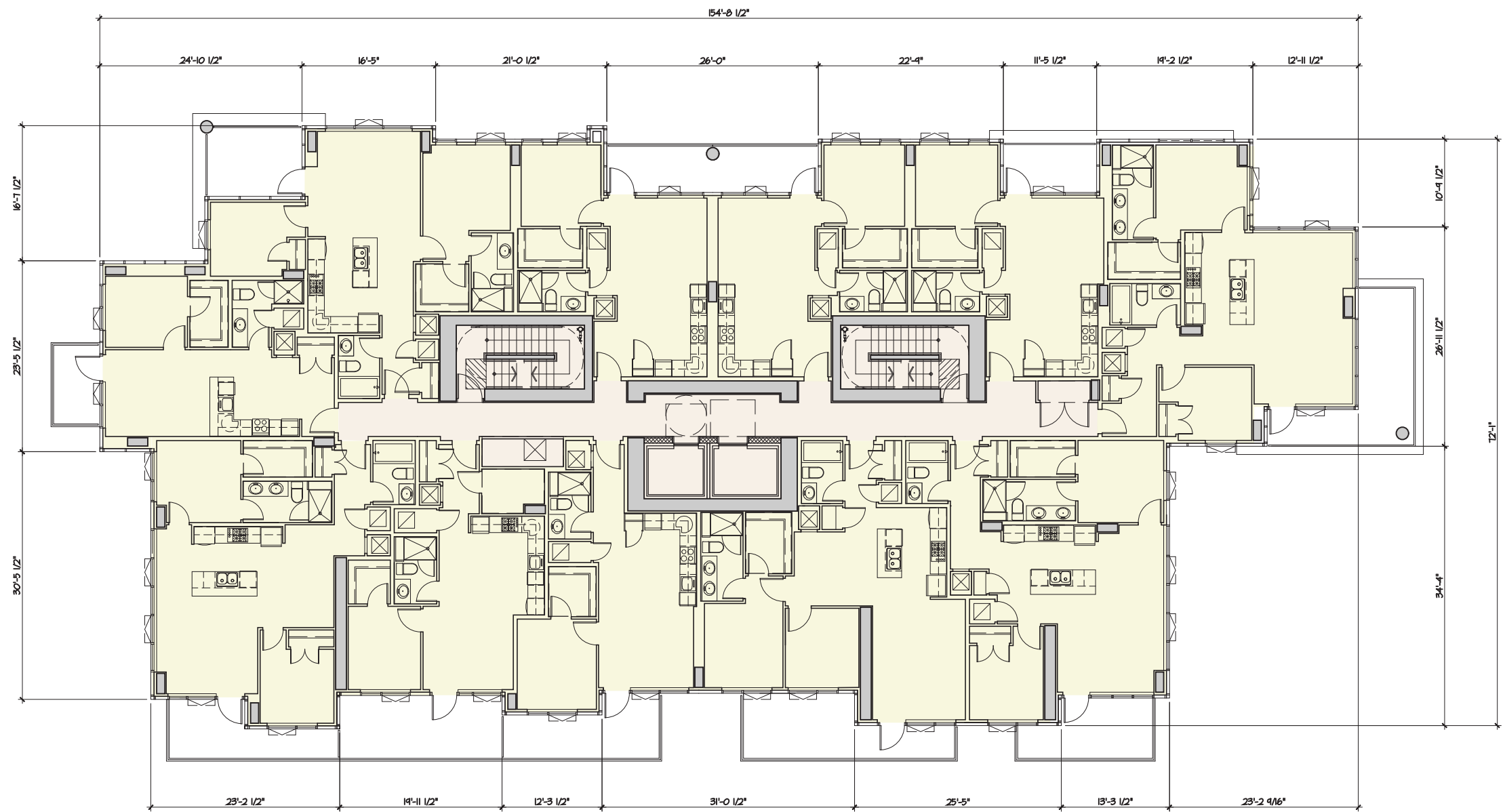
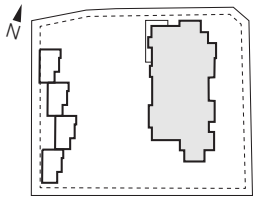


FLOOR PLANS

level 03

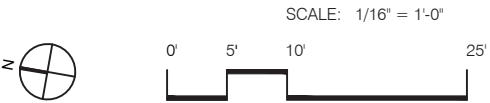
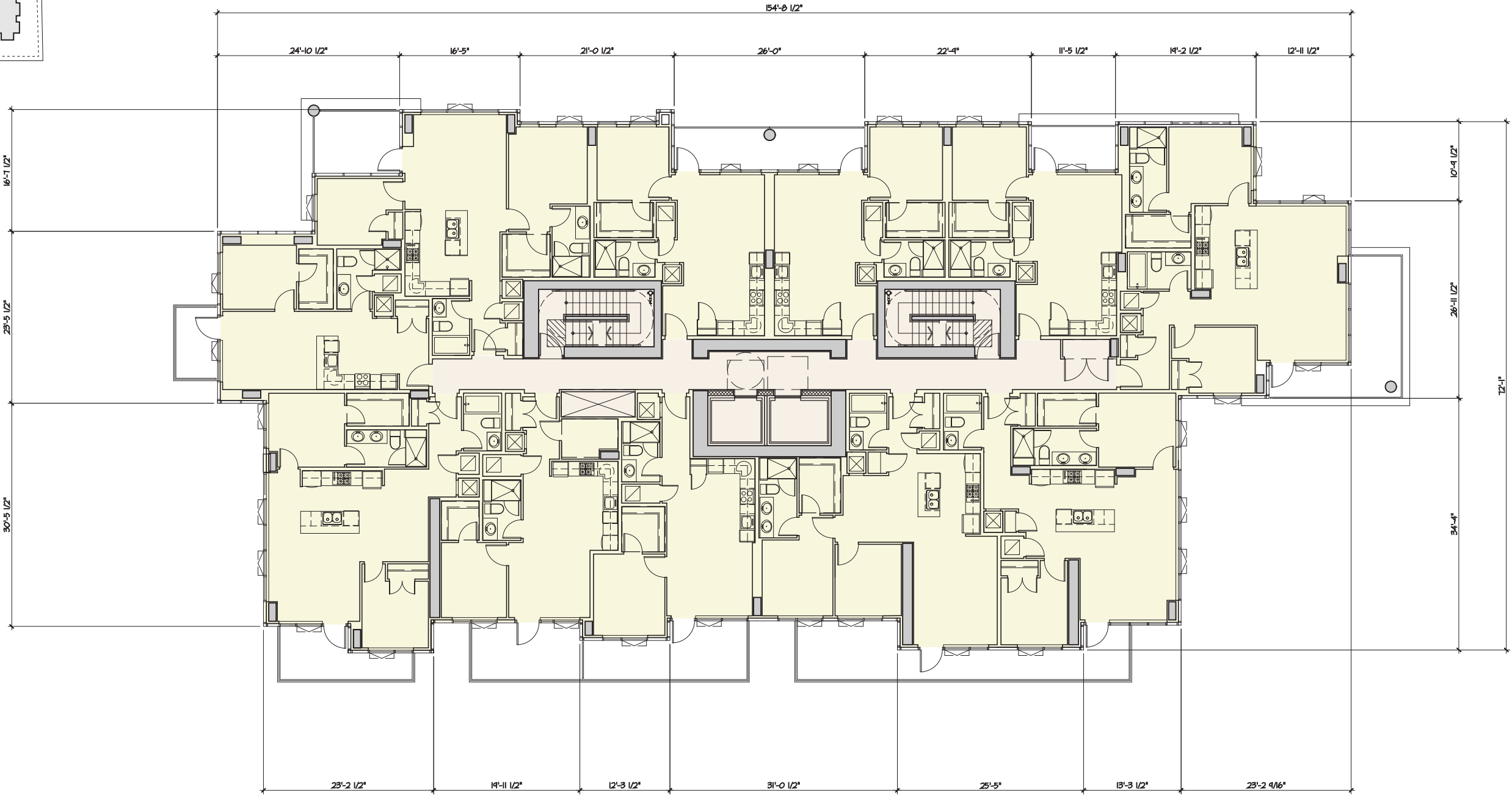
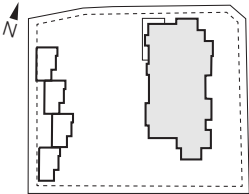


FLOOR PLANS
levels 04,08,11,16,18

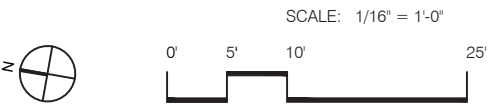
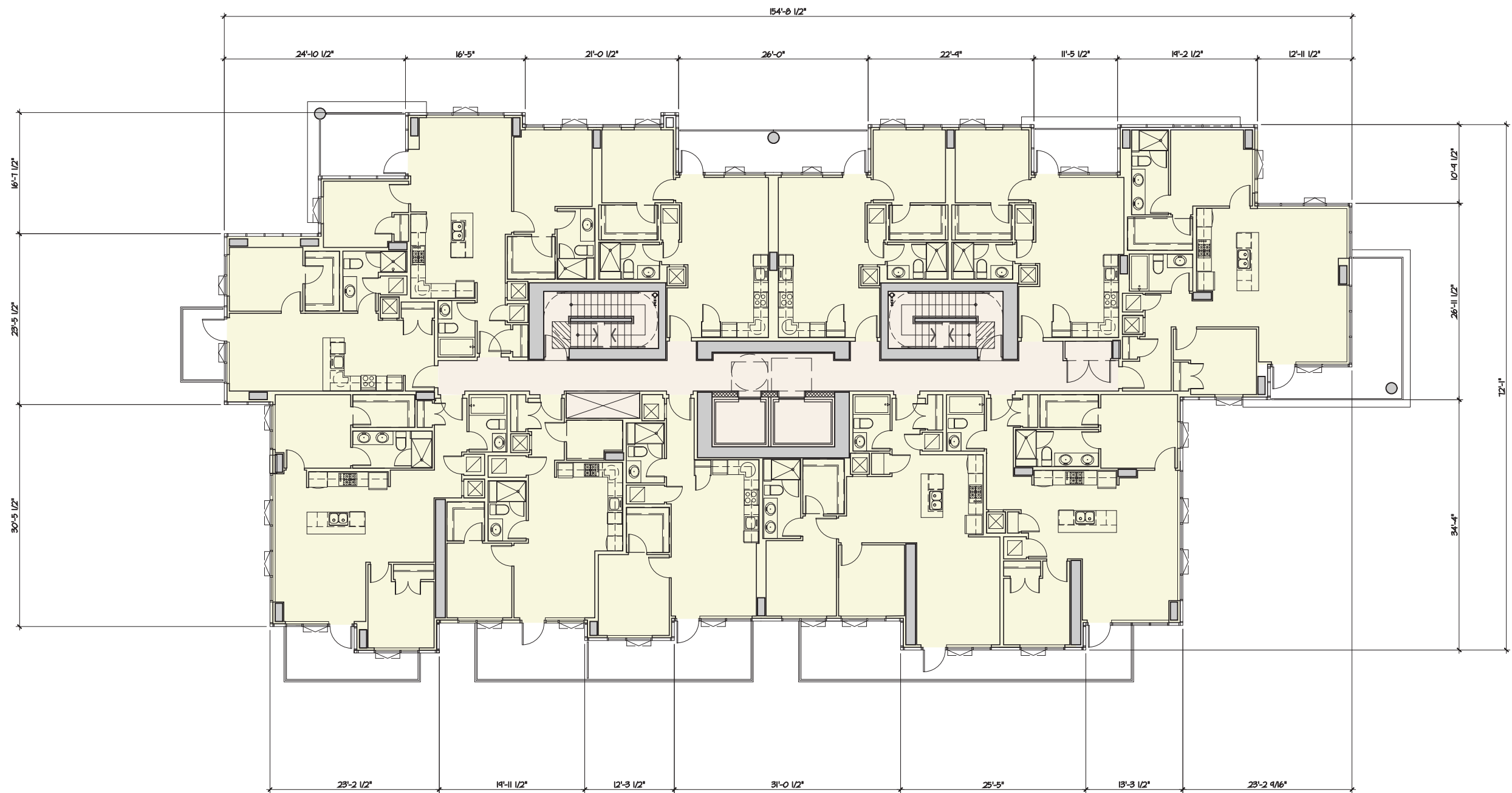
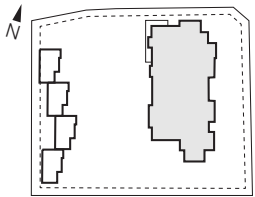


FLOOR PLANS

levels 05,07,09,13,16,19

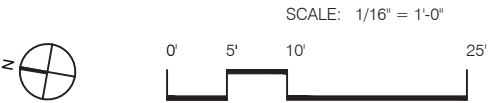
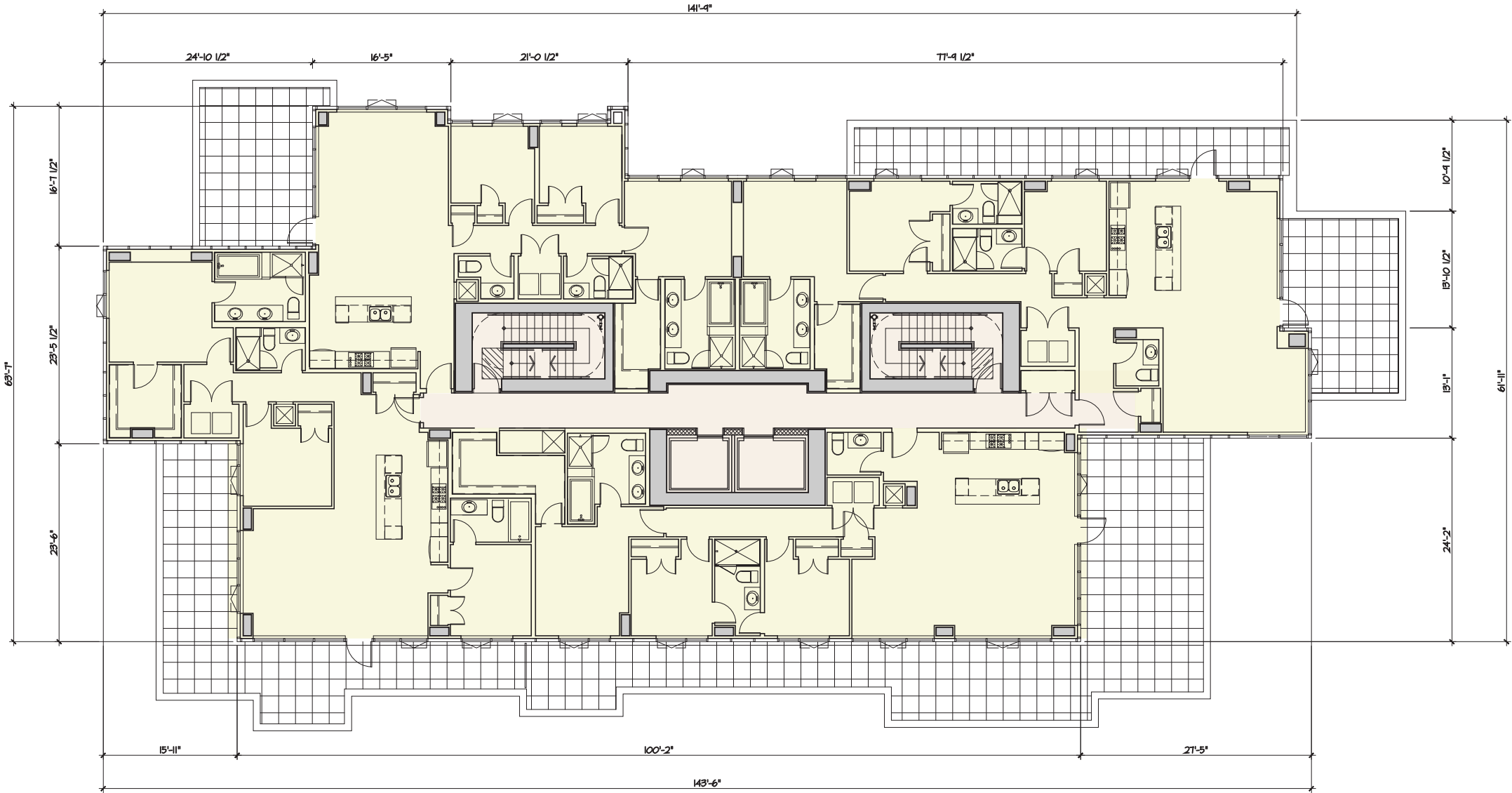
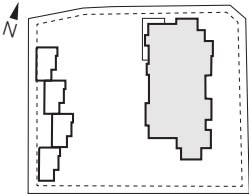


FLOOR PLANS
levels 06,10,12,14,17

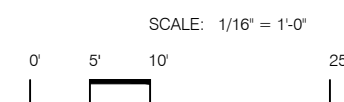
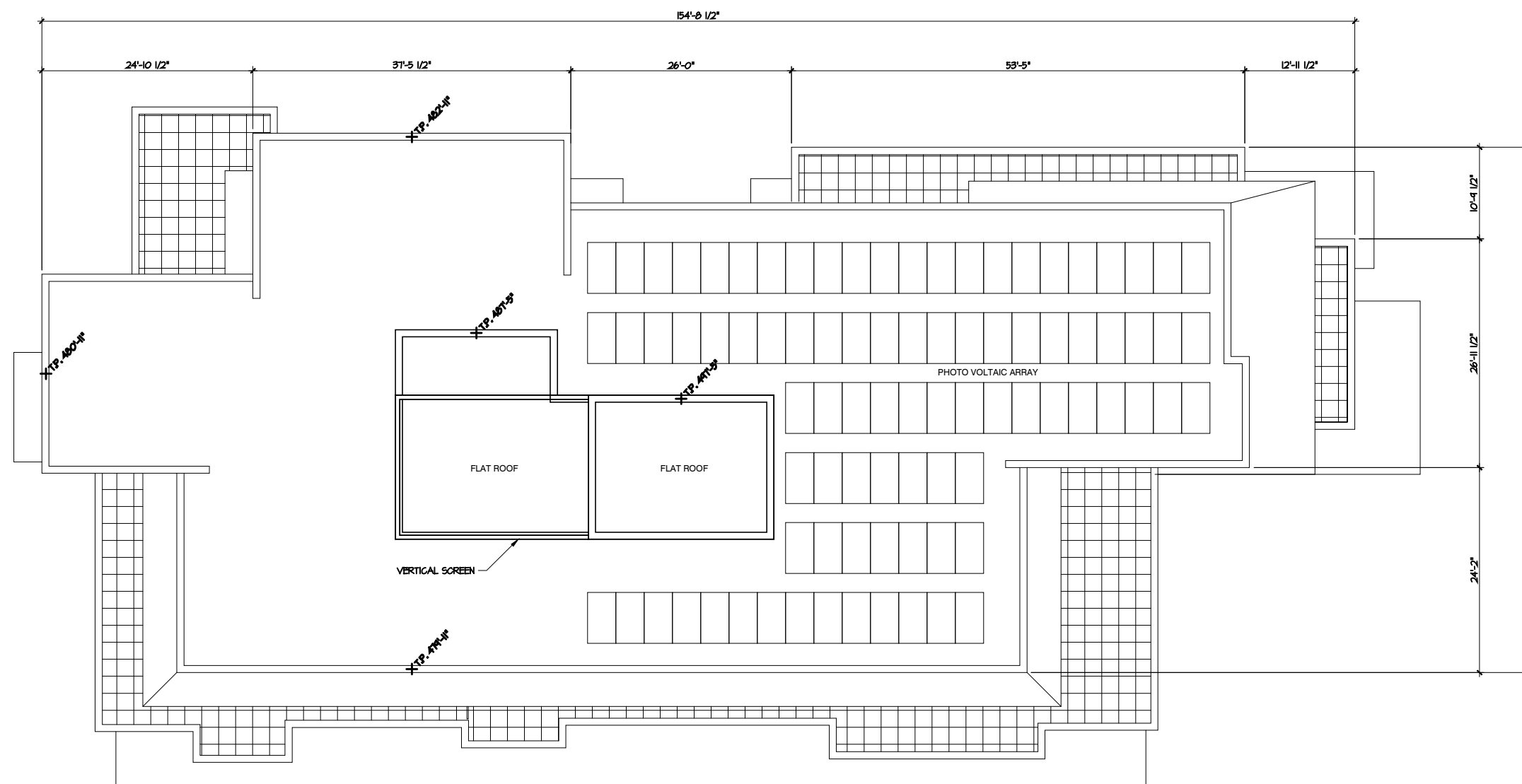


FLOOR PLANS

level 20

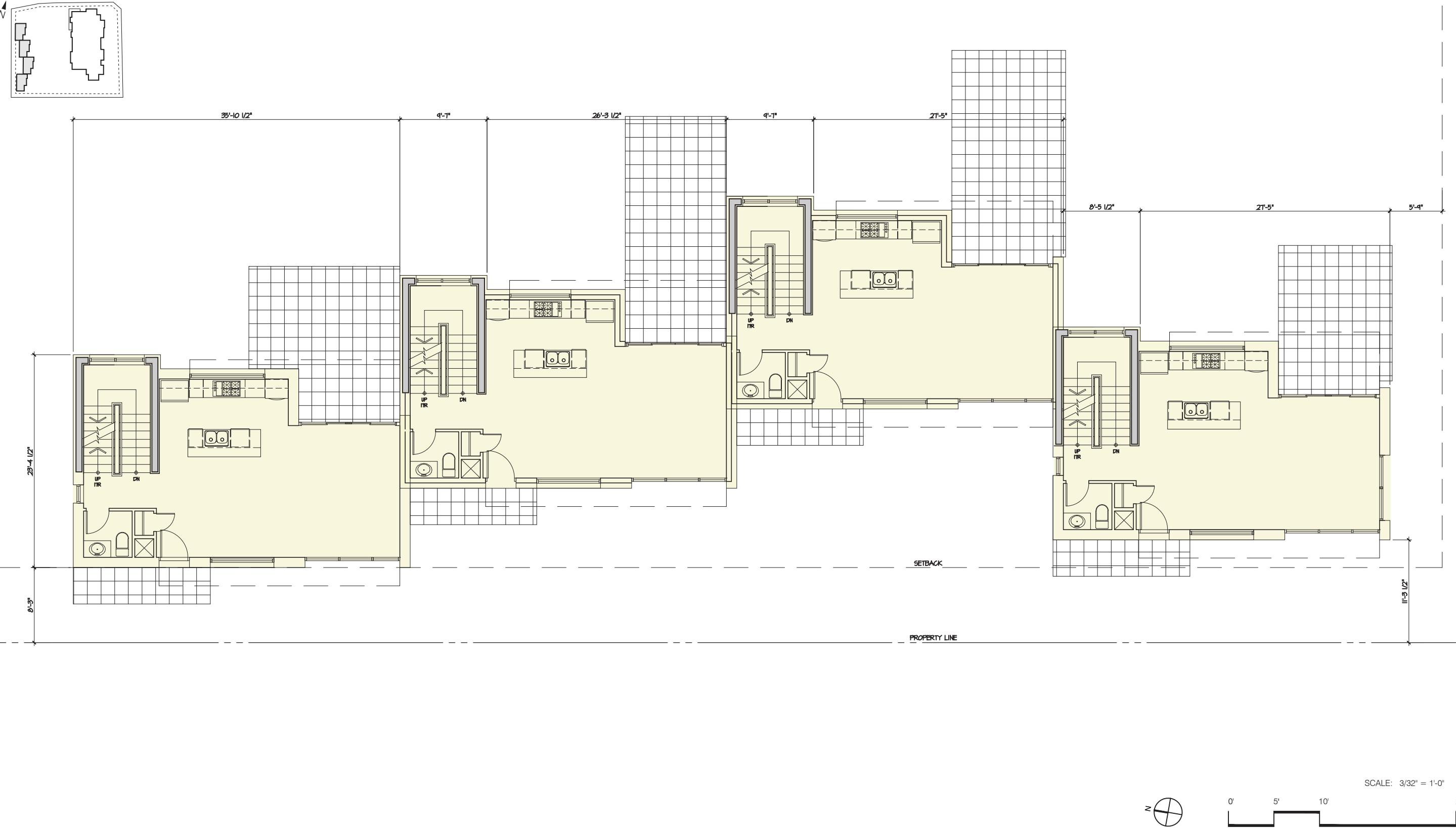


ROOF PLAN



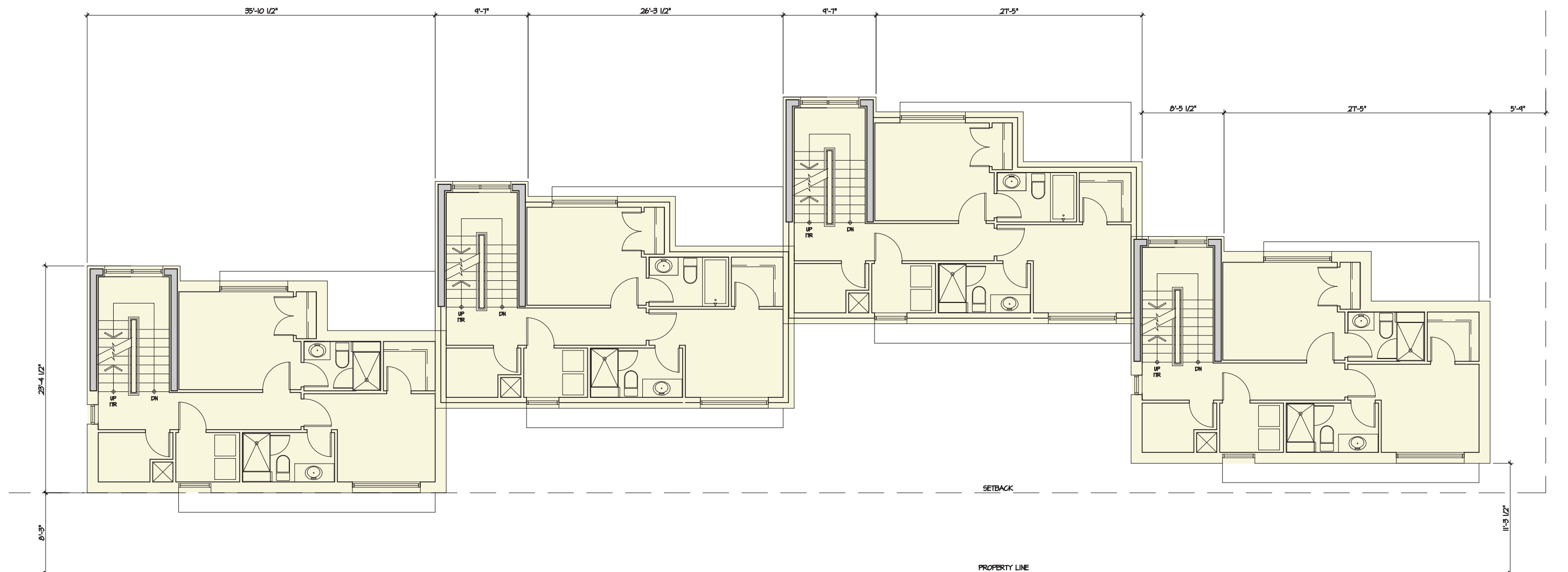
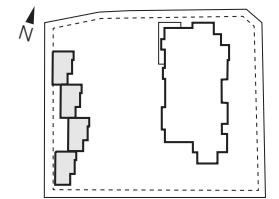
SCHEMATIC PLANS

city homes - level 01



SCHEMATIC PLANS

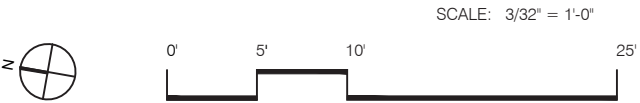
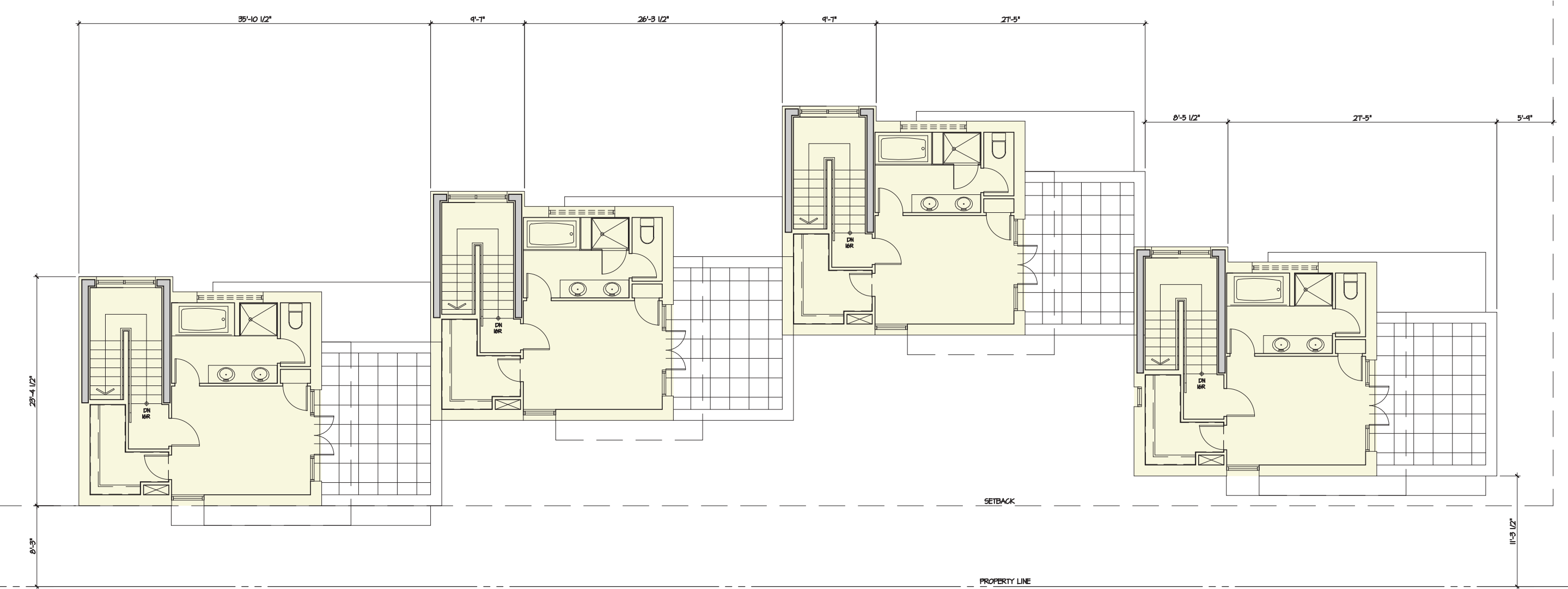
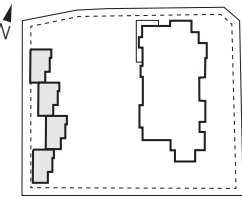
city home - level 02



SCALE: 3/32" = 1'-0"

SCHEMATIC PLANS

city home - level 03



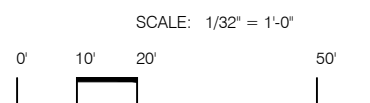
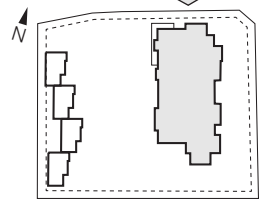
Materials

1. painted concrete column - light grey
2. charcoal aluminum window wall system c/w charcoal metal spandrel panels
3. green glass privacy screens
4. copper/bronze metal panels
5. concrete eyebrow/balcony
6. top mounted aluminum and glass guardrail
7. white aluminum window wall c/w white spandrel glass
8. face mounted aluminum and glass guard rail - white frit
9. painted underside of concrete - blue tones
10. curtain wall - charcoal
11. glass spandrel panel - charcoal
12. green metal spandrel panel
13. solar shading



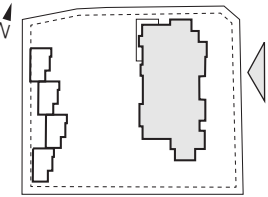
ELEVATIONS

tower north



ELEVATIONS

tower east



4

1

2

3

11

6

12

Materials

- 1. painted concrete column - light grey
- 2. charcoal aluminum window wall system c/w charcoal metal spandrel panels
- 3. green glass privacy screens
- 4. copper/bronze metal panels
- 5. concrete eyebrow/balcony
- 6. top mounted aluminum and glass guardrail
- 7. white aluminum window wall c/w white spandrel glass
- 8. face mounted aluminum and glass guard rail - white frit
- 9. painted underside of concrete - blue tones
- 10. curtain wall - charcoal
- 11. glass spandrel panel - charcoal
- 12. green metal spandrel panel
- 13. solar shading



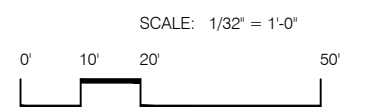
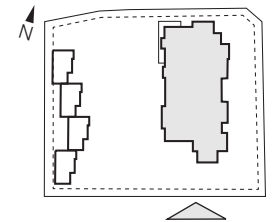
Materials

1. painted concrete column - light grey
2. charcoal aluminum window wall system c/w charcoal metal spandrel panels
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6. top mounted aluminum and glass guardrail
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9. painted underside of concrete - blue tones
10. curtain wall - charcoal
11. glass spandrel panel - charcoal
12. green metal spandrel panel
13. solar shading



ELEVATIONS

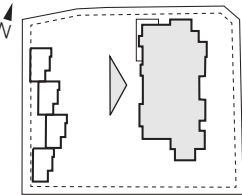
tower south



Revised 11 February 2020

ELEVATIONS

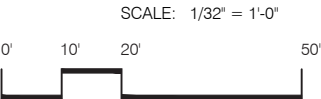
tower west



Materials

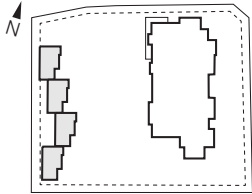
- 1. painted concrete column - light grey
- 2. charcoal aluminum window wall system c/w charcoal metal spandrel panels
- 3. green glass privacy screens
- 4. copper/bronze metal panels
- 5. concrete eyebrow/balcony
- 6. top mounted aluminum and glass guardrail
- 7. white aluminum window wall c/w white spandrel glass
- 8. face mounted aluminum and glass guard rail - white frit
- 9. painted underside of concrete - blue tones
- 10. curtain wall - charcoal
- 11. glass spandrel panel - charcoal
- 12. green metal spandrel panel
- 13. solar shading

Revised 11 February 2020



ELEVATIONS

city homes



Materials

1. composite aluminum panel system - light grey
2. aluminum window wall - charcoal
3. metal spandrel panel - copper/bronze
4. brick - white
5. aluminum and glass guardrail
6. painted concrete eyebrow

PERSPECTIVES

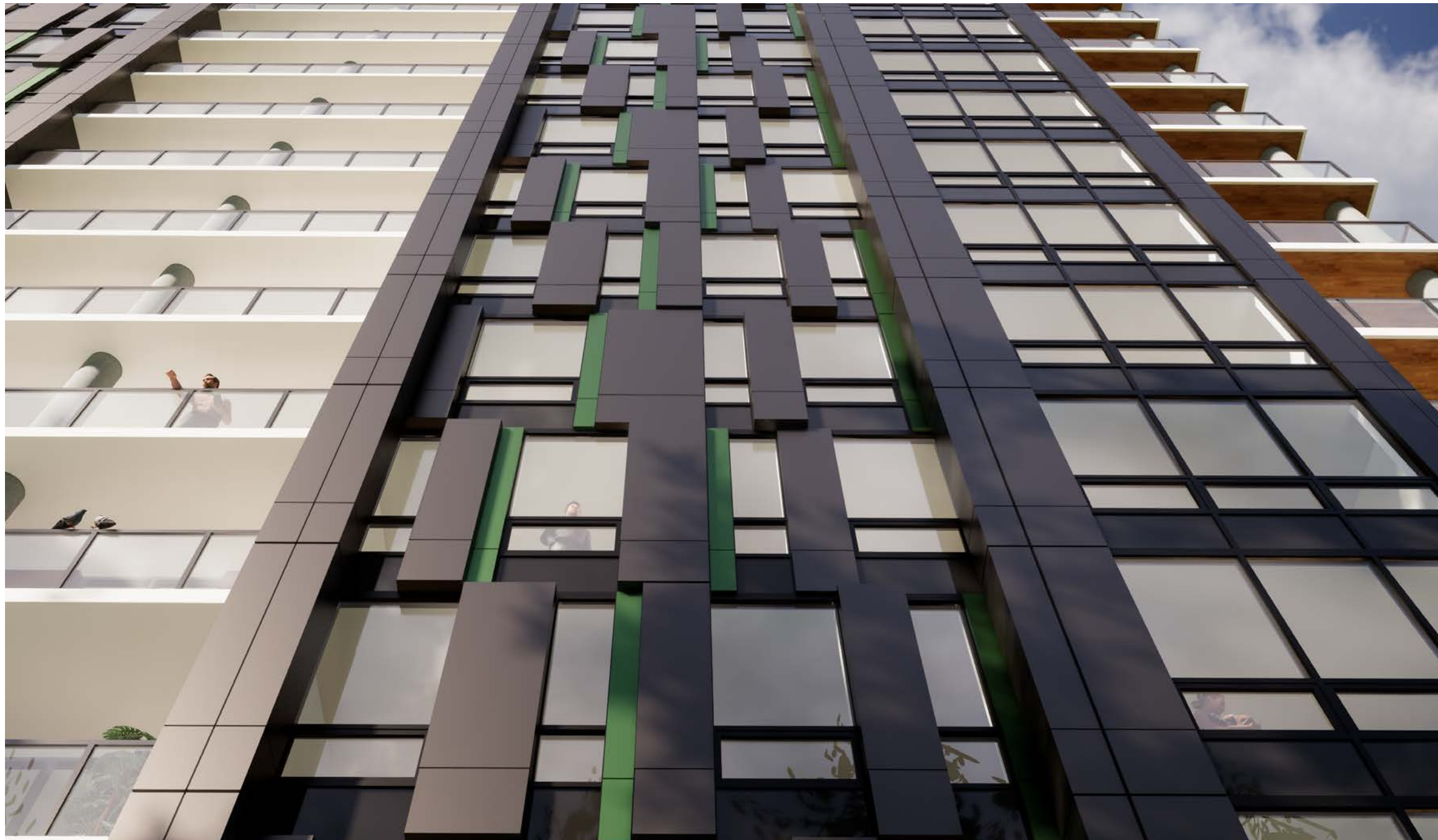
aerial view looking NE





P E R S P E C T I V E S

close up of forest side





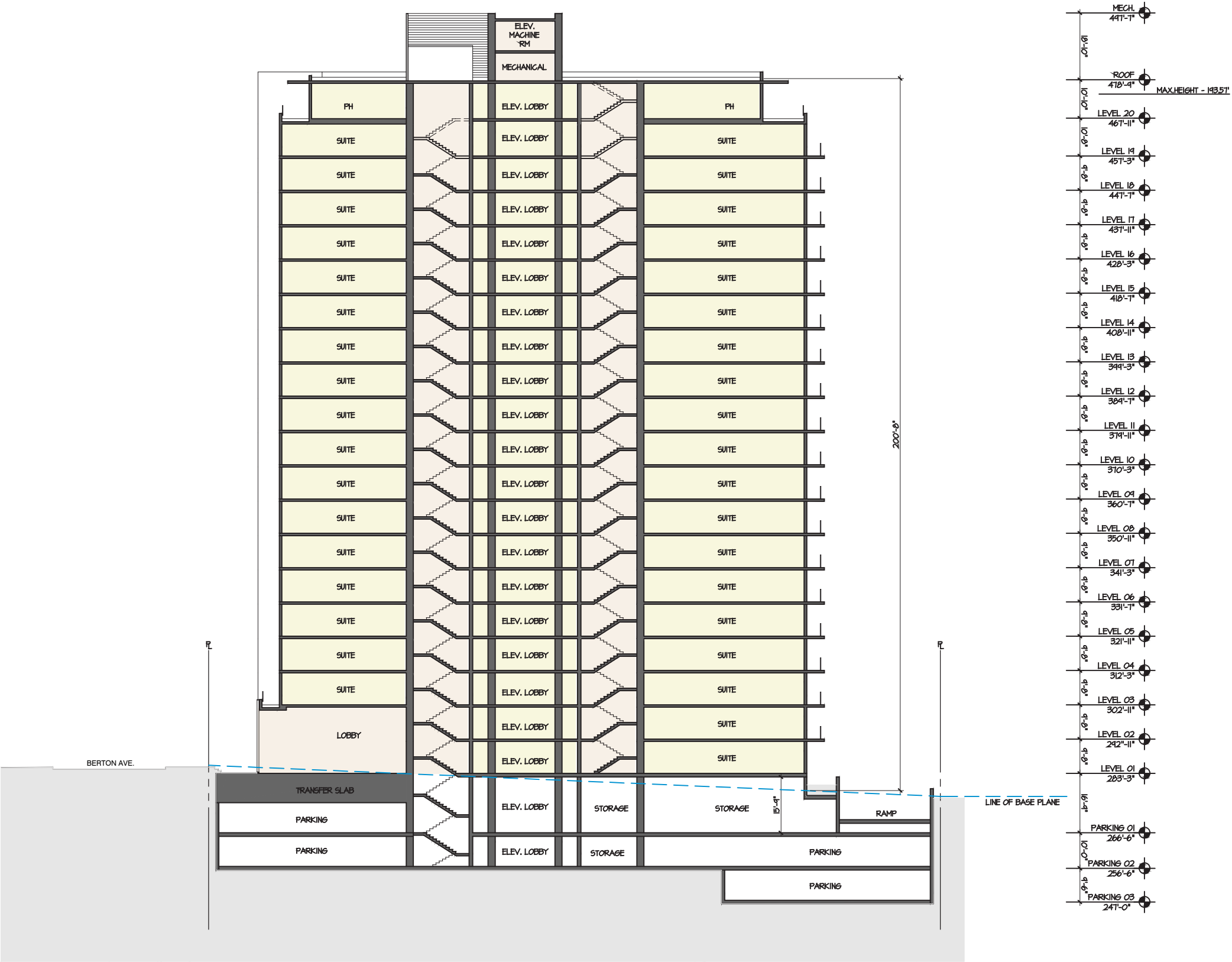
P E R S P E C T I V E S
view from Pacific Spirit Park





SECTIONS

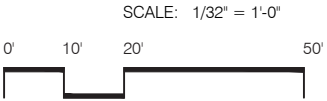
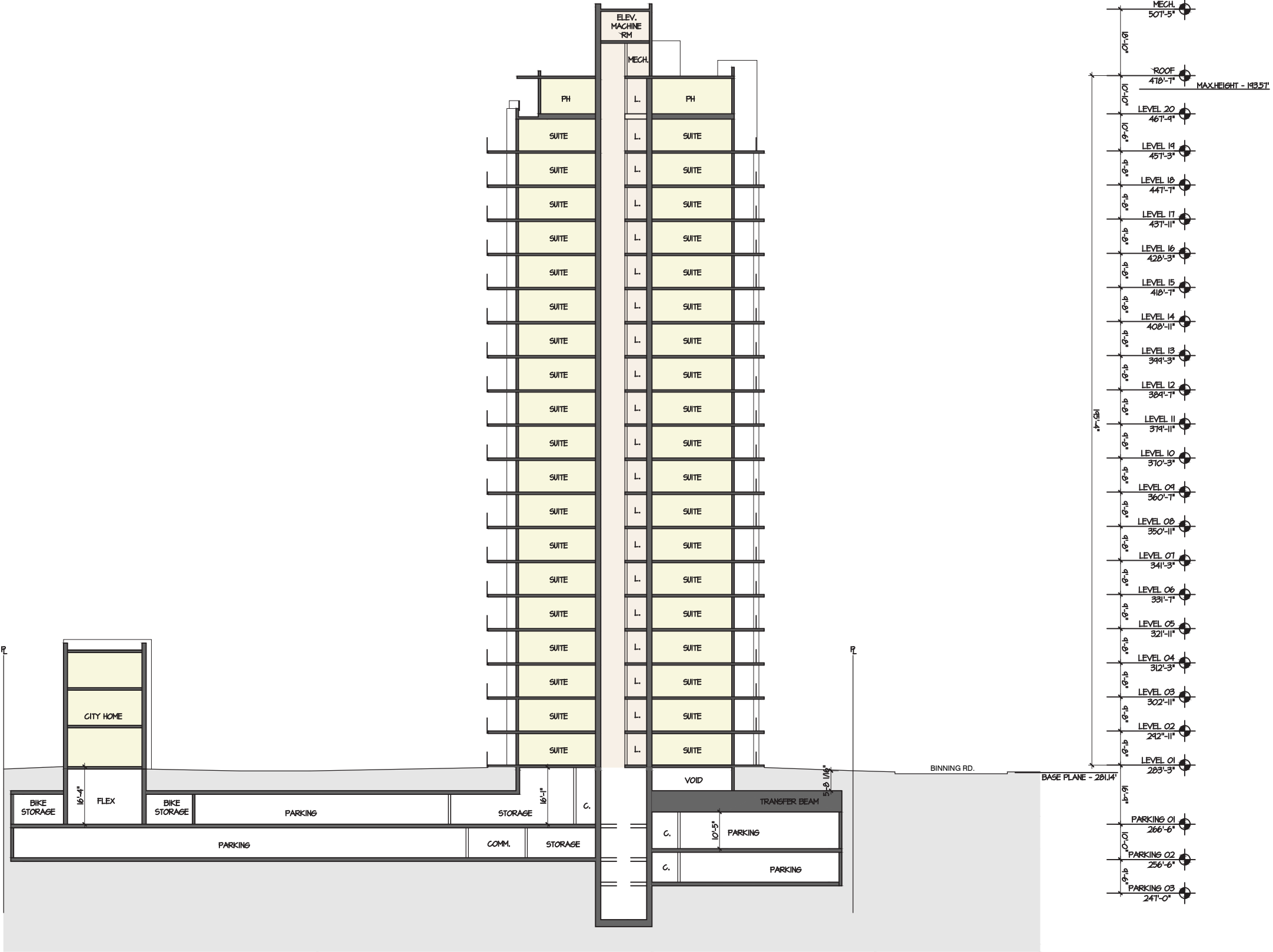
section A



Revised 11February 2020

SECTIONS

section B



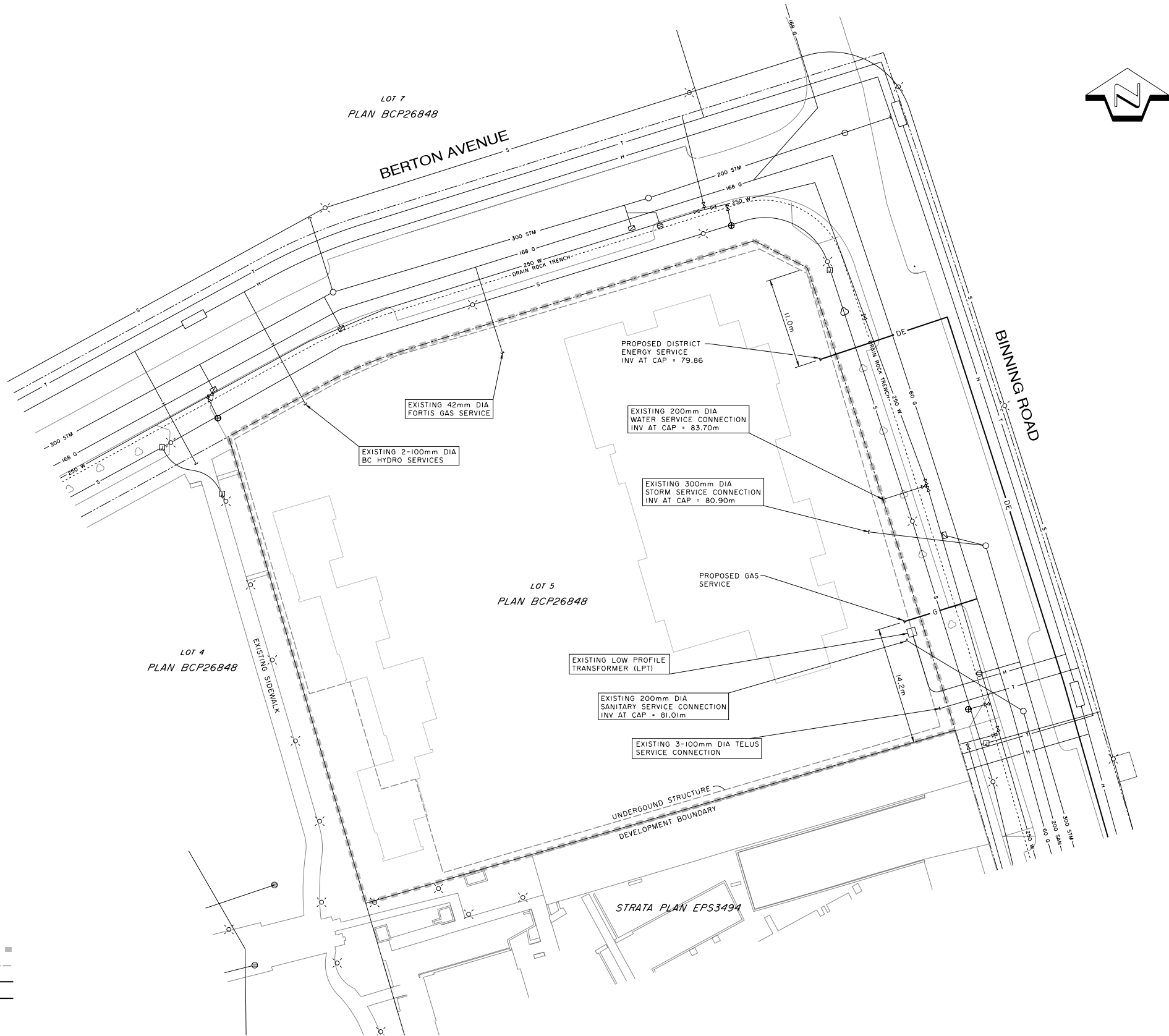
LEGEND

EXISTING

CURB AND GUTTER	
PROPERTY LINE	
LOT LINE	
DRAIN ROCK TRENCH	
STORM SEWER	
SANITARY SEWER	
WATERMAIN	
GAS	
BC HYDRO	
TELUS	
STREETLIGHTING	
STANDARD CATCH BASIN	
LAWN BASIN	
MANHOLE	
GATE VALVE	
FIRE HYDRANT	
CAP OR PLUG	
STREETLIGHT POLE	
UTILITY SERVICE VAULT	
UTILITY JUNCTION BOX	
TREE	

DESIGN

DEVELOPMENT BOUNDARY	
UNDERGROUND STRUCTURE	
DISTRICT ENERGY SYSTEM	
GAS	



NO.	DATE	REVISIONS	BY	APPROVED
2	19-12-20	ADDED PROPOSED DE AND GAS SERVICES	ML	GW
1	19-11-21	DEVELOPMENT PERMIT FIRST SUBMISSION	ML	GW

Client	POLYGON DEVELOPMENT 374 LTD
Project	CONSERVATORY UBC SOUTH CAMPUS LOT 5

Scale	0 5 10 15 1:250
Design	G. WOOD
Drawn	M. LOSCHIAVO
Plot Date	19/12/20
Plot Time	10:54:54 AM

Title	SERVICING PLAN
Drawing Number	AE46-C-101
Revision	2

Arborist's Notes:

1. Tree protection circles are plotted and dimensioned from surveyed tree center.
2. Tree protection zone shown for contextual purposes only for tree #244.
3. Any works to occur within TPZs of trees UBC01-UBC06 must occur under arborist supervision. This includes potential upgrades to existing hardscaping, landscaping and irrigation installation.





PACIFIC SPIRIT
REGIONAL PARK

BERTON AVENUE

PACIFIC SPIRIT
REGIONAL PARK

BINNING ROAD

KHORANA PARK

PROJECT NAME
UBC LOT 5 WESBROOK PLACE

CIVIC ADDRESS
5728 Berton Avenue

DRAWING CONTENTS

L0.00	COVER
L0.01	PRECEDENT IMAGES
L0.02	TREE MANAGEMENT PLAN
L0.03	TREE REPLACEMENT PLAN
L1.01	LAYOUT AND MATERIALS PLAN
L2.01	GRADING PLAN
L3.01	PLANT LIST
L3.02	PLANTING PLAN
L4.01	LIGHTING PLAN
L5.01	IRRIGATION PLAN
L6.01	SECTIONS
L6.02	SECTIONS

REVISIONS AND ISSUES	
NO.	DATE
1	2019-11-21
2	2019-11-27
3	2020-01-06
4	2020-02-10

ISSUED FOR DEVELOPMENT PERMIT
ISSUED FOR AUDP
DEVELOPMENT PERMIT BOARD SUBMISSION
RE-ISSUED FOR DEVELOPMENT PERMIT

PROJECT
THE CONSERVATORY
UBC LOT 5
WESBROOK PLACE

ADDRESS
5728 Berton Avenue

DRAWING TITLE
COVER

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PROJECT NO.	19037
DATE	Revised 11 February 2020
FILE NAME	19037 PLAN.vwx
PLOTTED	20-2-10
DRAWN	MB, EW
REVIEWED	BH

DRAWING
L0.00

REVISIONS AND ISSUES		
NO.	DATE	DESCRIPTION
1	2019-11-21	ISSUED FOR DEVELOPMENT PERMIT
2	2019-11-27	ISSUED FOR AUDP
3	2020-01-06	DEVELOPMENT PERMIT BOARD SUBMISSION
4	2020-02-10	RE-ISSUED FOR DEVELOPMENT PERMIT

ENTRY + PUBLIC PLAZAS



BRENT COMBER PUBLIC ART AT NORTH-EAST CORNER



PRIVATE COURTYARD AMENITY



DESIGN RATIONALE

OVERALL INTENT: CAPTURING THE SUBSTANCE OF PACIFIC SPIRIT PARK

- Displaying proportional resiliency and ecological value through masses of hardy plantings.
- Borrowing aesthetic from the park with bermed coniferous tree groves as focal points.
- Extending the naturalized park into the amenity space with curvilinear beds that carve out a "clearing in the forest".
- Intersecting and overlapping the built and natural environment to create a perceivable juxtaposition.

PUBLIC ENTRY

- The entry plaza is designed to engage public users along Berton Avenue. A bermed plant bed with coniferous planting provides a sense of discovery and interest. Seating is provided in a diversity of forms: benches, lounge chairs and a seat wall protruding from the berm.
- The entry plaza provides an experiential accessible passage to the main entry at The Conservatory tower.
- The public entry plaza is delineated from the private amenity courtyard by densely vegetated plant beds and coniferous trees; thus allowing a partially buffered view into the courtyard space.

PUBLIC PLAZA AT NORTH EAST CORNER

- At the corner of Berton Avenue and Binning Road a public amenity space is provided. This plaza acts as an extension of the public realm, as it welcomes users approaching The Conservatory through the Pacific Spirit Trail to the North and East.
- To further activate the space and celebrate Pacific Spirit Park, public art by Brent Combers is proposed. The piece will be derived from and inspired by reclaimed timber from the site.

PRIVATE COURTYARD AMENITY

- The private courtyard is made up of three predominate spaces.
- The first outdoor space lands just outside the indoor amenity. A rectilinear patio area provides lounge seating for passive use and a co-working table equipped with outlets and electronic charging stations
- The second is a lush lawn area encompassed by a flagstone path. The lawn area provides opportunity for informal recreation and play. Bermed plant beds on the West side of the courtyard are intersected by a pathway. Corten steel retaining walls support the bermed grade on either side of the path, creating a more dynamic walking experience.
- These flagstone paths lead toward a secondary patio space. The rectilinear patio is covered by a metal pergola structure that expresses the architectural form of the cantilevered entry awning. A sense of enclosure is created from within the space by surrounding bermed plant beds, while views onto the lawn are maintained. Benches and lounge chairs are provided to encourage rest and passive use of the space.

CITY HOME STREET FRONTAGE



TOWER STREET FRONTAGE



PROJECT

THE CONSERVATORY UBC LOT 5 WESBROOK PLACE

ADDRESS
5728 Berton Avenue

PRECEDENT IMAGES

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DRAWING TITLE	
PRECEDENT IMAGES	

PROJECT NO.	19037
DATE	November 2019
FILE NAME	19037 PLAN.vwx
PLOTTED	20-2-10
DRAWN	MB, EW
REVIEWED	BH

DRAWING

L0.01



PACIFIC SPIRIT
REGIONAL PARK

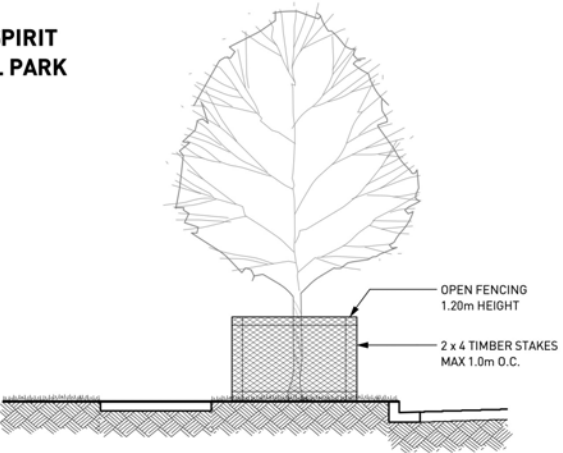
BERTON AVENUE

BINNING ROAD

KHORANA PARK

TREE MANAGEMENT LEGEND	
KEY	DESCRIPTION
	DECIDUOUS TREE TO BE REMOVED TOTAL REMOVED: 6
	CONIFEROUS TREE TO BE REMOVED TOTAL REMOVED: 57
	DECIDUOUS TREE RETAINED

PACIFIC SPIRIT
REGIONAL PARK



1 TREE PROTECTION BARRIER FENCING DETAIL
NTS

TREE PROTECTION GENERAL NOTES

- A. EXCAVATION AROUND TREES**
- EXCAVATION WITHIN DRIP LINE OF TREES ONLY WHERE INDICATED ON PLANS AND AS DIRECTED BY THE CONSULTANT.
 - DURING ANY EXCAVATION WITHIN THE DRIP LINE OF A TREE THE CONTRACTOR SHALL EXCAVATE AROUND TREE ROOTS AS DIRECTED BY THE CONSULTANT. DO NOT CUT TREE ROOTS UNLESS DIRECTED BY THE CONSULTANT.
 - TREES AND OTHER DESIRABLE VEGETATION TO BE TOTALLY FENCED BY 1.8M (6'-0") HIGH SEMI-PERMANENT CHAIN-LINK FENCING. FENCING TO BE MAINTAINED FOR THE DURATION OF THE PROJECT.
- B. EXCAVATION FOR NEW CONSTRUCTION WITHIN THE DRIP LINES OF TREES**
- HAND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS.
 - USE NARROW TINE SPADING FORKS TO PROBE AND COMB SOIL TO EXPOSE ROOTS.
 - RELOCATE ROOTS INTO BACKFILL AREAS WHENEVER POSSIBLE. IF LARGE MAIN LATERAL ROOTS ARE ENCOUNTERED, EXPOSE BEYOND EXCAVATION LIMITS AS REQUIRED TO BEND AND RELOCATE WITHOUT BREAKING.
- C. UTILITY TRENCHING WITHIN THE DRIP LINES OF TREES**
- TUNNEL UNDER AND AROUND ROOTS BY HAND DIGGING.
 - DO NOT CUT MAIN LATERAL ROOTS.
 - CUTTING OF SMALLER ROOTS THAT INTERFERE WITH INSTALLATION OF NEW WORK SHALL BE DONE WITH CLEAN SHARP TREE PRUNING TOOLS.
 - ROOTS THAT ARE ENCOUNTERED IMMEDIATELY ADJACENT TO THE LOCATION OF NEW CONSTRUCTION AND ARE TOO DIFFICULT TO RELOCATE SHALL BE CUT 15cm (6") BACK FROM NEW CONSTRUCTION. USE CLEAN SHARP TREE PRUNING TOOLS.
- D. PROTECTION OF EXPOSED ROOTS**
- DO NOT ALLOW EXPOSED ROOTS TO DRY OUT PRIOR TO PLACEMENT OF PERMANENT COVER. PROVIDE ONE OF THE FOLLOWING TEMPORARY REMEDIAL MEASURES:

A. PROVIDE TEMPORARY EARTH COVER. MAINTAIN MOISTURE.
B. PACK WITH WET PEAT MOSS. MAINTAIN MOISTURE.
C. PACK WITH FOUR LAYERS OF WET UNTREATED BURLAP. MAINTAIN MOISTURE.
 - TEMPORARILY SUPPORT AND PROTECT EXPOSED ROOTS FROM DAMAGE UNTIL PERMANENTLY RELOCATED AND COVERED WITH BACKFILL.
 - WATER PUDDLE BACKFILL AROUND ROOTS TO ELIMINATE VOIDS AND AIR POCKETS.

REVISIONS AND ISSUES		
NO.	DATE	DESCRIPTION
1	2019-11-21	ISSUED FOR DEVELOPMENT PERMIT
2	2019-11-27	ISSUED FOR AUDP
3	2020-01-06	DEVELOPMENT PERMIT BOARD SUBMISSION
4	2020-02-10	RE-ISSUED FOR DEVELOPMENT PERMIT

PROJECT
**THE CONSERVATORY
UBC LOT 5
WESBROOK PLACE**

ADDRESS
5728 Berton Avenue

DRAWING TITLE
TREE MANAGEMENT PLAN

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NORTH

SCALE

1/16"=1'0"

PROJECT NO.	19037
DATE	November 2019
FILE NAME	19037 PLAN.vwx
PLOTTED	20-2-10
DRAWN	MB, EW
REVIEWED	BH

DRAWING
L0.02



PACIFIC SPIRIT
REGIONAL PARK

BERTON AVENUE

BINNING ROAD

PACIFIC SPIRIT
REGIONAL PARK

TREE REPLACEMENT PLAN		
KEY	NUMBER	DESCRIPTION
	72	REPLACEMENT TREE - DECIDUOUS
	14	REPLACEMENT TREE - CONIFEROUS
TOTAL	86	

REVISIONS AND ISSUES		
NO.	DATE	DESCRIPTION
1	2019-11-21	ISSUED FOR DEVELOPMENT PERMIT
2	2019-11-27	ISSUED FOR AUP
3	2020-01-06	DEVELOPMENT PERMIT BOARD SUBMISSION
4	2020-02-10	RE-ISSUED FOR DEVELOPMENT PERMIT

KHORANA PARK

PROJECT
**THE CONSERVATORY
UBC LOT 5
WESBROOK PLACE**

ADDRESS
5728 Berton Avenue

DRAWING TITLE
**TREE REPLACEMENT
PLAN**

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NORTH  SCALE
1/16"=1'0"

PROJECT NO.	19037
DATE	November 2019
FILE NAME	19037 PLAN.vwx
PLOTTED	20-2-10
DRAWN	MB, EW
REVIEWED	BH
DRAWING	

L0.03

REVISIONS AND ISSUES		
NO.	DATE	DESCRIPTION
1	2019-11-21	ISSUED FOR DEVELOPMENT PERMIT
2	2019-11-27	ISSUED FOR ADUP
3	2020-01-06	DEVELOPMENT PERMIT BOARD SUBMISSION
4	2020-02-10	RE-ISSUED FOR DEVELOPMENT PERMIT

PROJECT
**THE CONSERVATORY
UBC LOT 5
WESBROOK PLACE**

ADDRESS
5728 Berton Avenue

DRAWING TITLE
**LAYOUT AND MATERIALS
PLAN**

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PROJECT NO.	19037
DATE	Revised 11 February 2020
FILE NAME	19037 PLAN.vwx
PLOTTED	20-2-10
DRAWN	MB, EW
REVIEWED	BH

DRAWING

L1.01



HARDSCAPE MATERIALS LEGEND	
KEY	DESCRIPTION
H1	Stone Wall Type 1
H2	Stone Wall Type 2
H3	Cast in Place Concrete Stairs
H4	Cast in Place Concrete Wall
H5	Timber Wall
H6	Corten Steel Wall

PAVING MATERIALS LEGEND	
KEY	DESCRIPTION
P1	Linear Paver
P2	Flagstone Paver
P3	Hydrapressed Pavers
P4	Cast in Place Unit Pavers
P5	River Rock Maintenance Strip
P6	Decorative Glass

SITE FURNISHING MATERIALS LEGEND	
KEY	DESCRIPTION
F1	Urban Staple Bike Rack (Model: UB-1000-STD)
F2	Frances Andrew Centennial Series Bench
F3	Landscapeforms Harpo Bench
F4	Landscapeforms Harpo Lounge Chair
F5	Co-Work Table
F6	Gate

- LAYOUT AND MATERIALS GENERAL NOTES**
- DO NOT SCALE DRAWING. LAYOUT AS PER DIMENSIONS NOTED ON LANDSCAPE PLANS. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
 - LAYOUT AND MATERIALS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH LANDSCAPE SPECIFICATIONS.
 - LANDSCAPE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND ENGINEERING DRAWINGS. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
 - VERIFY ALL DIMENSIONS WITH FIELD CONDITIONS. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
 - EXTERIOR LIGHTING SHOWN ON LANDSCAPE PLANS IS FOR REFERENCE ONLY. LIGHTING INFORMATION REFERENCED ON LANDSCAPE DRAWINGS IS TO BE READ IN CONJUNCTION WITH ELECTRICAL ENGINEER'S DRAWINGS.
 - REFERENCE CIVIL ENGINEER'S DRAWINGS FOR LAYOUT OF ROAD CURBS AND GUTTERS.

PACIFIC SPIRIT
REGIONAL PARK

KHORANA PARK

BERTON AVENUE

PACIFIC SPIRIT
REGIONAL PARK

BINNING ROAD

GRADING GENERAL NOTES

1. REFER TO ARCHITECTURAL PLANS, SECTIONS AND ELEVATIONS FOR TOP OF SLAB ELEVATIONS. SLAB ELEVATIONS INDICATED ON LANDSCAPE DRAWINGS ARE FOR REFERENCE ONLY. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
2. CONFIRM ALL EXISTING GRADES PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
3. GROWING MEDIUM DEPTHS ON ARCHITECTURAL SLAB ARE NOT TO EXCEED THOSE SPECIFIED IN SPECIFICATIONS. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
4. SLAB DRAINS AND PLANTER SLAB DRAINS ARE SHOWN FOR REFERENCE ONLY AND ARE TO BE READ IN CONJUNCTION WITH MECHANICAL ENGINEERING DRAWINGS. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
5. UNLESS OTHERWISE NOTED ALL DRAINS LOCATED IN LAWN OR PLANTED AREAS TO BE COMPLETE WITH INSPECTION CHAMBER AND CLEANOUT AS DETAILED ON LANDSCAPE DRAWINGS.
6. UNLESS OTHERWISE NOTED PROVIDE A MINIMUM SLOPE OF 2% ON ALL HARD AND SOFT LANDSCAPE AREAS TO ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS OR TO DRAINAGE STRUCTURES.
7. UNLESS OTHERWISE NOTED MAXIMUM SLOPE OF SOFT LANDSCAPE AREAS TO BE 3:1 (33%). REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
8. UNLESS OTHERWISE NOTED PROVIDE A MAXIMUM SLOPE OF 5% ON ALL HARD LANDSCAPE AREAS. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
9. TOP OF CURB ELEVATIONS ARE SHOWN FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR CURB ELEVATIONS.
10. TIE INTO EXISTING ELEVATIONS AT EXTENT OF WORK CLEAN AND FLUSH. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.

REVISIONS AND ISSUES		
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3	2020-01-06	DEVELOPMENT PERMIT BOARD SUBMISSION
4	2020-02-10	RE-ISSUED FOR DEVELOPMENT PERMIT

PROJECT
**THE CONSERVATORY
UBC LOT 5
WESBROOK PLACE**

ADDRESS
5728 Berton Avenue

DRAWING TITLE
GRADING PLAN

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PLANTING GENERAL NOTES

- ALL PLANTS ARE TO CONFORM TO THE STANDARD SPECIFIED IN THE LATEST EDITION OF THE BC LANDSCAPE STANDARD. THE STANDARD IS PUBLISHED BY THE BC SOCIETY OF LANDSCAPE ARCHITECTS AND BC LANDSCAPE AND NURSERY ASSOCIATION.
- SEARCH AREA FOR PLANT MATERIAL IS TO INCLUDE ALL OF WESTERN NORTH AMERICA.
- PLANT MATERIAL SIZES SPECIFIED IN THE PLANT LIST ARE THE MINIMUM ACCEPTABLE SIZES FOR MATERIAL SUPPLIED FOR THIS PROJECT.
- PLANTS WILL BE WELL ESTABLISHED AND UNIFORM IN SHAPE.
- PLANTS WILL BE NUSERY GROWN UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL PROVIDE A GROWING MEDIUM ANALYSIS FOR REVIEW BY THE CONSULTANT AS PER SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. GROWING MEDIUM SUPPLIED TO THE SITE OR PLACED ON SITE PRIOR TO REVIEW BY THE CONSULTANT WILL BE REJECTED.
- CONTRACTOR TO CONFIRM PLANT QUANTITIES ON DRAWING CORRESPOND TO THOSE INDICATED ON THE PLANT LIST. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE.
- PLANT LIST IS TO BE READ IN CONJUNCTION WITH SPECIFICATIONS.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR IS TO CONFIRM THE AVAILABILITY OF PLANT MATERIAL AS PER SPECIFICATIONS. PLANT SUBSTITUTIONS NOT CONFIRMED WITH THE CONSULTANT WILL BE REJECTED.

Plant List						
The Conservatory						
ID	Qty	Botanical Name	Common Name	Scheduled Size	Spacing	Remarks
Trees						
ACR	6	Acer circinatum	Vine Maple	2.4 m ht. [8'-0" ht.]	As Shown	B&B, Nursery grown, minimum 3 stems
AFJ	11	Acer x freemanii 'Jeffersred'	Autumn Blaze Maple	8 cm cal. [3" cal.]	As Shown	B&B, Uniform branching, dense tree, 7' [2.1 m] std.
AXA	6	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	4 cm cal. [1 1/2" cal.]	As Shown	B&B, Multi-stemmed, dense tree
CCD	8	Cercis canadensis 'Appalachian Red'	Appalachian Red Eastern Redbud	2.4 m ht. [8'-0" ht.]	As Shown	B&B, Multi-stem, nursery grown
CKO	7	Cornus kousa	Kousa Dogwood	5 cm cal. [2" cal.]	As Shown	B&B, Well branched, dense tree
MGP	3	Metasequoia glyptostroboides	Dawn Redwood	2.4 m ht. [8'-0" ht.]	As Shown	B&B, Dense plant, well branched, fully branched to ground
PPI	14	Parrotia persica 'Inge's Ruby Vase'	'IRV' Persian Ironwood	5 cm cal. [2" cal.]	As Shown	B&B, Straight trunk, uniform branching, 5' [1.5 m] std.
POR	10	Picea omorika	Serbian Spruce	2.4 m ht. [8'-0" ht.]	As Shown	B&B, Well branched, dense tree
POR-1	4	Picea omorika	Serbian Spruce	3.0 m ht. [10'-0" ht.]	As Shown	B&B, Well branched, dense tree
SPS	11	Stewartia pseudocamellia	Japanese Stewartia	5 cm cal. [2" cal.]	As Shown	B&B, Well branched, dense tree
Shrubs						
AUC	12	Arbutus unedo 'Compacta'	Compact Strawberry Tree	#3 pot	90cm [36"]	Well established
BMW	262	Buxus microphylla 'Winter Gem'	Winter Gem Boxwood	#2 pot	38cm [15"]	Well established
CCO	126	Ceanothus impressus 'Victoria'	Brilliant Ceanothus	#3 pot	90cm [36"]	Well established
CTR	198	Choisya ternata	Mexican Orange Blossom	#3 pot	90cm [36"]	Well established
CAS	15	Cornus alba 'Sibirica'	Siberian Dogwood	#2 pot	90cm [36"]	Well established
CSK	19	Cornus sericea 'Kelseyii'	Kelseyii Dogwood	#2 pot	60cm [24"]	Well established, nursery grown
DBW	42	Daphne burkwoodii 'Carol Mackie'	Carol Mackie Daphne	#1 pot	38cm [15"]	15cm [6"] height
EHN	118	Escallonia 'Newport Dwarf'	Newport Dwarf Escallonia	#2 pot	60cm [24"]	Well established
HYR	6	Hibiscus syriacus 'Red Heart'	Red Heart Rose-of-Sharon	#3 pot	100cm [39"]	Well established
NDG	128	Nandina domestica 'Gulf Stream'	Compact Heavenly Bamboo	#2 pot	68cm [27"]	Well established
PLO	225	Prunus laurocerasus 'Otto Luyken'	Otto Luyken laurel	#2 pot	60cm [24"]	Well established
RBB	116	Rhododendron 'Blue Bells'	Bow Bells Rhododendron	#3 pot	75cm [30"]	Well established
REL	133	Rhododendron 'Elizabeth'	Elizabeth Rhododendron	#3 pot	75cm [30"]	Well established
RCP	32	Rhododendron carolinianom 'P.J.M.'	P.J.M. Rhododendron	#3 pot	75cm [30"]	Well established
RMP	256	Rosa 'Meidiland Pink'	Meidiland Pink Rose	#2 pot	60cm [24"]	Well established
RMV	86	Rosa 'Meidiland var. Meikrotal'	Scarlet Meidiland Rose	#2 pot	75cm [30"]	Well established
SHH	386	Sarcococca hookeriana humilis	Himalayan Sarcococca	#2 pot	45cm [18"]	Well established
SJP	467	Skimmia japonica	Japanese Skimmia	#2 pot	60cm [24"]	Well established
SBA	284	Spiraea bumalda 'Anthony Waterer'	Anthony Waterer Spiraea	#2 pot	60cm [24"]	Well established
TXM	228	Taxus x media 'H.M.Eddie'	H.M.Eddie Yew	1.2m	60cm [24"]	Well established, dense hedging plant / B & B
VOT	63	Vaccinium ovatum 'Thunderbird'	Thunderbird Evergreen Huckleberry	#3 pot	75cm [30"]	Well established, nursery grown
VDV	599	Viburnum davidii	David Viburnum	#2 pot	60cm [24"]	Well established
Ground Cover						
ECP	164	Erica carnea 'Springwood Pink'	Spring Pink Winter Heath	#1 pot	38cm [15"]	15cm [6"] height
EFE	545	Euonymus fortunei 'Emerald Gaiety'	Emeral Gaiety Wintercreeper	#1 pot	38cm [15"]	25cm [10"] spread. Minimum 3 leads
LSR	278	Liriope spicata	Creeping Lily-turf	#1 pot	38cm [15"]	25cm [10"] spread
Perennials						
HOJ	38	Hosta 'June'	June Hosta	#1 pot	60 cm [24"]	Well established
POL	309	Papaver orientale	Oriental Poppy	#1 pot	38 cm [15"]	Well established
SSB	160	Salvia superba	Perennial Salvia	#1 pot	30 cm [12"]	Well established
Vines						
CAR	50	Clematis armandii	Evergreen Clematis	---	As Shown	Staked, full development
Ferns						
PMU	99	Polystichum munitum	Western Sword Fern	#1 pot	45 cm [18"]	Well established, nursery grown

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PROJECT

THE CONSERVATORY
UBC LOT 5
WESBROOK PLACE

ADDRESS

5728 Berton Avenue

DRAWING TITLE

PLANT LIST

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NORTH	SCALE

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PACIFIC SPIRIT
REGIONAL PARK

BERTON AVENUE

PACIFIC SPIRIT
REGIONAL PARK

BINNING ROAD

KHORANA PARK


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DRAWING TITLE
PLANTING PLAN

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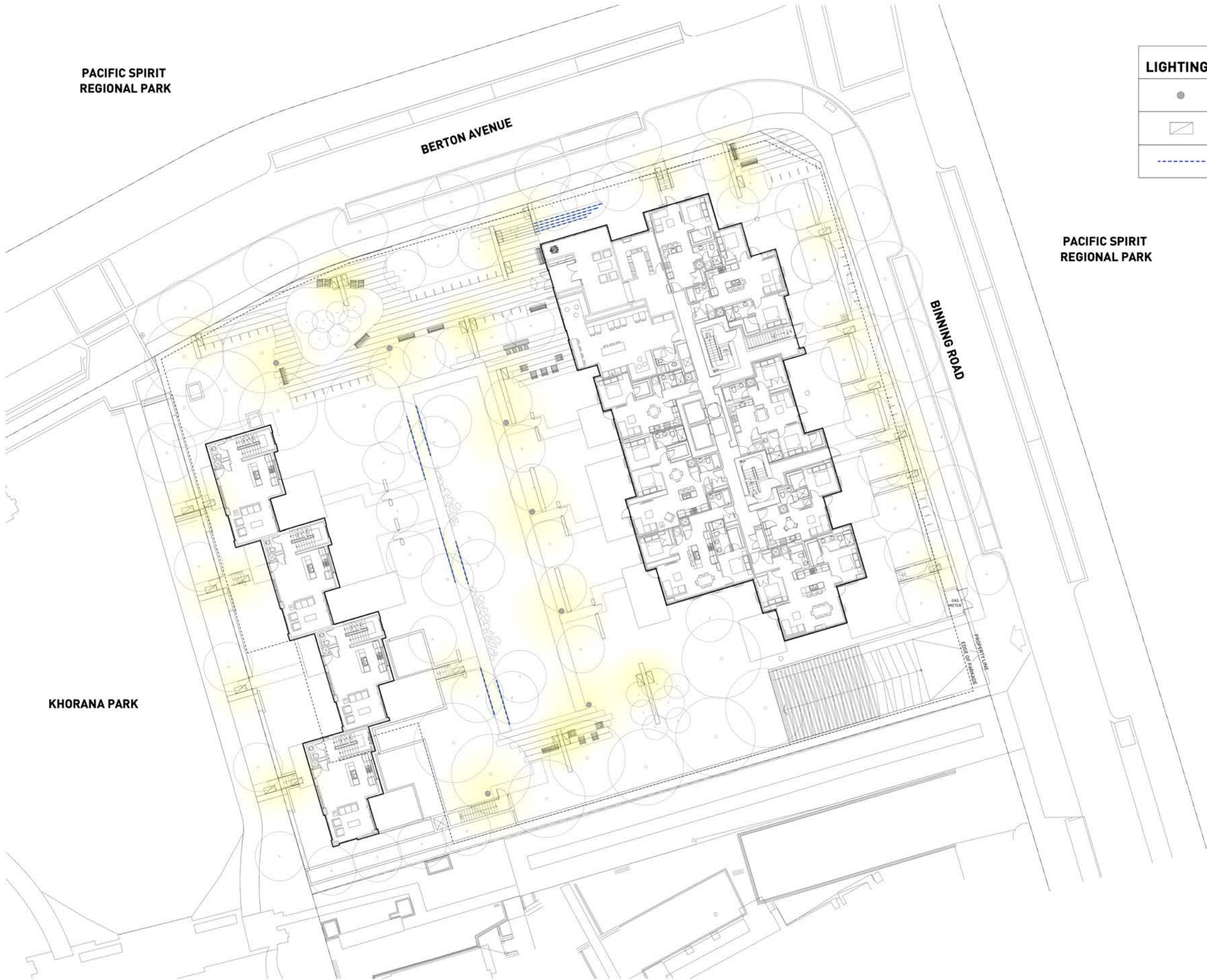


NORTH

SCALE
1/16"=1'0"

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L3.02



PACIFIC SPIRIT
REGIONAL PARK

BERTON AVENUE

PACIFIC SPIRIT
REGIONAL PARK

BINNING ROAD

KHORANA PARK

LIGHTING LEGEND	
	Bollard Light
	Wall Light
	LED Light Strip



PWL partnership

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Vancouver, BC Canada V6E 2V2
www.pwlpartnership.com
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PROJECT
**THE CONSERVATORY
UBC LOT 5
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LIGHTING PLAN

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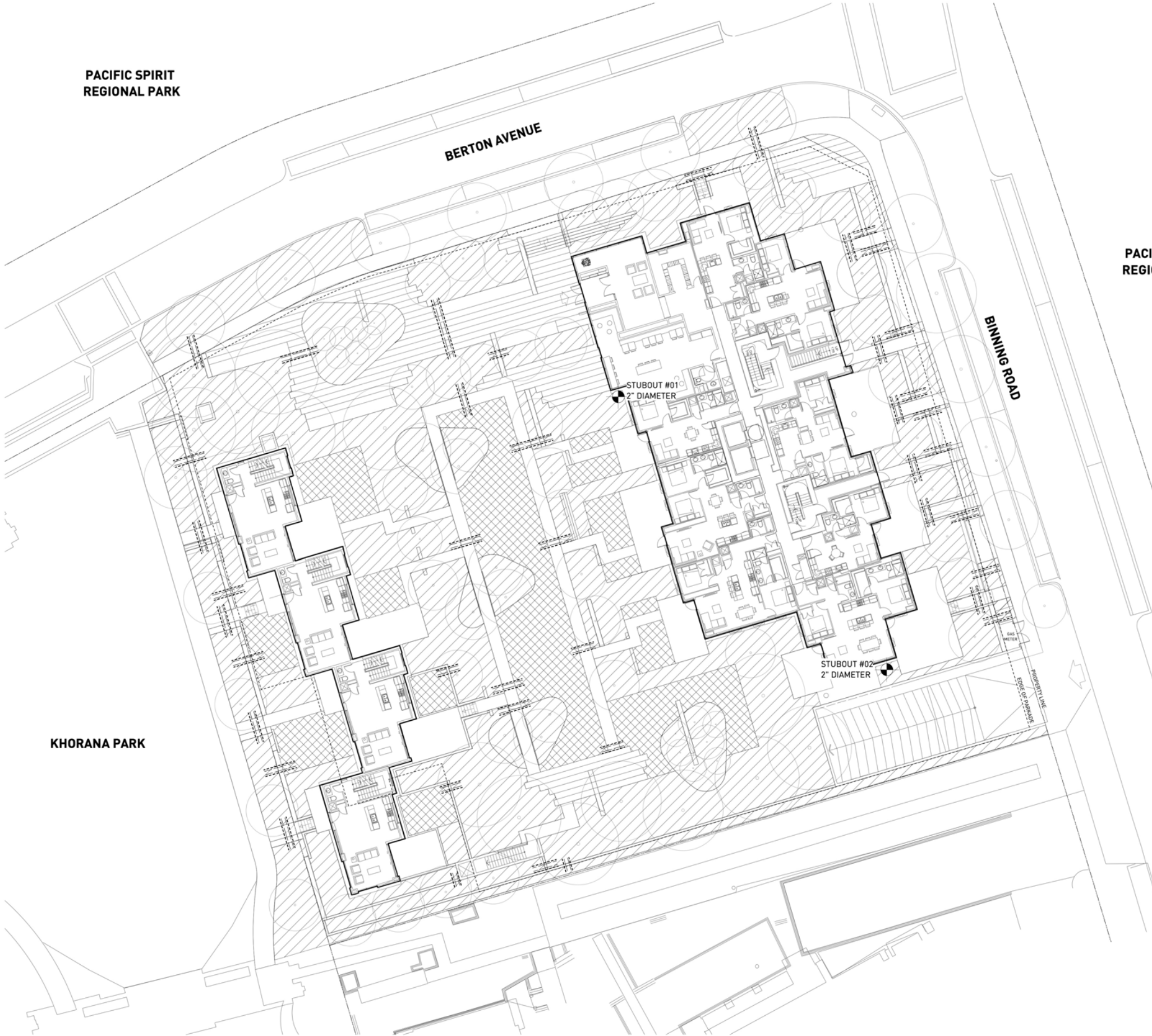
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L4.01



IRRIGATION LEGEND	
	DRIP IRRIGATION - ALL PLANT BEDS
	HIGH EFFICIENCY SPRAY IRRIGATION - ALL LAWN AREAS
	IRRIGATION SLEEVING
	WATER STUBOUT FOR IRRIGATION SYSTEM ARE SHOWN FOR REFERENCE ONLY. SEE ALSO MECHANICAL AND ELECTRICAL DRAWINGS.

PACIFIC SPIRIT
REGIONAL PARK

DESIGN BUILD IRRIGATION SYSTEM
GENERAL NOTES

- DESIGN BUILD IRRIGATION DRAWINGS TO BE READ IN CONJUNCTION WITH PLANTING PLANS. CONTRACTOR TO ENSURE THAT LAWN AREAS ARE ZONED SEPARATELY FROM OTHER PLANTED AREAS AS PER SPECIFICATIONS. LAWN AREAS ZONED WITH OTHER PLANTED AREAS WILL BE REJECTED.
- AUTOMATIC IRRIGATION SYSTEM TO BE PROVIDED AS "DESIGN BUILD". REFER TO SPECIFICATIONS FOR DESIGN AND SUBMISSION REQUIREMENTS.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR TO PROVIDE IRRIGATION DESIGN DRAWINGS FOR CONSULTANT REVIEW AS PER SPECIFICATIONS. IRRIGATION INSTALLED PRIOR TO THE REVIEW OF DESIGN BUILD DRAWINGS BY THE CONSULTANT WILL BE REJECTED.
- LOCATION OF IRRIGATION SLEEVES NOTED ON LANDSCAPE DRAWINGS ARE SCHEMATIC. PRIOR TO THE START OF PROJECT CONSTRUCTION CONTRACTOR TO COORDINATE IRRIGATION SLEEVES UNDER PAVED AREAS AND THROUGH WALLS WITH GENERAL CONTRACTOR. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE. FINAL SLEEVE LOCATIONS ARE TO BE RECORDED ON THE AS-BUILT IRRIGATION DRAWINGS BY THE CONTRACTOR AS PER SPECIFICATIONS.
- PRIOR TO THE START OF PROJECT CONSTRUCTION CONTRACTOR TO COORDINATE CONDUIT RUNS, SLEEVING AND MOUNTING LOCATION FOR RAIN SENSOR AS PER SPECIFICATIONS WITH GENERAL CONTRACTOR. REPORT ANY DISCREPANCIES TO CONSULTANT FOR REVIEW AND RESPONSE. FINAL RAIN SENSOR LOCATION IS TO BE RECORDED ON THE AS-BUILT IRRIGATION DRAWINGS BY THE CONTRACTOR AS PER SPECIFICATIONS.
- IRRIGATION STUB-OUT LOCATIONS NOTED ON LANDSCAPE DRAWINGS ARE SCHEMATIC AND FOR REFERENCE ONLY. CONTRACTOR TO COORDINATE CONNECTION TO WATER SUPPLY WITH THE MECHANICAL CONTRACTOR. REFER TO MECHANICAL ENGINEER'S DRAWINGS.
- UNLESS OTHERWISE INDICATED THE IRRIGATION CONTROLLER TO BE LOCATED IN BUILDING MECHANICAL ROOM AS PER SPECIFICATIONS. FOR CONTROLLER LOCATION IN MECHANICAL ROOM, SEE MECHANICAL ENGINEER'S DRAWINGS.
- CONTRACTOR TO COORDINATE CONTROLLER CONNECTION TO ELECTRICAL SUPPLY WITH ELECTRICAL CONTRACTOR. REFER TO ELECTRICAL ENGINEER'S DRAWINGS.
- IRRIGATION SYSTEM TO PROVIDE FULL HEAD TO HEAD COVERAGE.

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DRAWING TITLE
IRRIGATION PLAN

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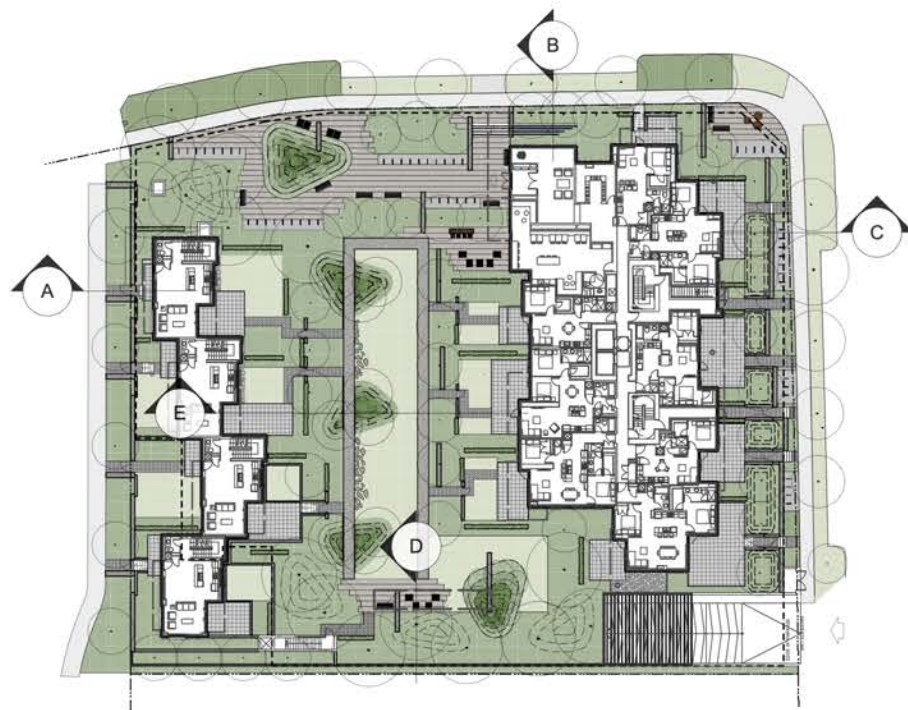
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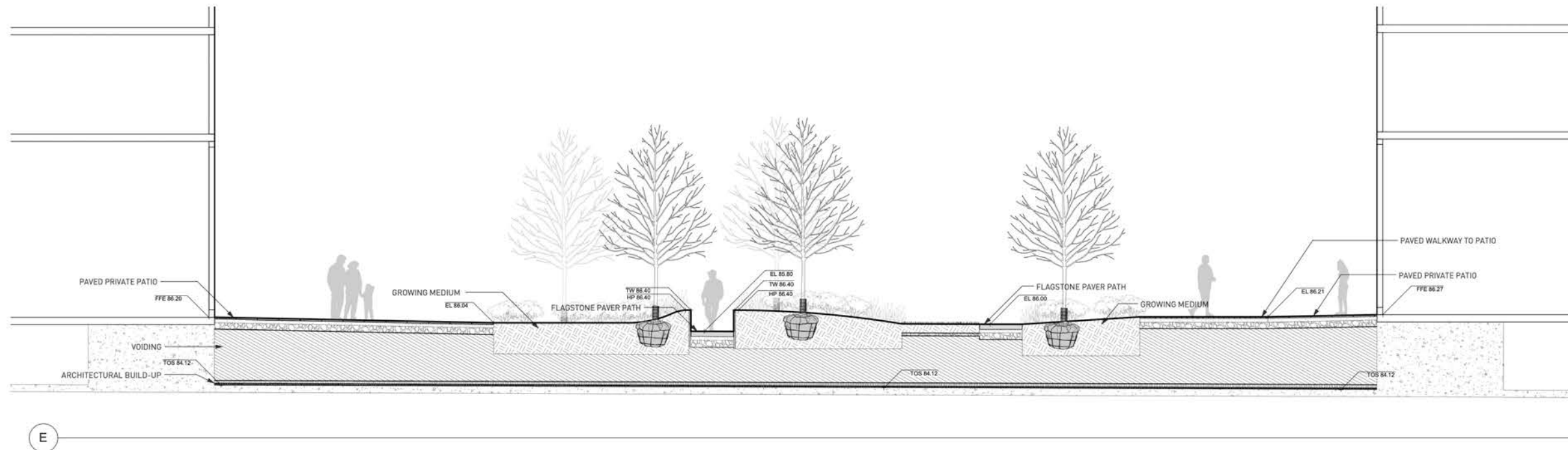
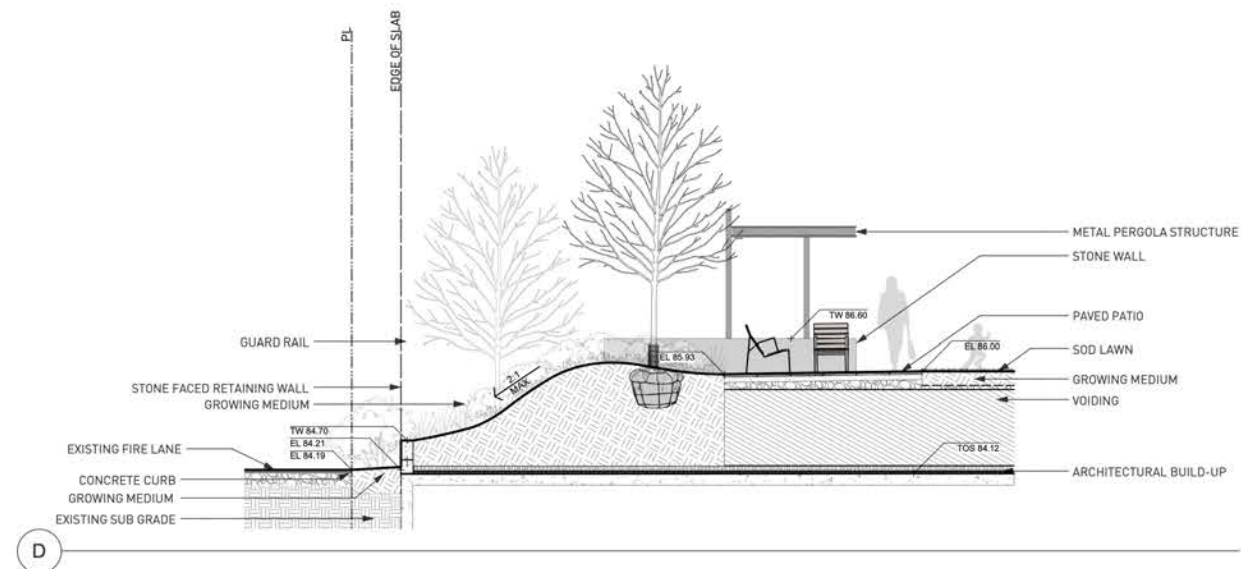
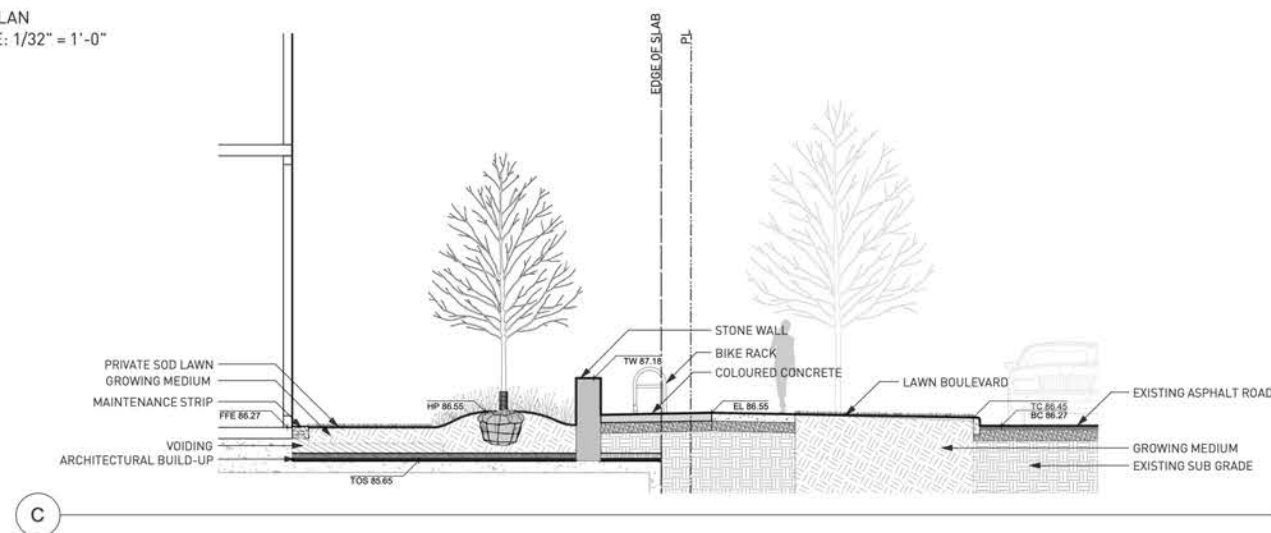
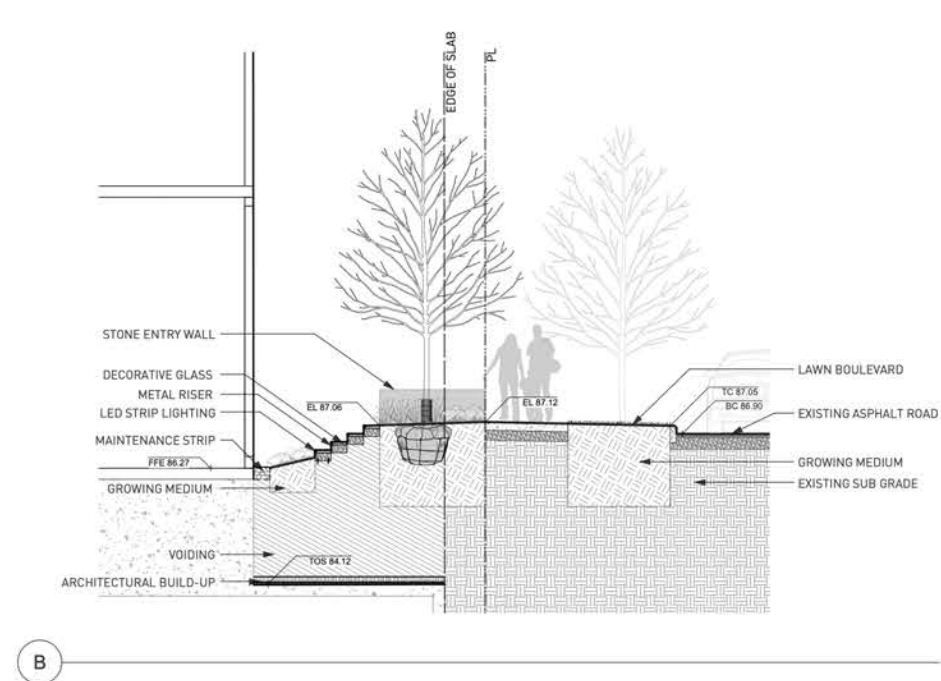
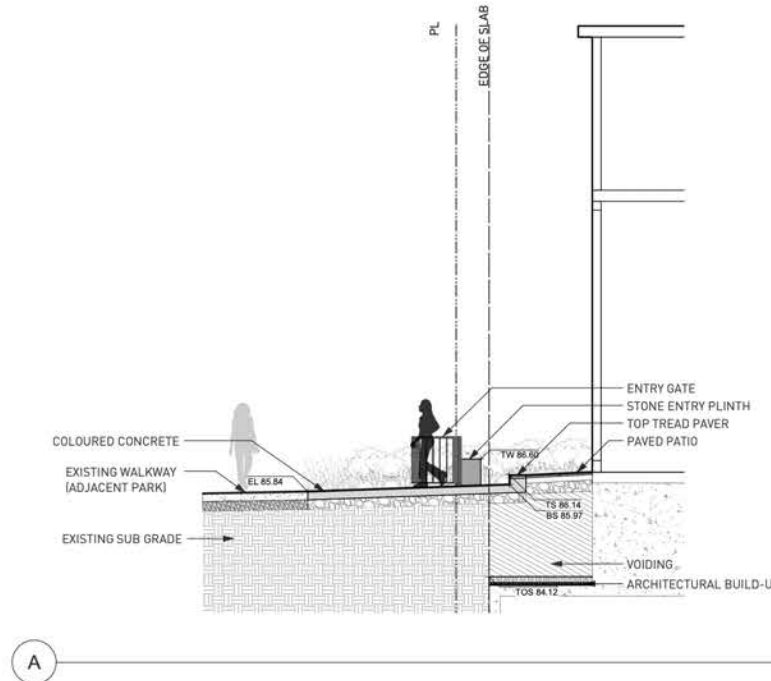
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DRAWING

L5.01



KEY PLAN
SCALE: 1/32" = 1'-0"



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DRAWING TITLE
SECTIONS

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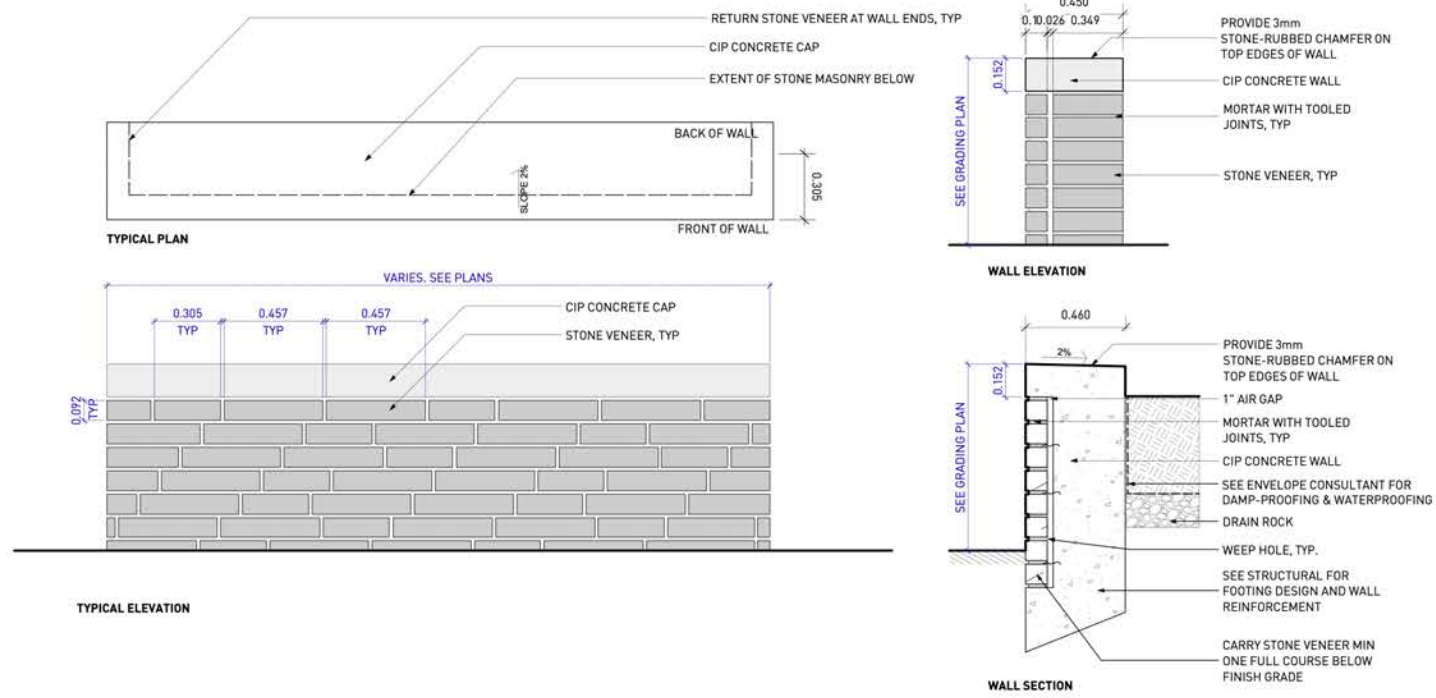
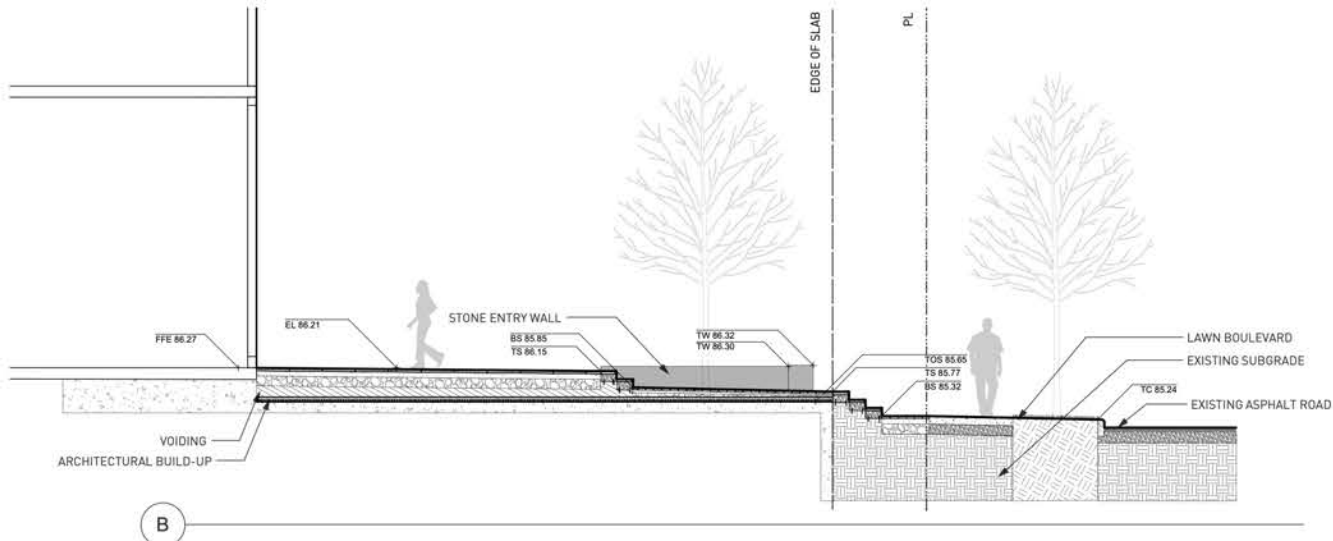
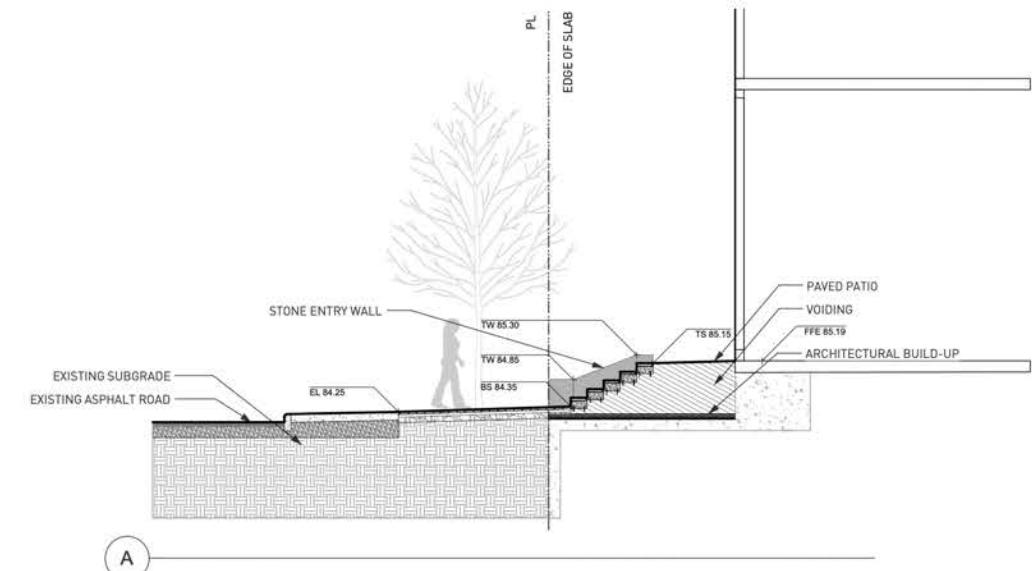
NORTH **SCALE**
3/16" = 1'-0"

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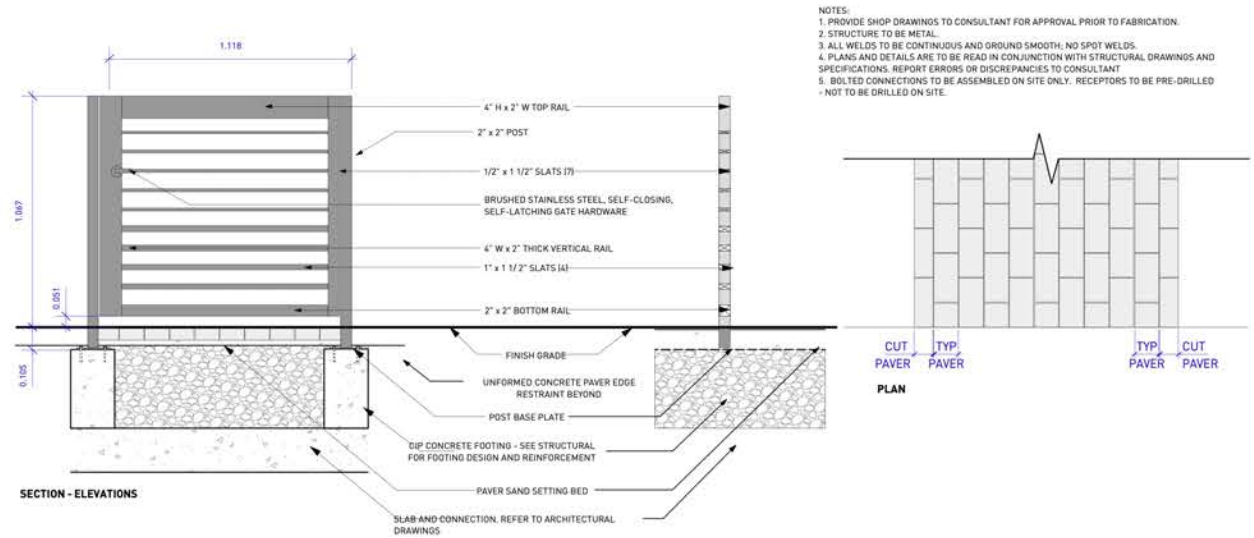
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KEY PLAN
SCALE: 1/32" = 1'-0"



1 STONE FACED WALL DETAIL
3/4" = 1'-0"



2 GATE
3/4" = 1'-0"

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DRAWING TITLE
SECTIONS
AND DETAILS

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NORTH
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RESIDENTIAL ENVIRONMENTAL ASSESSMENT PROGRAM 3.1

Individual Project Information

Project Name	The Conservatory
Project address	5728 Berton Avenue, Vancouver, BC
Rental or Market	Market
Number of Storeys	20
Total Number of Units	211
Studio	0
1 Bed	108
2 Bed	94
3 Bed	9
4 Bed	0
Total Number of Bedrooms	323
Residential Parking (non visitor)	236

Project Team

	Company	Name	Contact
ARCH	DYS Architecture	Jennifer Boyle, Colin Shrubb	jennifer.boyle@dysarchitecture.com ; colin.shrubb@dysarchitecture.com
CIV			
DEV	Polygon	Hugh kerr	hker@polyhomes.com
GC	Polygon	Matt Anderson	mattanderson@polyhomes.com
MECH	Williams Engineering	Edwin Zander	ezander@williamsengineering.com
ELEC	Nemetz	Bijan Valagohar	bijan@nemetz.com
LAND	PWL	Bruce Hemstock	bhemstock@pwlpartnership.com
EM	Morrison Hershfield	Alex Blue	ablue@morrisonhershfield.com
ENVL	-	-	
ID	Polygon	-	Just chek with GC polygon

REAP 3.1 Certification Level

Target	Gold
Achieved	Gold



Residential Environmental Assessment Program (3.1)

Project Checklist

Project Name: **The Conservatory**

Date 07-M11-20

Y	M	Sustainable Sites (SS)			6 of 10
M		Prereq	SS M1	Storm Water Management Plan	M
M		Prereq	SS M2	Adapted and Ecologically Sound Planting	M
M		Prereq	SS M3	Bicycle Storage	M
M		Prereq	SS M4	Contribution to Community Car Sharing	M
2		Prereq	SS M5	Electric Vehicle Charging- Resident	2
M		Prereq	SS M6	Light Pollution Reduction	M
M		Prereq	SS M7	Recycling Collection	M
M		Prereq	SS M8	Compost Collection	M
2	0	Credit	SS 1.1	In-Suite Recycling and Compost Separation	2
0	0	Credit	SS 2.1	Additional Bicycle Facilities	2
2	0	Credit	SS 2.2	Electric Vehicle Charging – Visitor	2
0	0	Credit	SS 2.3	Electric Vehicle Charging Stations - Resident	2

Y	M	Water Efficiency (WE)			6 of 18
M		Prereq	WE M1	Efficient Irrigation Technology	M
M		Prereq	WE M2	Low-Flow Faucet Aerators	M
M		Prereq	WE M3	Low-Flow Showerheads	M
M		Prereq	WE M4	Energy Star Clothes Washers	M
3	0	Credit	WE 1.1	Reduce Potable Water Use	3
0	0	Credit	WE 1.2	Eliminate Potable Water Use	3
2	0	Credit	WE 2.1	Low-Flow Showerheads	2
1	0	Credit	WE 2.2	Water Efficient Dishwasher	1
0	0	Credit	WE 2.3	Most Efficient Clothes Washers	2
0	0	Credit	WE 2.4	Water Use Reduction Package	2
0	0	Credit	WE 3.1	Domestic Hot Water metering	3
0	0	Credit	WE 3.2	Domestic Cold-Water metering	2

Y	M	Materials and Resources (MR)			1 of 18
0	0	Credit	MR 1.1	Reused Building Materials	2
0	0	Credit	MR 1.2	Reused Building Materials	2
1	0	Credit	MR 1.3	Recycled Content Materials	2
0	0	Credit	MR 2.1	Regionally Manufactured Building Materials	1
0	0	Credit	MR 2.2	Regionally Sourced Building Materials	1
0	2	Credit	MR 3.1	Dimensional Lumber and Plywood	3
0	0	Credit	MR 3.2	Hardwood Floors	3
0	0	Credit	MR 4.1	Transparency of Ingredients	2
0	0	Credit	MR 4.2	Optimization of Ingredients	2

Y	M	Construction (CON)			2 of 4
M		Prereq	CON M1	Staging and Construction	M
M		Prereq	CON M2	Vegetation Safeguards and Land-Clearing Debris	M
M		Prereq	CON M3	Truck Management Plan	M
M		Prereq	CON M4	Wheel Wash	M
M		Prereq	CON M5	Erosion and Sedimentation Control	M
M		Prereq	CON M6	Waste Management Plan	M
2	0	Credit	CON 1.1	Indoor Air Quality Management Plan	2
0	0	Credit	CON 1.2	Flushout / IAQ Test	2

Y	M	Energy & Atmosphere (EA)			23 of 52
M		Prereq	EA M1	Minimum Roof Insulation	M
M		Prereq	EA M2	Minimum Exterior Wall Insulation	M
M		Prereq	EA M3	Minimum Floor Insulation	M
M		Prereq	EA M4	Energy Efficient Windows	M
M		Prereq	EA M5	Minimum Boiler Efficiency	M
M		Prereq	EA M6	Domestic Hot Water	M
M		Prereq	EA M7	Energy Star Dishwashers and Refrigerators	M
M		Prereq	EA M8	Programmable Thermostats	M
M		Prereq	EA M9	Common Area Lighting	M
M		Prereq	EA M10	Parkade and Corridor Lighting Controls	M
2		Prereq	EA M11	Energy Modeling Workshop	2
4		Prereq	EA M12	Commissioning	4
2		Prereq	EA	Building Envelop Airtightness Testing	2
6		Prereq	EA	Energy Step Code Step 2	6
0		Prereq	EA	Energy Step Code Step 3	8
0	0	Credit	EA	Energy Step Code Step 4	15
0	0	Credit	EA	Passive House Energy Performance	5
1	0	Credit	EA 1.1	Thermal Energy Sub-Metering	1
0	1	Credit	EA 2.1	Future Renewable Electricity	1
3	0	Credit	EA 2.2	Renewable Electricity Utilization	3
5	0	Credit	EA 2.3	Low-Carbon District Energy Utilization	5

Y	M	Indoor Environmental Quality (IEQ)			8 of 8
M		Prereq	IEQ M1	Adhesives and Sealants	M
M		Prereq	IEQ M2	Paints and Coatings	M
M		Prereq	IEQ M3	Floor Coverings	M
M		Prereq	IEQ M4	Ventilation Effectiveness	M
2	0		IEQ 1.1	Low VOC Paints and Coatings	2
2	0	Credit	IEQ 1.2	Low-Emitting Composite Wood Products	2
2	0	Credit	IEQ 1.3	Low-Emitting Insulation	2
2	0	Credit	IEQ 1.4	Low -Emitting Cabinetry	2

Y	M	Innovation and Design Process (ID)			11 of 24
M		Prereq	ID M1	Goal-Setting Workshop	M
M		Prereq	ID M2	Educate the Homeowner	M
0	0	Credit	ID 1.1	Life-Cycle Assessment	4
1	0	Credit	ID 2.1	Green Building Specialist	1
0	0	Credit	ID 2.2	Design for Safety and Accessibility	1
2	0	Credit	ID 2.3	Design for Security and Crime Prevention	2
1	0	Credit	ID 3.1	Educate the Sales Staff	1
5	0	Credit	ID 4.1	Enhance Research or Further Student Development	5
0	0	Credit	ID 4.2	Energy Data Sharing	4
2	0	Credit	ID 5.1	Innovative Design or Exemplary Achievement	2
0	2	Credit	ID 5.2	Innovative Design or Exemplary Achievement	2
0	2	Credit	ID 5.3	Innovative Design or Exemplary Achievement	2
57	7	TOTALS			Possible Points: 134

Gold: 45 to 60 points, **Gold Plus:** 61 to 75 points, **Platinum:** 76 to 100 points, **Platinum Plus:** 101 to 134 points

Sustainable Sites (SS)									
		TOTAL	10	6	0				
		MAX	Y	M	Awarded	Role	Documentation	Phase	
SS M1	Storm Water Management Plan	M	M			CIV		BP	
Require all new construction projects detain the 10-year, 24-hour storm volume and discharge at the 2-year, 40-hour pre-development rate on site or at a designated centralized facility using low-impact development and green infrastructure strategies by 2018.						-Copy of Stormwater Management Plan -Letter by CIV requirements will be met			
SS M2	Adapted and Ecologically Sound Planting	M	M			LAND		BP	
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.						-Narrative describing Planting design + letter confirming landscaping is low maintenance and resource efficient, and does not require use of pesticides (requirements will be met)			
SS M3	Bicycle Storage	M	M			ARCH/LAND		BP	
Provide covered bicycle storage facilities including 1.5 parking spaces per dwelling unit or individual parking garages for Class I use, and 0.5 bicycle parking spaces per dwelling unit for Class II use in accordance with The UBC Development Handbook.						-Drawing showing number and location of bike storage facilities. -Letter by ARCH requirements will be met			
		Required	Proposed						
CLASS I		305	305						
CLASS II		106	106						
SS M4	Contribution to Community Car Sharing	M	M			DEV		OP	
Contribute to the development of a community car-sharing network by funding the equivalent of one community vehicle per 100 residential units.						-Letter confirming number of residential units and amount contributed to car-sharing network. -Documentation confirming amounth contributed			
Amount to be Contributed		42,200	CAD	Confirm amount per unit with UBCPT					
SS M5	Electric Vehicle Charging- Resident (MANDATORY)	2	2			ELEC		BP	
Provide a minimum of one energized level 2 outlet per residential unit for non-rental developments or provide energized outlets for 50% of resident parking stalls for rental developments. Level 2 charging capacity that provides a minimum of 40A service and a minimum performance level of 12 kWh per stall, over an eight (8) hour period must be provided. Load sharing (up to four-way) and load management systems may be utilized. Exceptions may be granted in cases where utility mandated transformer upgrades are required.						-Drawing showing electrical service to stalls - Documentation of load sharing and load management systems - Letter by ELEC requirements will be met			
		Required	Proposed						
Non-Rental		211							
Rental		118							
SS M6	Light Pollution Reduction	M	M			ELEC		BP	
Do not exceed the current Illuminating Engineering Society (IES) illuminance requirements as stated in Lighting for Exterior Environments.						-Description of lighting strategy employed to achieve IESNA illuminance requirements (in letter from ELEC requirements will be met) - Light fixtures' cut sheets showing illuminance meet requirements			
SS M7	Recycling Collection	M	M			ARCH/DEV		BP & OP	
Provide for collection of domestic paper, plastic, glass and metal recyclables by contracting with a waste management company for the service. Recycling storage space shall be designed in accordance with Metro Vancouver's Technical Specifications for Recycling Amenities.						- BP: location and size of recycling/organics storage area - OP: Letter by DEV/Owner requirementented will be met including description of Waste Management contract in place			
		Garbage+Recycling Room Min. Size	MI. Recycling Space WITHIN room	Flex Space	Total Storage Space Required	Storage Space Provided			
m²		73.4	38.8	19.4	92.8				
SS M8	Compost Collection	M	M			ARCH/DEV		BP & OP	
Provide a space in the building for the collection compost and provide for the compost collection through a contract with UBC Waste Management or another waste management service provider. Design the space in the building in accordance with Metro Vancouver's Technical Specifications for Recycling Amenities.						Same as SS M7			
SS 1.1	In-Suite Recycling and Compost Separation	2	2			ARCH/DEV		BP	
Provide a space and system for simplified separation and collection of recycling and compostables in each suite or unit.						-Letter by ARCH requirements will be met - Description of system implemented (cut sheet might be ok)			
SS 2.1	Additional Bicycle Facilities	2	0			ARCH		BP	
In addition to the requirements for bicycle parking in the UBC Development Handbook, provide an additional 0.25 Class I bicycle storage/bedroom and a bicycle repair station within the building,complete with a 120V electric outlet									
		Required	Proposed						
CLASS I		398	311						
SS 2.2	Electric Vehicle Charging – Visitor	2	2			ELEC		BP	
Provide one dedicated parking spot per 100 residential units for visitors of residents/owners, fully equipped with Level 2 charging station.						- Letter signed by ARCH and ELEC declaring requirements will be met - Drawings showing location of parking spots with EV charging stations			
		Required	Proposed						
EV Stations		3							
SS 2.3	Electric Vehicle Charging Stations - Resident	2	0			ELEC		BP	
Install Level 2 charging stations for the following percentage of owners'/residents' parking. <input type="checkbox"/> 5% of owners'/residents' parking – 1 Points <input type="checkbox"/> 10% of owners'/residents' parking – 1 Points						- Letter signed by ARCH declaring requirements will be met - Drawings showing location of parking spots with EV charging stations -Cut sheet of charging stations			
		5% Req.	10% Req.	Proposed	Pts				
EV Stations		12	24		0				

Water Efficiency (WE)									
		TOTAL	18	6	0				
		MAX	Y	M	Awarded	Role	Documentation	Phase	
WE M1	Efficient Irrigation Technology	M	M			LAND	-Letter indicating requirements will be met including description of irrigation system by LAND	BP	
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.									
WE M2	Low-Flow Faucet Aerators	M	M			GC	-Letter stating requirements will be met including specific fixtures used and flow rate - Cut sheets indicating flow rate	BP	
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).									
WE M3	Low-Flow Showerheads	M	M			GC	-Letter stating requirements will be met including specific fixtures used and flow rate - Cut sheets indicating flow rate	BP	
Specify and install water-saving showerheads with a maximum flow rate of 8.5 L per minute in each shower.									
WE M4	Energy Star Clothes Washers	M	M			GC	-Letter from DEV declaring requirements were met - Cut sheet from manufacturer ESTAR labelled or equivalente clothes washers (non labelled need supporting documentation showing they meet criteria)	OP	
Specify and install Energy Star-labelled clothes washers and dishwashers in each unit, or specify and offer only Energy Star models if these appliances are optional.									
WE 1.1	Reduce Potable Water Use	3	3			LAND	- Letter by LAND declaring requirements will be met and description of system - Calculation to verify the claim of ≥50% reduction in potable water irrigation	BP	
Reduce potable water use for site irrigation needs by 50% from the calculated mid-summer baseline.									
WE 1.2	Eliminate Potable Water Use	3	0			LAND	- Letter by LAND declaring requirements will be met and description of system - Calculation to verify the claim of 100% reduction in potwable water irrigation	BP	
Eliminate potable water use for site irrigation needs.									
WE 2.1	Low-Flow Showerheads	2	2			GC	-Letter stating requirements will be met including specific fixtures used and flow rate - Cut sheets indicating flow rate	BP	
Specify and install water-saving showerheads (maximum of 5.7 L per minute) in each shower									
WE 2.2	Water Efficient Dishwasher	1	1			GC	-Letter stating requirements will be met including specific fixtures used and flow rate - Cut sheets indicating dishwasher water use per cycle	OP	
Specify and install water-efficient dishwashers that use ≤ 11 L (2.91 gal) per normal wash cycle or if dishwashers are available only as an option, specify and offer only models complying with this credit.									
WE 2.3	Most Efficient Clothes Washers	2	0			GC		OP	
Specify and install Energy Star clothes washers listed as "Most Efficient" (for the year in which the Building Permit is received), or if washers are available only as an option, specify and offer only models complying to this standard.									
WE 2.4	Water Use Reduction Package	2	0			LAND/ID	- Letter stating requirements for WE 2.1-2.3 have been met and respective documentation	OP	
Additional credit for achieving credits: WE 1.1, WE 2.1, WE 2.2 and WE 2.3.									
WE 3.1	Domestic Hot Water metering	3	0			MECH	-Letter from MECH requirements will be met - Location and drescription of the metering system	BP	
In units with central hot water, provide individual hot water metering.									
WE 3.2	Domestic Cold-Water metering	2	0			MECH	-Letter from MECH requirements will be met - Location and drescription of the metering system	BP	
Provide for individual cold water meters for all units.									

Energy & Atmosphere (EA)									
		TOTAL	52	23	1				
		MAX	Y	M	Awarded	Role	Documentation	Phase	
EA M1	Minimum Roof Insulation	M	M			ARCH		BP	
Design the roof assembly with a minimum insulation value of R-40 h-ft²·°F/Btu (7.04 °K-m²/W) for buildings with attic space and R-28 h-ft²·°F/Btu (4.93 °K-m²/W) for cathedral ceilings/flat roofs.							-Letter signed by ARCH declaring requirements will be met -Description and overall R-value of the roof assembly used		
EA M2	Minimum Exterior Wall Insulation	M	M			ARCH		BP	
Design the exterior insulated wall area with a minimum thermal resistance of effective (overall) R-15.6 h-ft²·°F/Btu (2.75 °K-m²/W) for above grade non-glazed wall areas, and R-7.5 h-ft²·°F/Btu (1.32 °K-m²/W) "continuous insulation" for below grade walls.							-Letter signed by ARCH declaring requirements will be met -Description and overall R-value of the wall assembly used		
EA M3	Minimum Floor Insulation	M	M			ARCH		BP	
Design floors above non-heated parkade areas with a minimum insulation value of R-30 h-ft²·°F/Btu (5.28 °K-m²/W) for framed floors and R-15.6 h-ft²·°F/Btu (2.75 °K-m²/W) for slab floors.							-Letter signed by ARCH declaring requirements will be met -Description and overall R-value of the floor assembly used		
EA M4	Energy Efficient Windows	M	M			ARCH		BP	
Specify and install Energy Star-rated windows or windows with a maximum overall U-value of 0.35 Btu/hr-ft²·°F (2.0 W/m²·°K for non-metal framed windows or a maximum overall U-value of 0.45 Btu/hr-ft²·°F (2.55 W/m²·°K) for metal framed windows.							-Letter signed by ARCH declaring requirements will be met -Shop drawing from manufacturer showing glazing system U-value or ESTAR rating		
EA M5	Minimum Boiler Efficiency	M	M			MECH		BP	
Specify and install boilers with a minimum thermal efficiency of 84% /AFUE of minimum 90%.							-Letter by MECH requirement will be met - Manufacturer's spec sheet showing minimum efficiency of installed equipment		
EA M6	Domestic Hot Water	M	M			MECH		BP	
Specify and install gas DHW boilers with a minimum efficiency of 84% (mid-efficiency boiler).							-Letter by MECH requirement will be met - Manufacturer's spec sheet showing minimum efficiency of installed equipment		
EA M7	Energy Star Dishwashers and Refrigerators	M	M			ID		OP	
Specify and install Energy Star-labelled dishwashers and refrigerators in each unit.							-Letter indicating requirements have been met -Cut sheet showing ESTAR label or supporting documentation showing equivalent meet criteria		
EA M8	Programmable Thermostats	M	M			MECH		BP	
Specify and install programmable thermostats for at least the largest heating zone in each unit.							-Letter by ELEC indicating requirements will be met -Cutsheet of thermostats and description of locations		
EA M9	Common Area Lighting	M	M			ELEC		BP	
Specify and install only non-incandescent lighting, such as fluorescent, compact fluorescent or LED, in common areas.							-Letter by ELEC indicating requirements will be met -Description of common area lighting		
EA M10	Parkade and Corridor Lighting Controls	M	M			ELEC		BP	
Specify and install parkade and corridor lighting controls to automatically reduce the overall lighting level by at least 30% in a lighting zone when the zone is unoccupied.							-Letter signed by ELEC that requirements will be met -Indication of controlled and uncontrolled parkade lighting wattage		
EA M11	Enerav Modelina Workshop (MANDATORY)	2	2			DEV/F3		BP	
EA M12	Commissioning (MANDATORY)	4	4			Unknown		BP/OP	
Contract a third party Commissioning Authority to develop and implement a commissioning plan for all major building energy systems and verify they are installed, calibrated and perform according to design intent.							-Commissioning Plan -Final commission report, detailing the final approvals and the project commissioning process		
EA	ENERGY EFFICIENCY TARGETS	M						BP/OP	
Building Envelop Airtightness Testing (MANDATORY)		2	2			Unknown	BP: Preliminary Energy Model Report and UBC Energy Modelling Checklist	BP	
An airtightness test meeting ASTM E779 or USACE Version 3 standard, as required by the Energy Step Code.							OP:		
Energy Step Code Step 2 (MANDATORY)		6	6			EM	- Letter by Architect and Engineer declaring building meets the requirement of Energy Step Code and Energy Step Code targets have been met -Final Energy Model Report and UBC Energy Modelling Checklist	OP	
130 kWh/m2-yr (TEUI) and 45 kWh/ m2-yr (TEDI). This credit is mandatory.									
Energy Step Code Step 3		8	0			EM	- Air Tightness test results - For Passive House Energy Performance Credit provide energy model documentation as required by section 10.2.3.3 (3) of the Energy Step Code Regulation	OP	
120 kWh/m2-yr (TEUI) and 30 kWh/ m2-yr (TEDI).									
Energy Step Code Step 4		15	0			EM		OP	
100 kWh/m2-yr (TEUI) and 15 kWh/ m2-yr (TEDI). This credit is optional.									
Passive House Energy Performance		5	0			EM		OP	
Design and construct the building to conform to the Passive House Planning Package, version 9 or newer, meeting the requirements of Section 10.2.3.3 (3) of the Energy Step Code Regulation. This credit is optional.									
EA 1.1	Thermal Energy Sub-Metering	1	1			MECH	Letter by MECH requirements will be met	BP	
Provide separate metering in individual units for measuring thermal energy consumption used for space heating.									
EA 2.1	Future Renewable Electricity	1	0	1		ELEC	-Letter by ELEC requirementd will be met - Drawings showing wiring schematics	BP	
Pre-wire buildings and provide installation space for future use of photovoltaic technologies or other renewable electricity generation.									
EA 2.2	Renewable Electricity Utilization	3	3			ELEC	-Letter by ELEC requirementd will be met - Spec sheets of technologies that will be used	BP	
Utilize photovoltaic technologies or other renewable electricity generation for a portion of the building's electrical supply									
EA 2.3	Low-Carbon District Energy Utilization	5	5			DEV	-Letter by DEV requirementd will be met	BP	
Connect to the District Energy System for the building's thermal energy supply in preparation of transition to renewable energy in the future.									

Materials & Resources (MR)									
		TOTAL	18	1	2				
		MAX	Y	M	Awarded	Role	Documentation	Phase	
MR 1.1	Reused Building Materials	2	0			ARCH/GC		OP	
Use salvaged, refurbished, or reused materials for at least 5% of the total cost of building materials.							-Letter by ARCH requirements have been met - Total value of construction materials and total valie of re-used building materials		
MR 1.2	Reused Building Materials	2	0			ARCH/GC		OP	
Use salvaged, refurbished, or reused materials for at least 10% of the total cost of building materials.							-Letter by ARCH requirements have been met - Total value of construction materials and total valie of re-used building materials		
MR 1.3	Recycled Content Materials	2	1			ARCH/GC		OP	
Specify and use building materials with the following recycled content levels:							-Letter by ARCH requirements have been met - Manufacturer's cut sheets indicating recycled content		
4 Products = 1 point; 8 Products = 2 points									
MR 2.1	Regionally Manufactured Building Materials	1	0			ARCH/GC		OP	
Use a minimum of 20% (by value) of building materials and products that are manufactured within a radius of 800 km (500 miles).							-Letter by ARCH requirements have been met - Total value of construction materials and total valie of regionally manufactured materials		
MR 2.2	Regionally Sourced Building Materials	1	0			ARCH/GC		OP	
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).							-Letter by ARCH requirements have been met - Total value of regionally manufactured materials and total value of those materials that are also extracted, harvested, or recovered regionally		
MR 3.1	Dimensional Lumber and Plywood	3	0	2		ARCH/GC		OP	
Demonstrate that a minimum of 50% of the total value of dimensional lumber and plywood is certified in accordance with either: CSA Z809 – 2 Points ☐ Or Forest Stewardship Council (FSC) – 3 Points ☐							-Letter by ARCH requirements have been met - Total value of lumber plywood - Total value of certified lumber and plywood used in the project. For FSC provide CoC documentation for each.		
MR 3.2	Hardwood Floors	3	0			ARCH/GC		OP	
Specify and install bamboo floors or hardwood floors certified in accordance with the Forest Stewardship Council or CSA Z809. If floors are offered only as an option, specify and offer only bamboo or renewable products with third-party certification. CSA Z809 – 2 Points ☐							-Letter by ARCH requirements have been met - Manufacturer's cut sheet for each amterial selcted indicating certification standard - For FSC provide CoC documentation for each product		
MR 4.1	Transparency of Ingredients	2	0			ARCH/GC		OP	
Install ten different building products from three different manufacturers that evaluate and disclose the chemical inventory of the product to an accuracy of 0.1% for each product. For each product selected provide either: • Health Product Declaration • Manufacturer Inventory of all ingredients by CAS number, of • Declare Label (Living Building Institute)							-Letter by ARCH requirements have been met including list of chosen products - Documentation for each product		
MR 4.2	Optimization of Ingredients	2	0			ARCH/GC		OP	
Demonstrate that a minimum of 10% (by value) of building materials are optimized for ingredient content by demonstrating optimization in one of the following ways: • GreenScreen v1.2 benchmark 4 minimum • Red List free • Free of ingredients listed on REACH Authorization and Candidate List							-Letter signed by ARCH declaring requirements have been met - Documentaion of optimized ingredient for each product chosen - Total value of building materials and the total value of building materials optimized for ingredient content		

Indoor Environmental Quality (IEQ)									
		TOTAL	8	8	0				
		MAX	Y	M	Awarded	Role	Documentation	Phase	
IEQ M1	Adhesives and Sealants	M	M			ARCH/GC			OP
Specify and use adhesives, sealants and sealant primers that are EcoLogo certified or do not exceed the VOC limits in the South Coast Air Quality Management District (SCAQMD) Rule #1168 on the interior of the building.							-Letter by ARCH requirements have been met - Manufacturer's cut sheet indication VOC content (adhesive, sealants and sealant primers)		
IEQ M2	Paints and Coatings	M	M			ARCH/GC			OP
Specify and use paints and coatings that carry an EcoLogo label or those rated at a minimum GPI-1 by the Master Painter's Institute on the interior of the building.							-Letter by ARCH requirements have been met - Manufacturer's cut sheet indicating VOC content of all paints and coatings in the interior of the building		
IEQ M3	Floor Coverings	M	M			ARCH/GC			OP
Specify and install carpet and carpet cushion that carry the following certifications: Carpet and Rug Institute Green Label Plus.							-Letter by ARCH requirements have been met -Certification documentation for products used		
IEQ M4	Ventilation Effectiveness	M	M			MECH			BP
Prepare and implement an effective air management strategy that meets the requirements of the current versions of CAN/CSA F326 or ASHRAE-62.1 or 62.2 as applicable to the building configuration.							-Letter by MECH requirements will be met - Description of ventilation system and fresh air management strategies employed		
IEQ 1.1	Low VOC Paints and Coatings	2	2			ARCH/GC			OP
Specify and use paints and coatings rated at a minimum GPS-2 by the Master Painter's Institute on the interior of the building.							-Letter by ARCH requirements have been met - Manufacturer's cut sheet indicating VOC content of all paints and coatings in the interior of the building - Calculations of VOC budget showing that the total average of VOC in all coating products based in litres applied meets the GPS-2 VOC limit of 50 g/L		
IEQ 1.2	Low-Emitting Composite Wood Products	2	2			ARCH/GC			OP
Specify and install interior composite wood products, such as flooring, doors, trim, etc., that are low emitting or have no added urea formaldehyde. Cabinetry is excluded from this credit.							-Letter by ARCH requirements have been met - Manufacturer's cut sheet indicating each interior composite wood product is NAUF		
IEQ 1.3	Low-Emitting Insulation	2	2			ARCH/GC			OP
Specify and install formaldehyde-free insulation on the interior of the building.							-Letter by ARCH requirements have been met - Manufacturer's cut sheet indicating each product selected is urea-formaldehyde free		
IEQ 1.4	Low -Emitting Cabinetry	2	2			ARCH/GC			OP
Specify and install interior cabinetry doors and boxes that are low emitting or contain no added urea formaldehyde.							-Letter by ARCH requirements have been met - Manufacturer's cut sheet indicating each product selected is urea-formaldehyde free		

Construction (CON)									
		TOTAL	4	2	0				
		MAX	Y	M	Awarded	Role	Documentation	Phase	
CON M1	Staging and Construction	M	M			GC/DEV			OP
Prepare and implement a staging and construction plan, including alternate detour information and signage for pedestrians and cyclists.							- Letter signed by DEV requirements have been met - Copy of Staging and Construction Plan		
CON M2	Vegetation Safeguards and Land-Clearing Debris	M	M			GC/DEV			OP
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) and develop a plan to effectively handle debris from land clearing and divert it from landfill disposal.							- Letter signed by DEV requirements have been met - Copy of Vegetation Site Plan - Copy of Debris and Land clearing management plan		
CON M3	Truck Management Plan	M	M			GC/DEV			OP
Prepare and implement a comprehensive truck management plan for the project that conforms to the UBC Strategic Transportation Plan and the Neighbourhood Plan Development Guidelines.							- Letter signed by DEV requirements have been met - Copy of Truck Management Plan		
CON M4	Wheel Wash	M	M			GC/DEV			OP
Provide a wheel wash for vehicles leaving the site or a street cleaning program and catch basin protection.							- Letter signed by DEV requirements have been met		
CON M5	Erosion and Sedimentation Control	M	M			CIV			OP
Prepare and implement a Sediment and Erosion Control Plan that conforms to the City of Vancouver Bulletin 2002-003-EV dated March 1, 2017.							- Letter signed by CIV or responsible party requirements have been met - Copy of ESC plan		
CON M6	Waste Management Plan	M	M			GC			OP
Prepare and implement a waste management plan that diverts 75% (by weight) of construction, demolition and land clearing waste from landfill.							- Letter by GC requirements have been met - Copy of CWMP and hauling summary demonstrating 75% or more diversion		
CON 1.1	Indoor Air Quality Management Plan	2	2			GC			OP
Prepare and implement an Indoor Air Quality (IAQ) Management Plan for the construction and pre-occupancy phases of the building.							- Letter by GC requirements have been met - Copy of IAQ management plan		
CON 1.2	Flushout / IAQ Test	2	0			GC			OP
After construction ends and prior to occupancy conduct aminimum two-week continuous building flushout with new filtration media at 100% outside air or conduct a Baseline Indoor Air Quality Test.							- Letter by GC requirements have been met including copy of specifications showing requirement for flushout or results of IAQ testing		

Innovation & Design Process (ID)									
		TOTAL	24	11	4				
		MAX	Y	M	Awarded	Role	Documentation	Phase	
ID M1	Goal-Setting Workshop	M	M			E3			BP
Hold a goal setting workshop including the developer, design consultants and contractor to review the Residential Environmental Assessment Program, set goals for the project and assign responsibilities.							-Copy of meeting minutes or report from the Goal Setting Workshop clearly outlining REAP priorities and goals		
ID M2	Educate the Homeowner	M	M			DEV			OP
Develop a homeowner's manual that promotes sustainable behavior and describes all of the sustainable features of the project instructing the homeowner on their proper use. This manual should be included in record drawings or some form that will be accessible beyond the first generation of owner/resident.							- Letter signed by DEV certifying the requirements have been met - Copy of homeowner's manual highlighting sustainable features of the project		
ID 1.1	Life-Cycle Assessment	4	0			DEV			OP
Perform a Life-Cycle Assessment of the project's structure and enclosure and demonstrate a minimum of 5% improvement from a reasonable baseline building for three environmental categories.							-Lifecycle assessment report, showing the results of the life-cycle assessment and confirmation that the credit criteria have been met		
ID 2.1	Green Building Specialist	1	1			DEV/E3			BP
Engage an expert in green buildings and sustainable construction practices to provide advice on effective green building strategies to the design team.							- Letter signed by DEV identifying an expert in green buildings and construction practices has been engaged for the project - Explanation of expert's combination of experience and education that demonstrates ability to provide advice		
ID 2.2	Design for Safety and Accessibility	1	0			ARCH			BP
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.							-Letter signed by ARCH requirements have been met -Description of how the criteria have been addressed in the design		
ID 2.3	Design for Security and Crime Prevention	2	2			ARCH			BP
Demonstrate that the design has been reviewed by an accredited Crime Prevention Through Environmental Design (CPTED) practitioner .							-Letter signed by ARCH declaring that the requirements have been met		
ID 3.1	Educate the Sales Staff	1	1			DEV			OP
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.							-Letter signed by DEV declaring that the requirements have been met - Copy of marketing material highlighting sustainable features of the project		
ID 4.1	Enhance Research or Further Student Development	5	5			E3/DEV			BP/OP
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. The research project should be concurrent with, and applicable to, the current project.							BP: Letter signed by DEV requirements will be met OP: Copy of research project or description of project opportunity		
ID 4.2	Energy Data Sharing	4	0			DEV/OTHER			BP/OP
Incorporate a data sharing agreement into the sales contracts or strata constitution that allows building aggregate energy data to be collected for use by the UBC Sustainability and Engineering, Campus & Community Planning.							BP: Letter signed by DEV requirements will be met and highlighted copies of sales, lease and/or strata documentat that detail this agreement - For purpose-build rental apartment buildings and strata owned buildings see REAP 3.1 Guide for details (OP)		

ID 5.1	Innovative Design or Exemplary Achievement	2	2	0	MECH/E3	OP
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.						
EV Bike chargers in Class I storage. ELEC to confirm.						
ID 5.2	Innovative Design or Exemplary Achievement	2	0	2	ARCH/E3	OP
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.						
Want to come up with something to ged GOLD PLUS						
ID 5.3	Innovative Design or Exemplary Achievement	2	0	2	MECH/E3	OP
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.						