

# West Don Lands – Block 16

July 26, 2017

## Project Description & Background

- Block 16 represents the 3rd market residential building in the Canary District
- The Canary District was home to the athletes village at the Pan Am and Parapan Am Games.
- Prior to the Pan/Parapan Am Games, the Canary District constructed 2 market residential buildings and 2 affordable housing buildings.
- The final development blocks of the Canary District are Block 16, Block 12 (targeting a Fall 2017 sales launch) and Block 13 (launching project early next year).
- Canary District has been experiencing very strong sales activity (Block 16 sold out in a few days). The health and wellness retail strategy is also proving very successful.
  
- Project is 100% sold
- This is the project's fourth time presenting to the DRP
- The team is presenting Detailed Design
- Proponents are working through final SPA comments and one outstanding comment will be addressed today

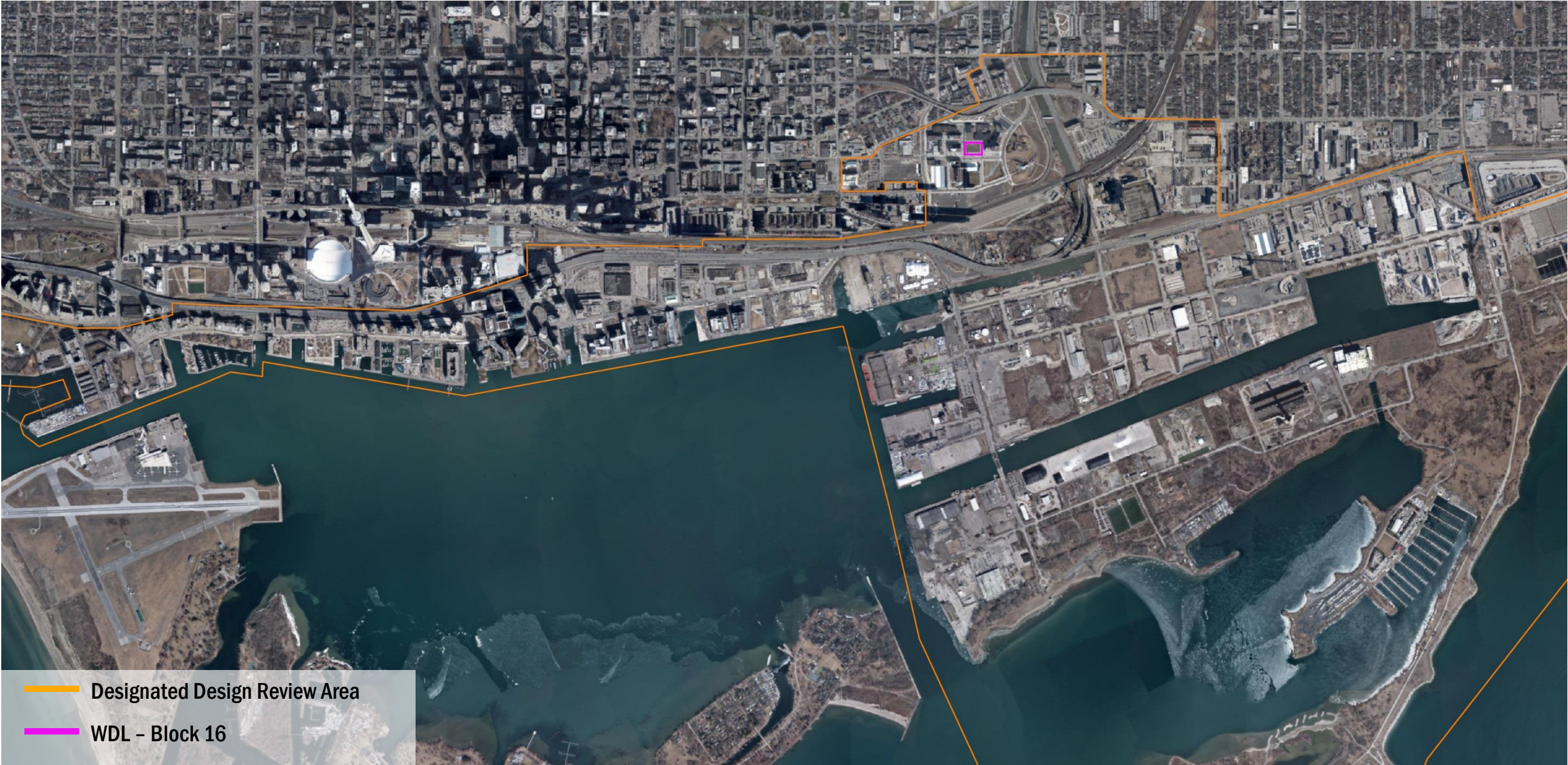
### Key dates for Block 16:

- Targeting Fall 2017 for start of construction

## Sustainability

- Deal negotiated in 2011
- Contractual commitment to LEED Gold under 2009 version and MGBR version 1
- When negotiating deal, did not feel could include a progressive uptick for sustainability targets. Would result in a significant hit on land value as a purchaser would need to factor in unknown costs and risk.
- Developer is exceeding LEED and MGBR contractual obligations

# Site Context



— Designated Design Review Area  
— WDL - Block 16

# Site Context

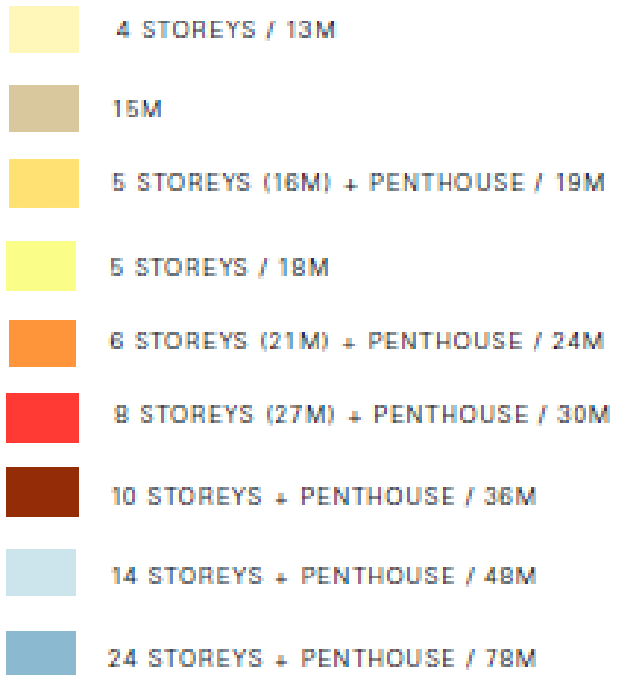
## West Don Lands Built Form

# WDL - Block 16

Proponent: Dundee Kilmer

Design Team: KPMB Architects

Review Stage: Detailed Design

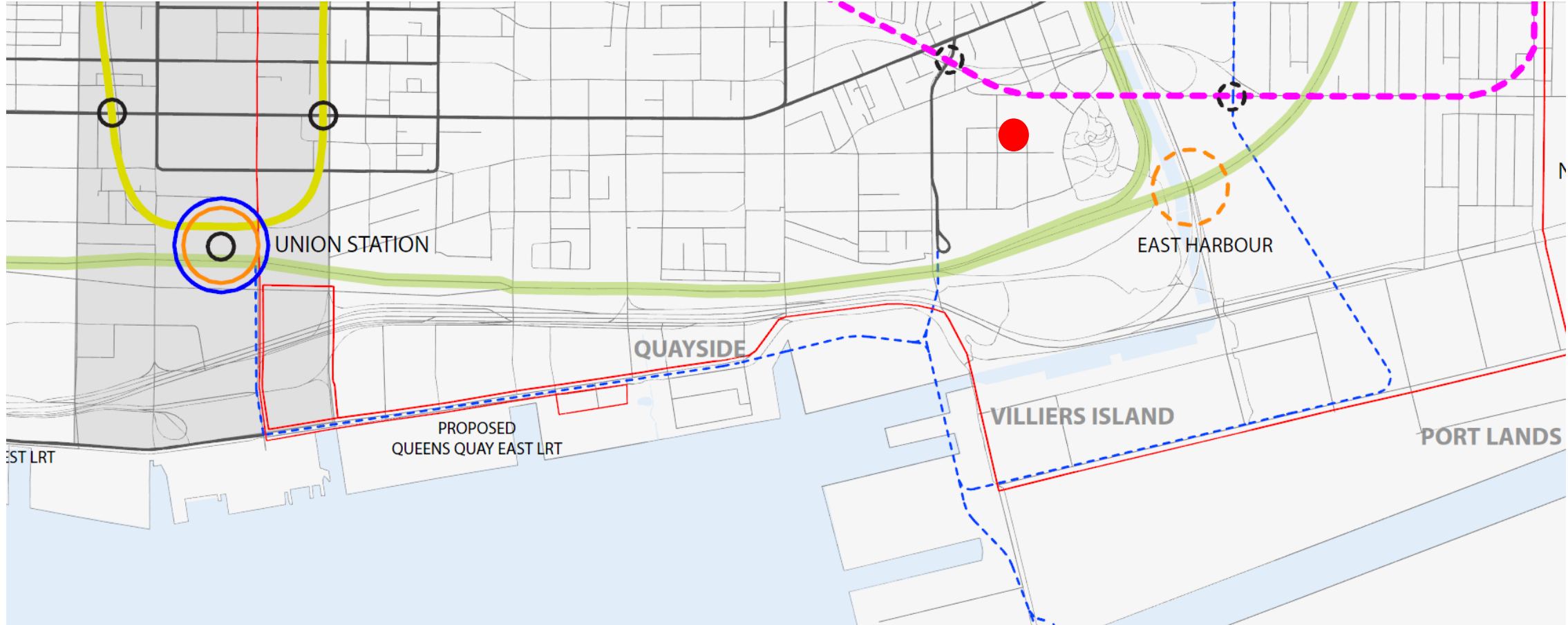


## Site Context - Transit

Proponent: Dundee Kilmer

Design Team: KPMB Architects

Review Stage: Detailed Design



	SUBWAY - EXISTING - YONGE-UNIVERSITY		SUBWAY STATION - EXISTING		SUBWAY STATION - FUTURE
	SUBWAY - EXISTING - BLOOR		REGIONAL EXPRESS RAIL STATION - EXISTING		NATIONAL RAIL STATION
	SUBWAY - FUTURE - RELIEF LINE		REGIONAL EXPRESS RAIL STATION - PROPOSED		CENTRAL BUSINESS DISTRICT
	STREETCAR - EXISTING				
	STREETCAR - FUTURE				
	BUS ROUTES SERVICING EASTERN WATERFRONT				
	REGIONAL EXPRESS RAIL ROUTE				

## Policy Context – Central Waterfront Secondary Plan

### D21\_A NEW BEGINNING FOR THE WEST DON LANDS

The West Don Lands will be redeveloped into diverse mixed-use communities. These communities will capitalize on their **strategic downtown location**, the synergy created by the simultaneous development of the Port Lands and their historic roots as part of the original town of York, as well as the Don River's new environmental health.

(P32) **Excellence in the design of public and private buildings**, infrastructure (streets, bridges, promenades, etc.) **parks and public spaces** will be promoted to achieve **quality, beauty and worldwide recognition**.

(P33) New development will be **located, organized and massed to protect view corridors, frame and support the adjacent public realm** and discourage privatization of public spaces. Built form will result in comfortable micro-climates on streets, plazas and other parts of the public realm.

## Recap

### Summary of Panel Comments from May 2017:

- There was strong support for providing the Proponent with assistance in gaining approval from Infrastructure Ontario to move forward with the outdoor amenity space on the roof.
- Resolution regarding the thermal breaks on the balconies should be included when the project returns for the Detailed Design stage.
- Structural solutions to enable unit conversion should be explained at the Design Development stage
- The language of the material palette should be simplified, with less emphasis on reflecting the material palette of the adjacent buildings.
- The upper residential component continues to feel disjointed from the base. Better integration between the upper and lower portion of the building should be pursued as part of design development process.
- The balcony detail concealing the hand rail and extending the screen is supported, but the size of the resulting aperture between screens should be reviewed to make sure it does not feel too small for occupants.

**Vote: Conditional Support**



## Topics for Panel Consideration

- The lowered balcony heights and detailing
- Proposed material palette
- Ground floor details and treatment of the screen wall
- Servicing layout

### Additional City of Toronto Concerns:

- ‘Front in Back out’ ground floor layout to accommodate street activation
  - City (Recycling/Waste Management) would prefer a drive through concept

# CANARY DISTRICT - BLOCK 16

DESIGN REVIEW PANEL

26.07.2017

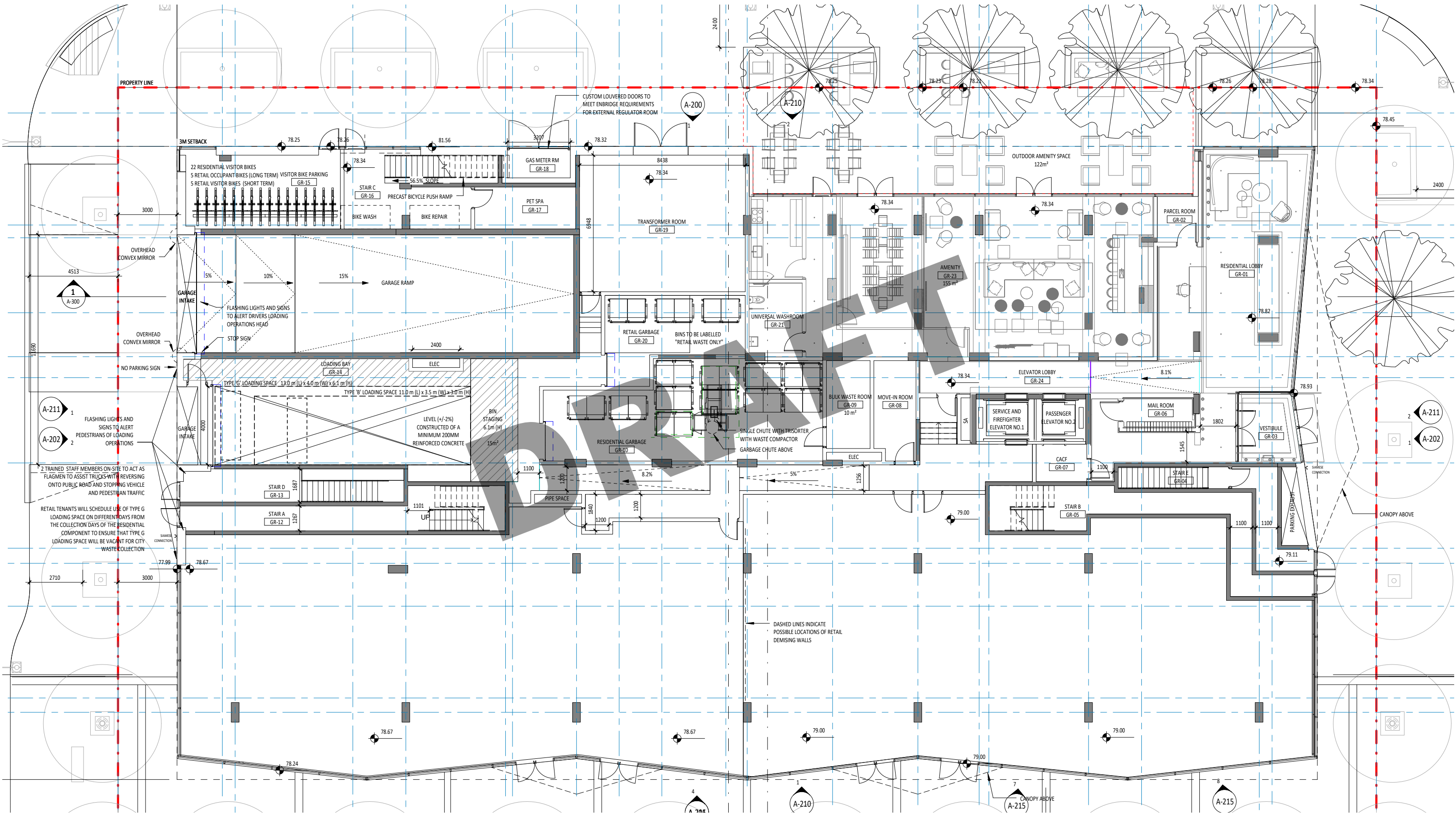


# DESIGN REVIEW PANEL COMMENTS

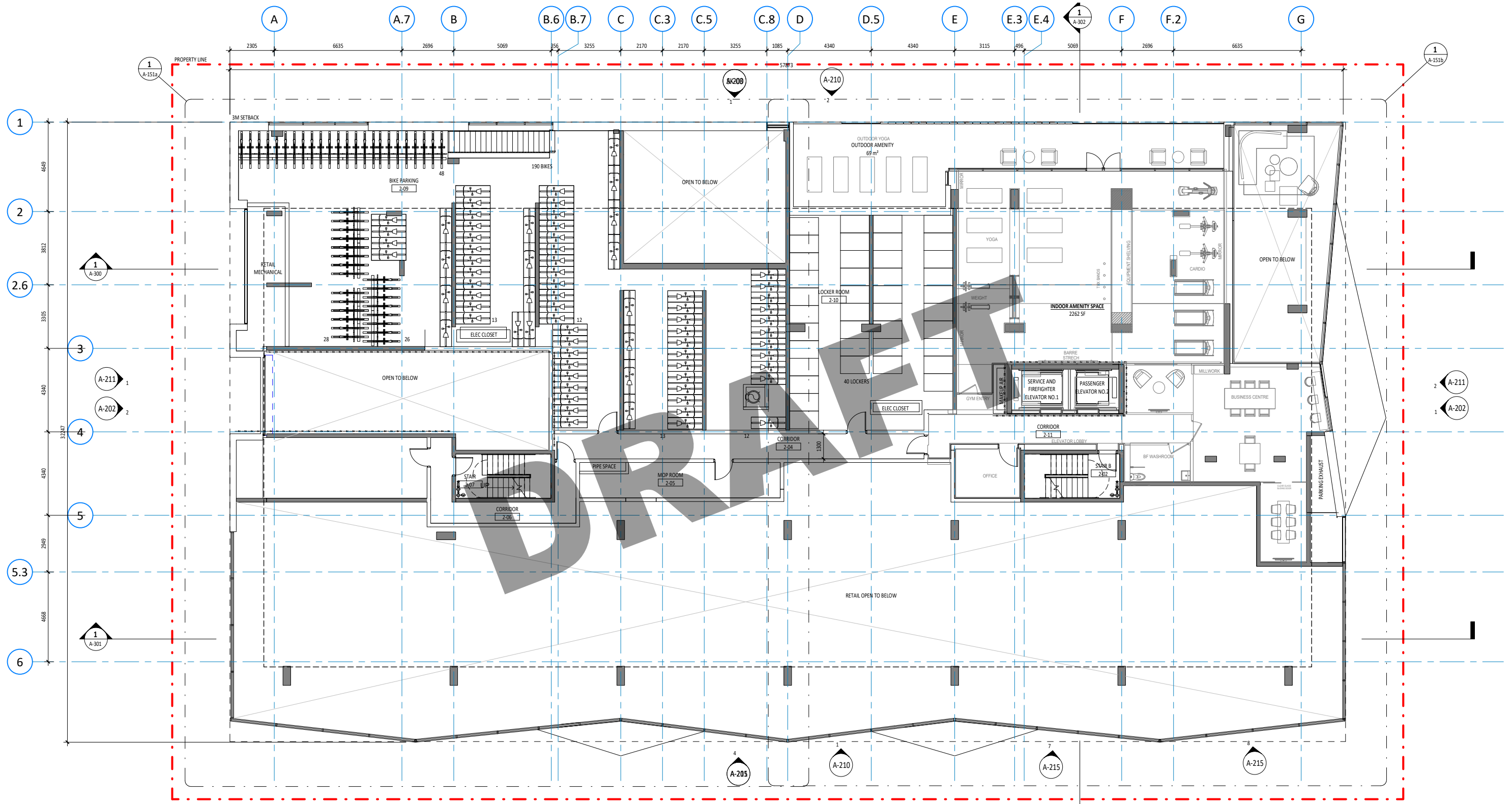
- 1. There was strong support for providing the Proponent with assistance in gaining approval from Infrastructure Ontario to move forward with the outdoor amenity space on the roof.**
- 2. Resolution regarding the thermal breaks on the balconies should be included when the project returns for the Design Development stages.**
- 3. Structural solutions to enable unit conversion should be explained at the Design Development stage**
- 4. The language of the material palette should be simplified, with less emphasis on reflecting the material palette of the adjacent buildings**
- 5. The upper residential component continues to feel disjointed from the base. Better integration between the upper and lower portion of the building should be pursued as part of design development process.**
- 6. The balcony detail concealing the hand rail and extending the screen is supported, but the size of the resulting aperture between screens should be reviewed to make sure it does not feel too small for occupants.**

**SPA Comments - Service Bay Discussion**

# GROUND FLOOR PLAN

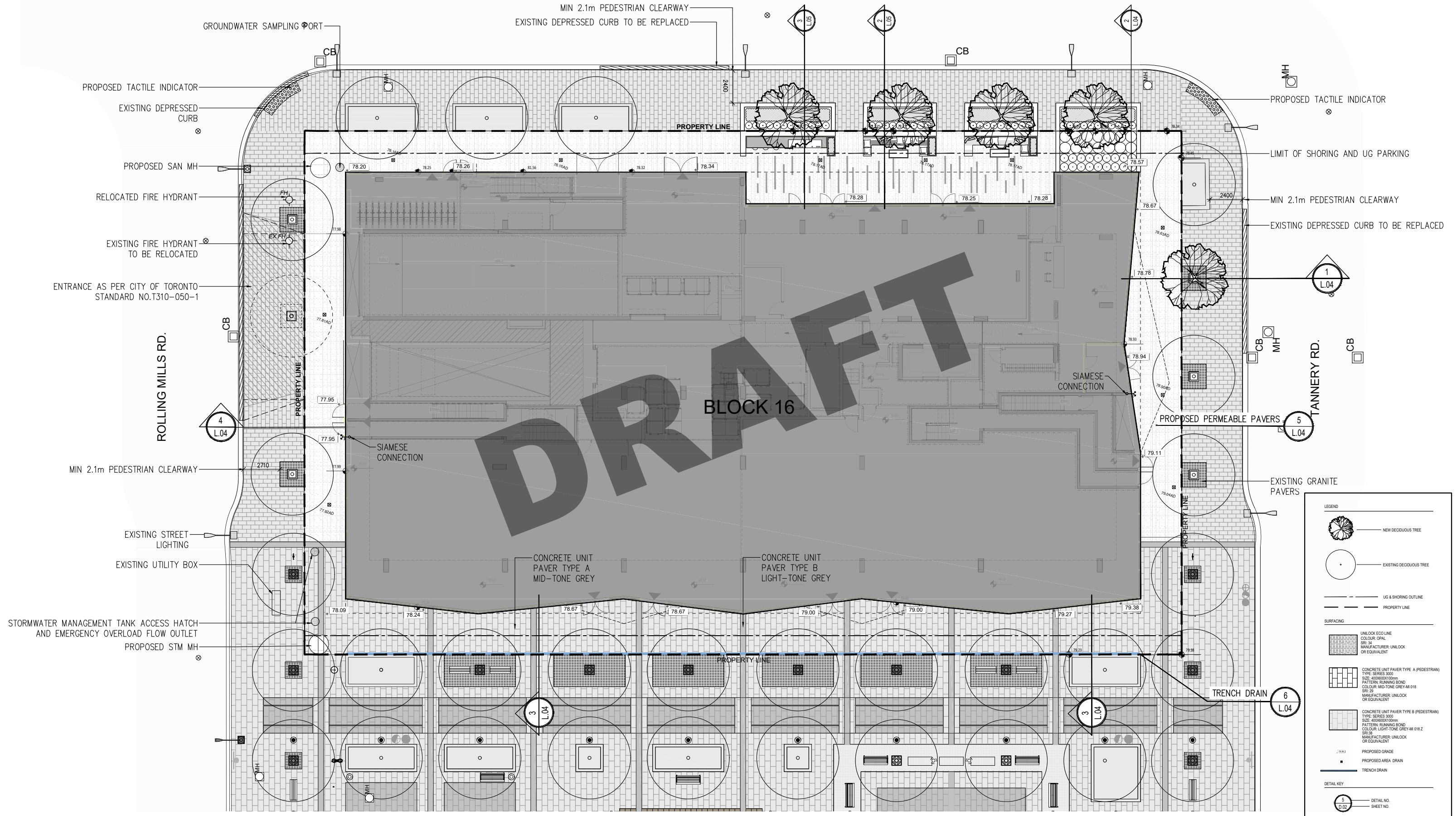


# SECOND FLOOR PLAN



1 FLOOR 2 PLAN  
A3.01 SCALE 1:100

# PUBLIC REALM



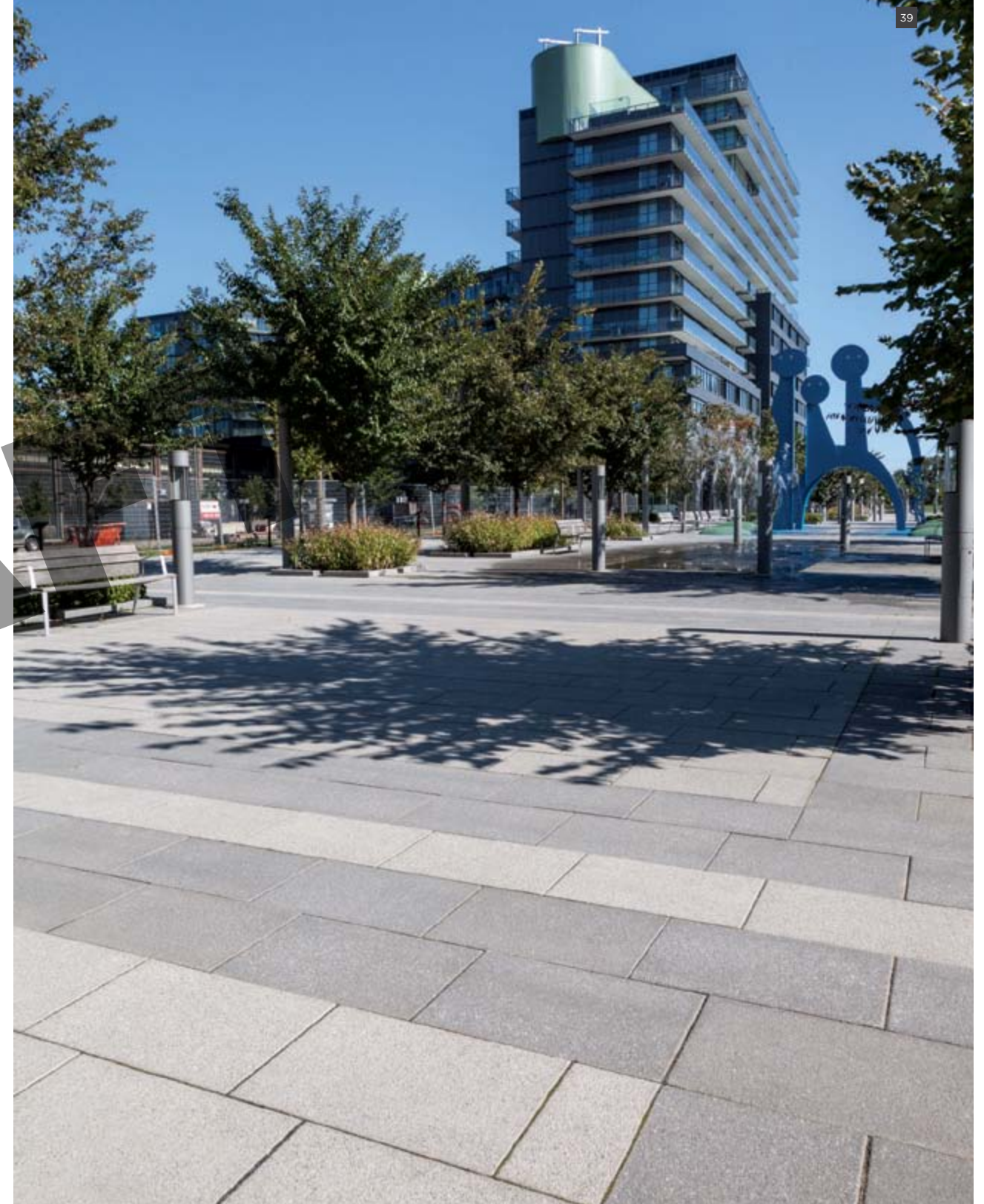
# PUBLIC REALM - MATERIAL PALETTE



UNILOCK PERMEABLE PAVER IN OPAL



PERMACON NOBLE BRICK IN CARRERA WHITE



EXISTING PUBLIC REALM CONDITION ON SITE

# SOUTH ELEVATION





# RETAIL VIEW



# MATERIAL PALETTE



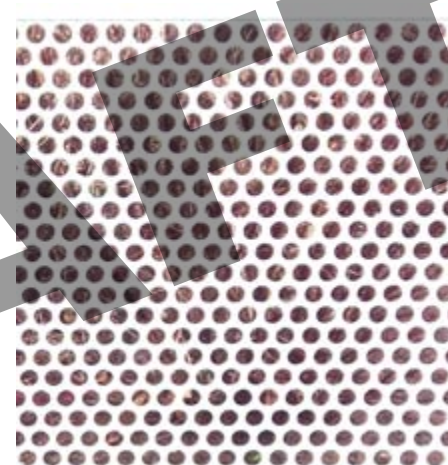
**PERMACON NOBLE BRICK  
CARRERA WHITE**



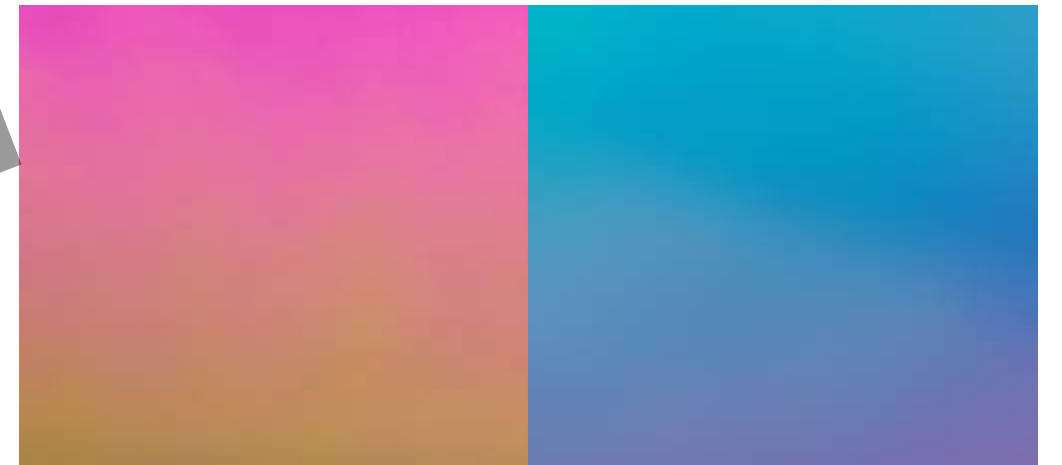
**GOLD MULLIONS**



**WHITE OAK SOFFIT**

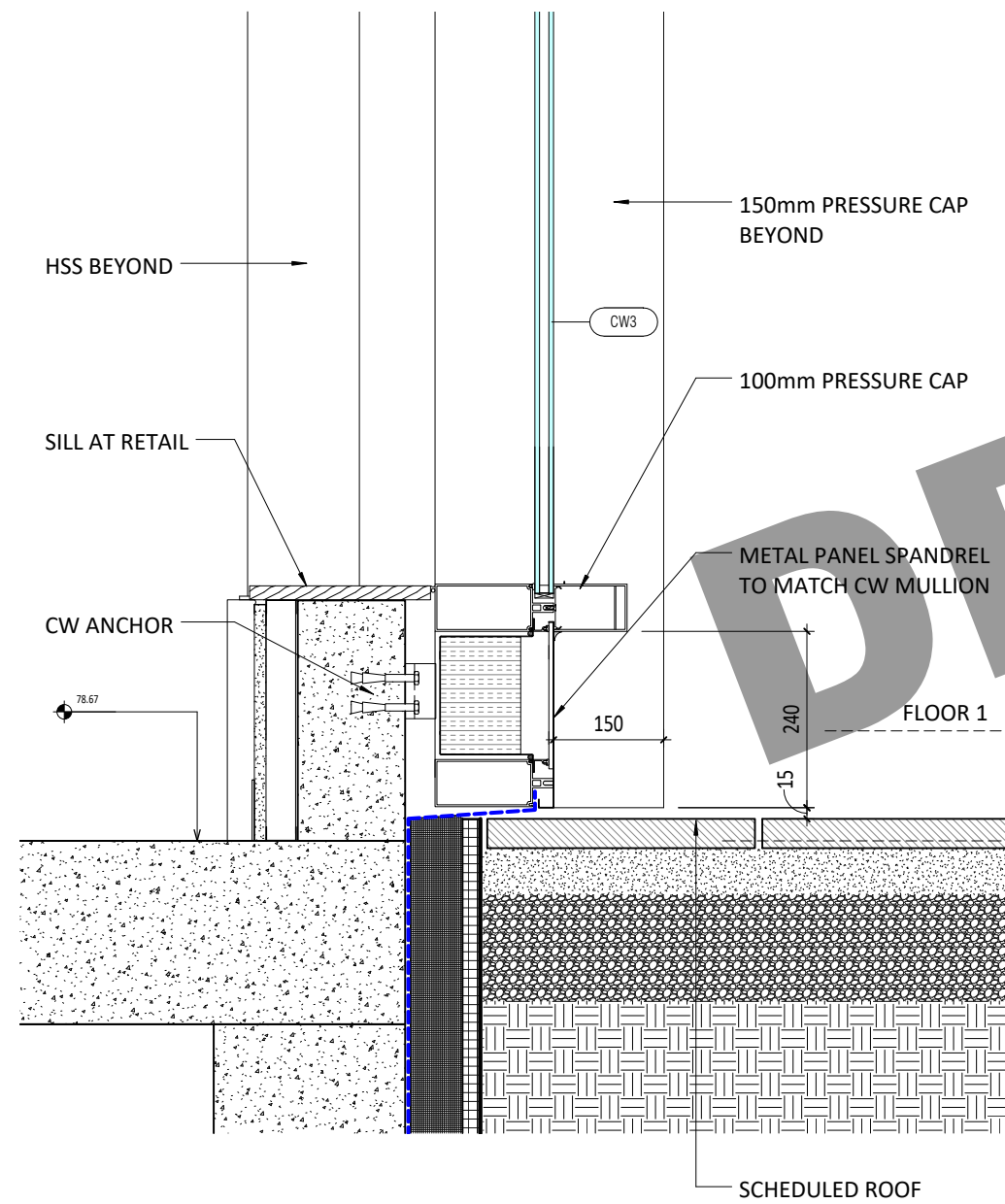


**WHITE BALCONY  
GUARDS AND  
PERFORATED METAL**

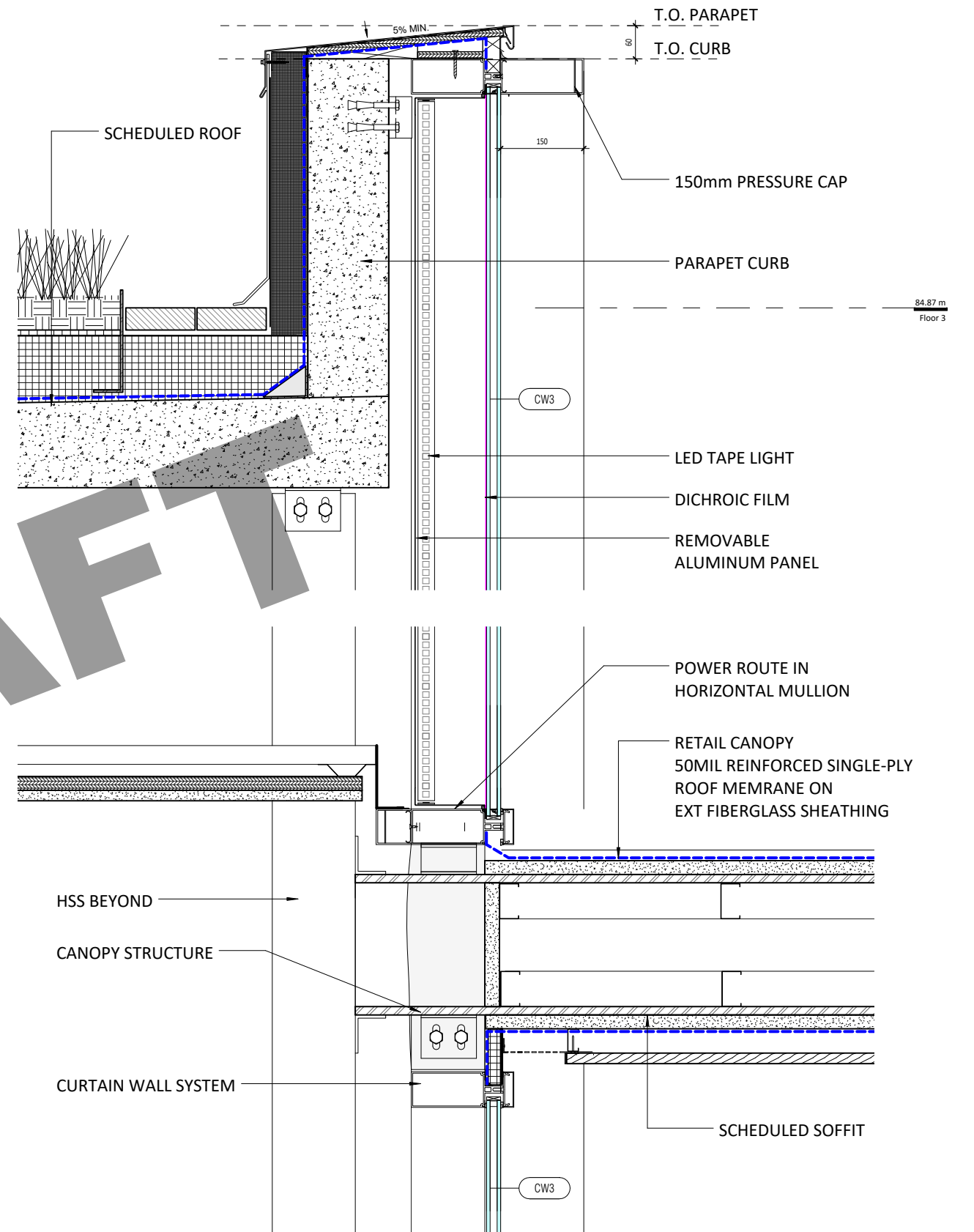


**DICHROIC FILM**

# RETAIL SECTIONS

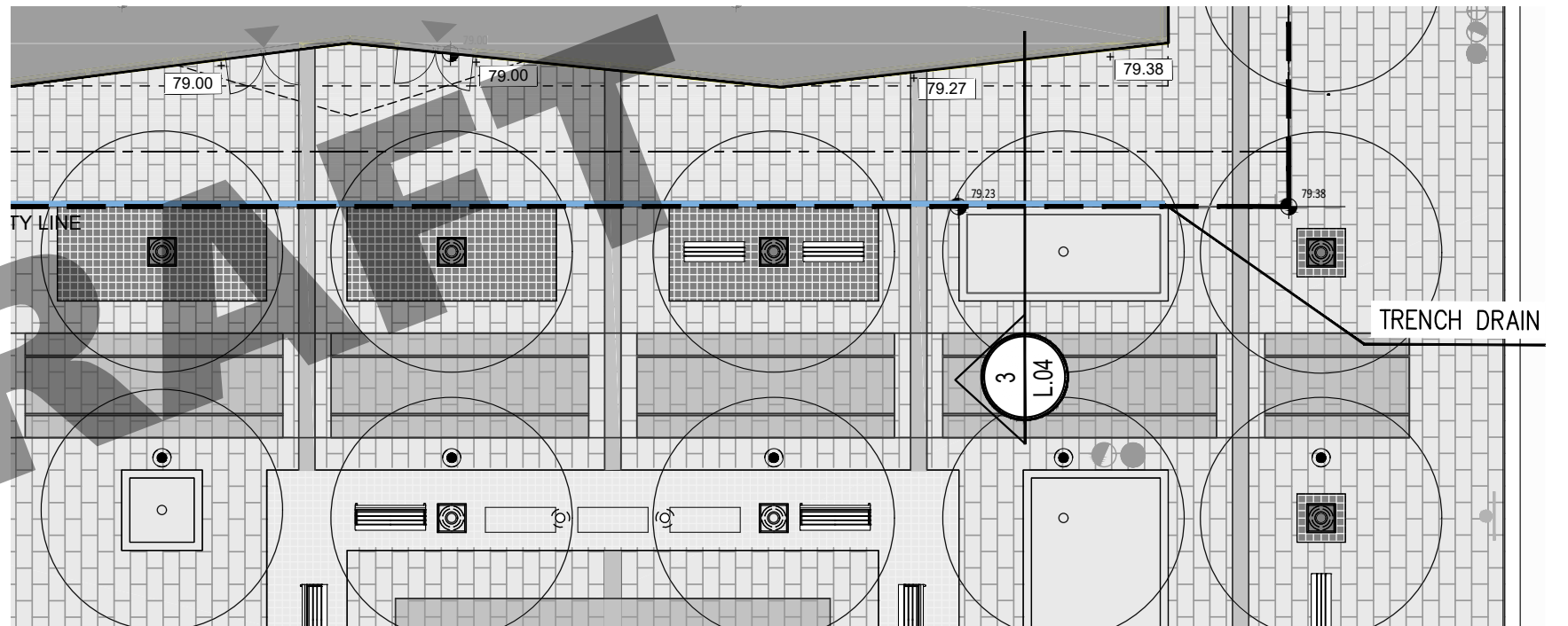
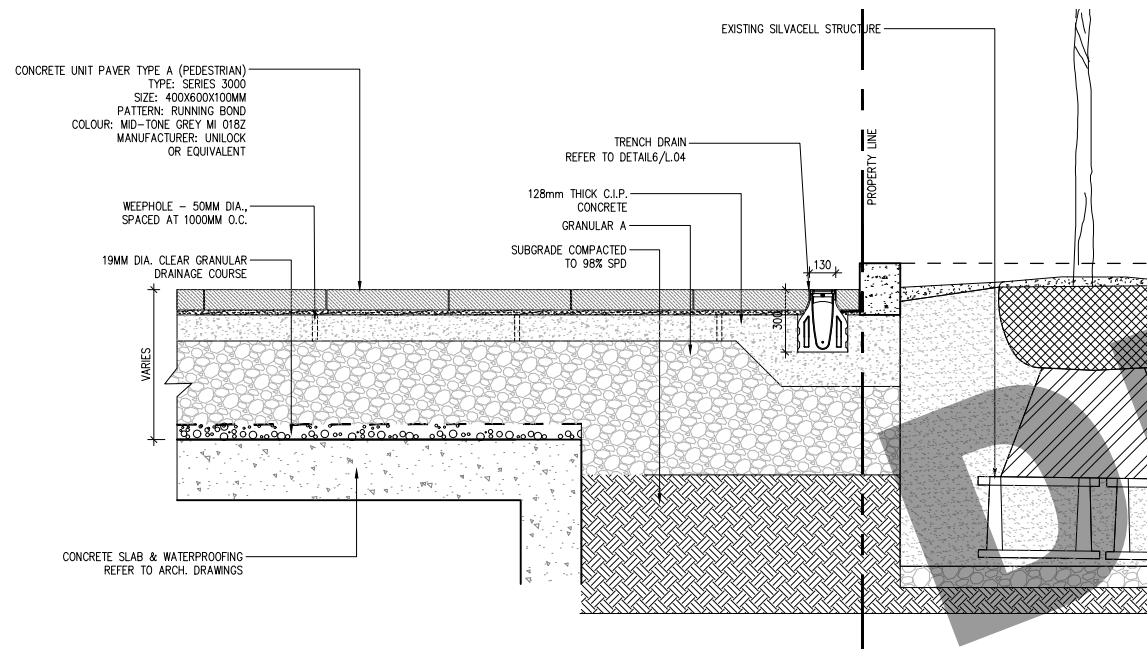


RETAIL BASE SECTION



RETAIL LIGHTBOX AND SIGNAGE SECTION

# TRENCH DRAIN DETAIL



**3** CONCRETE PAVING ON SLAB & GRADE  
 1:20

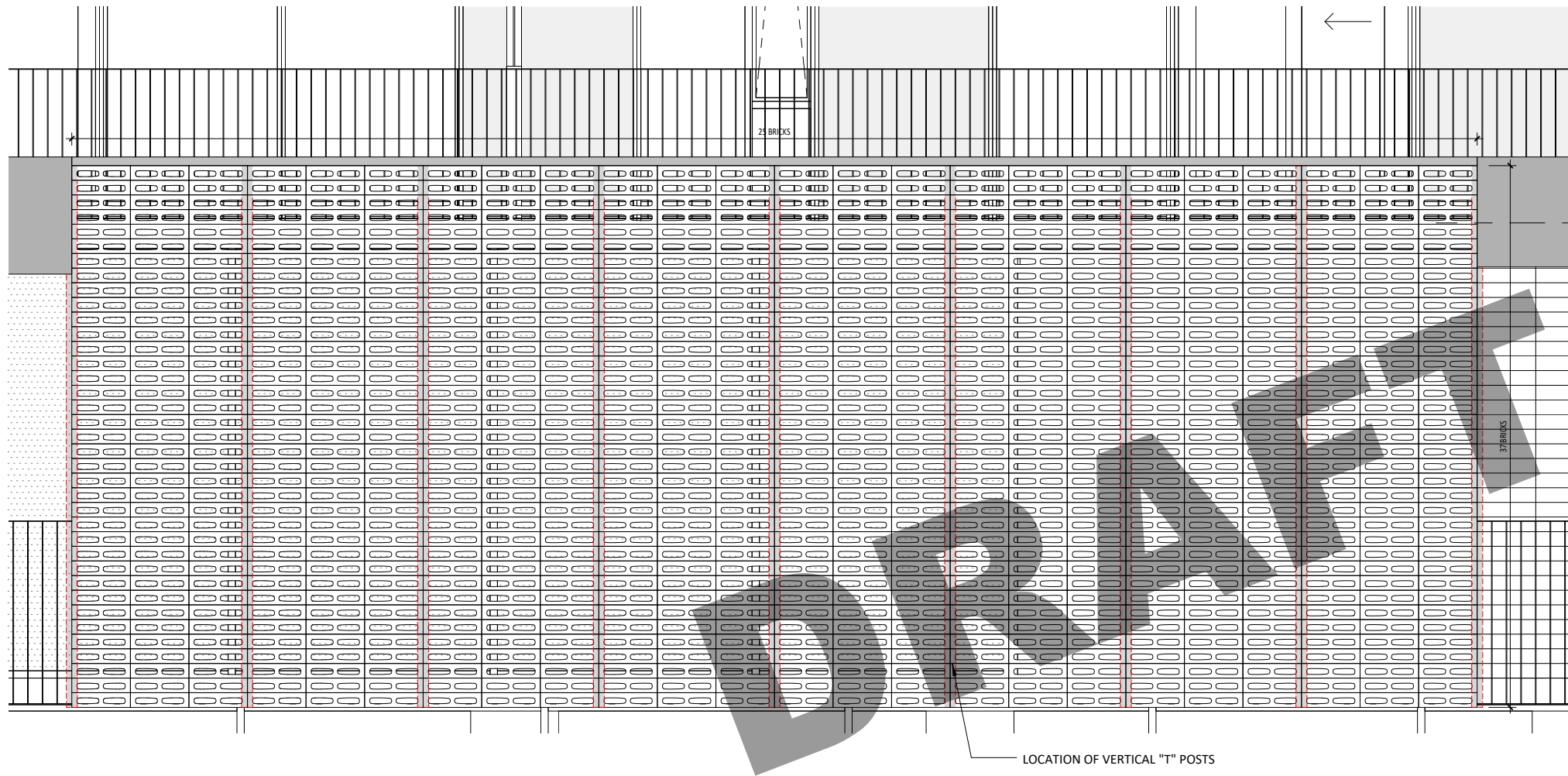
# NORTH ELEVATION



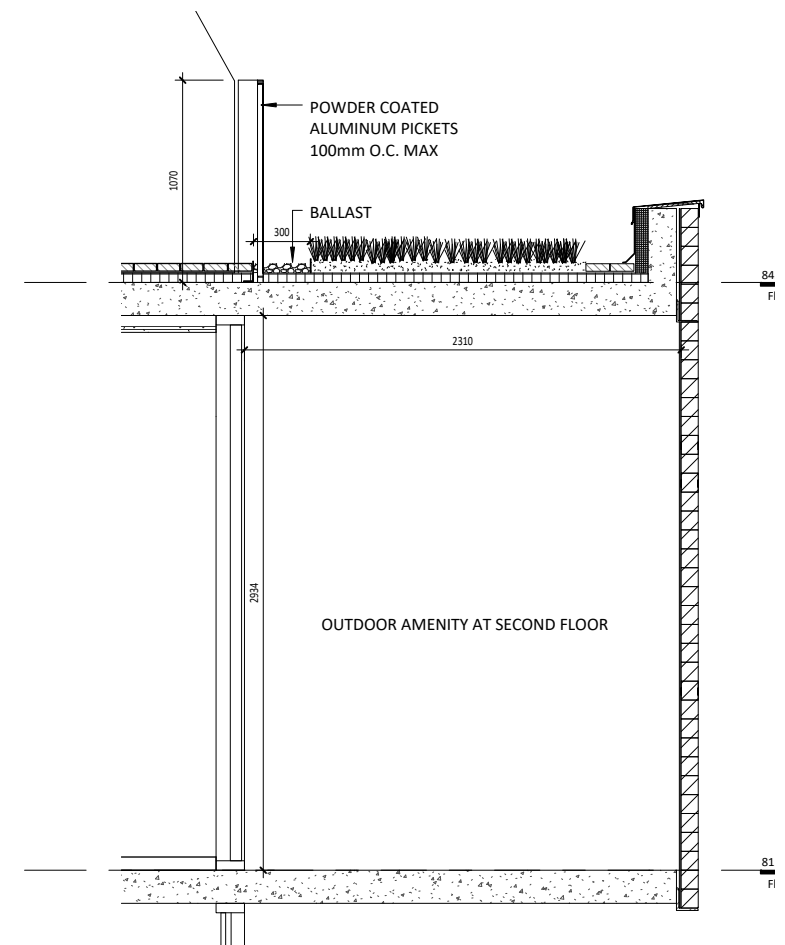
# AMENITY SPACE



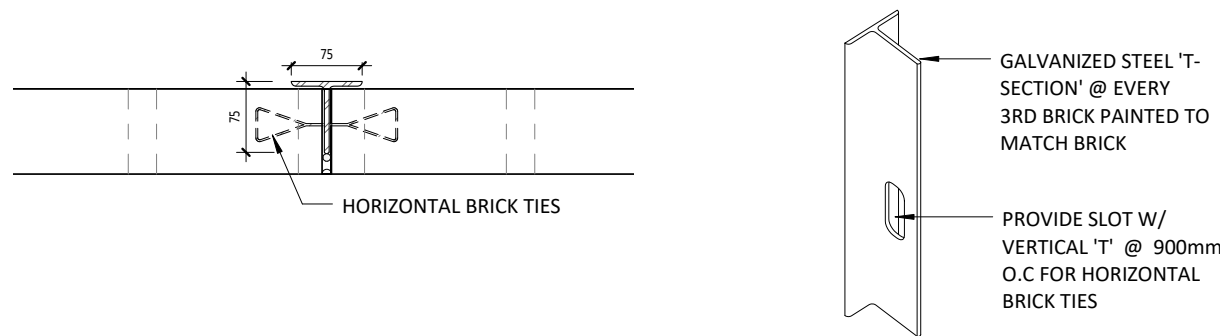
# EXTERIOR BRICK SCREEN AT SECOND FLOOR AMENITY



BRICK SCREEN ELEVATION

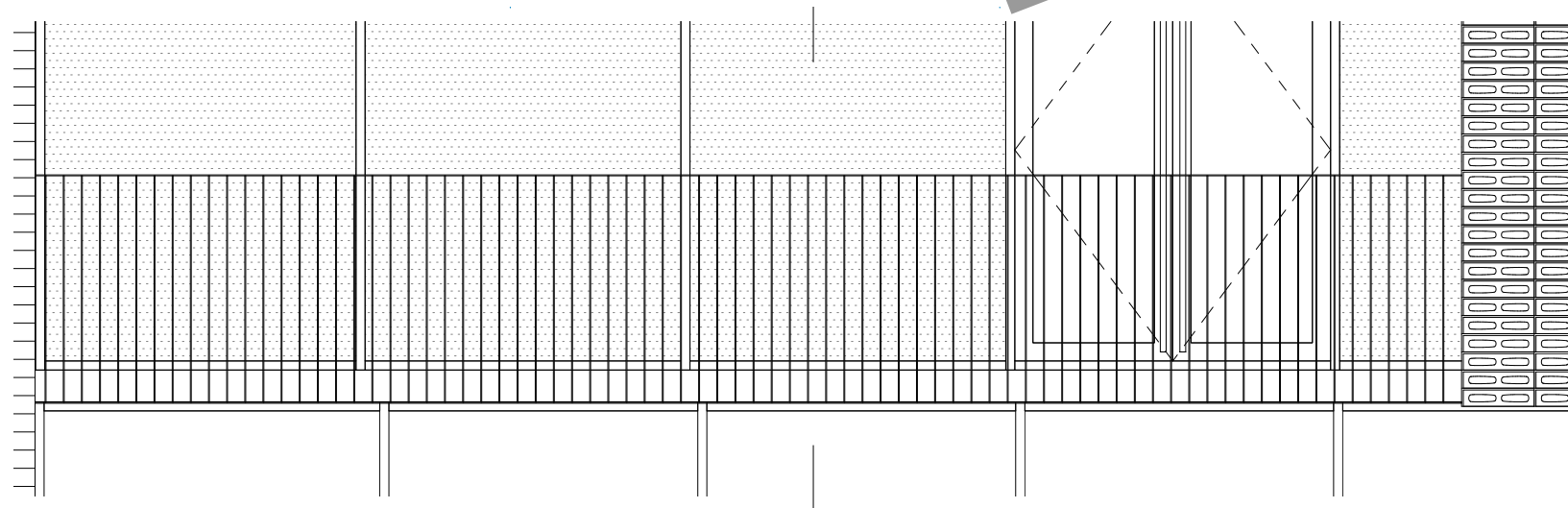
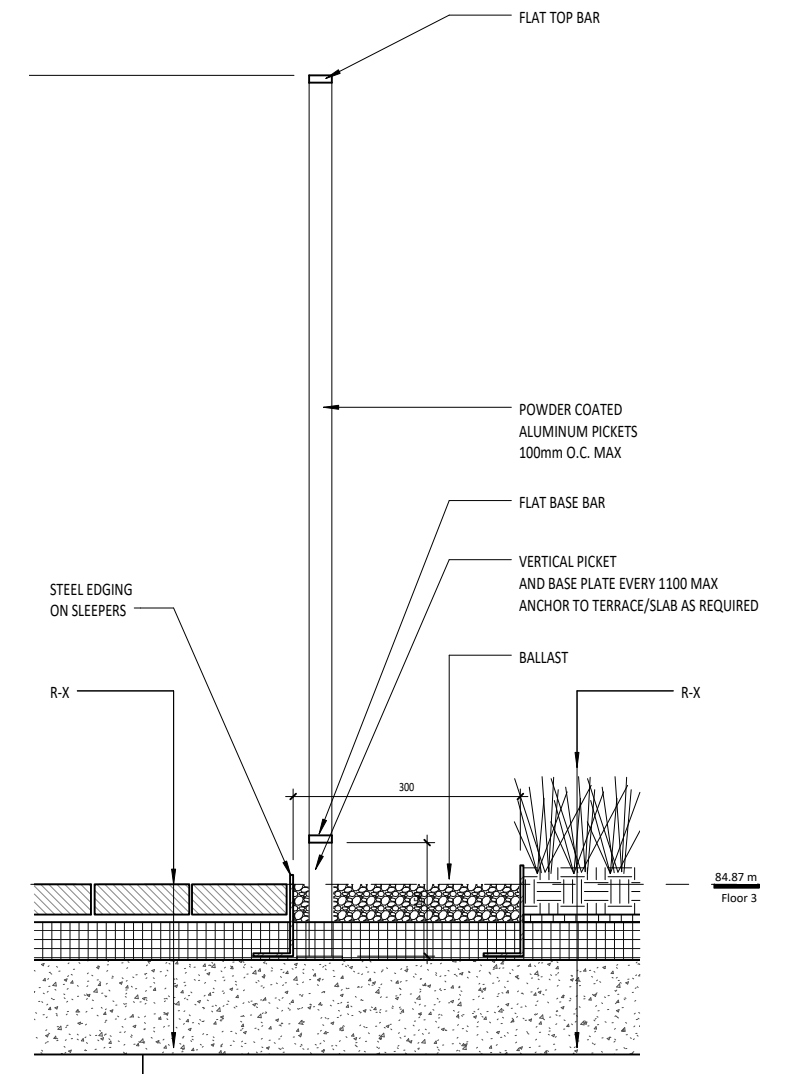
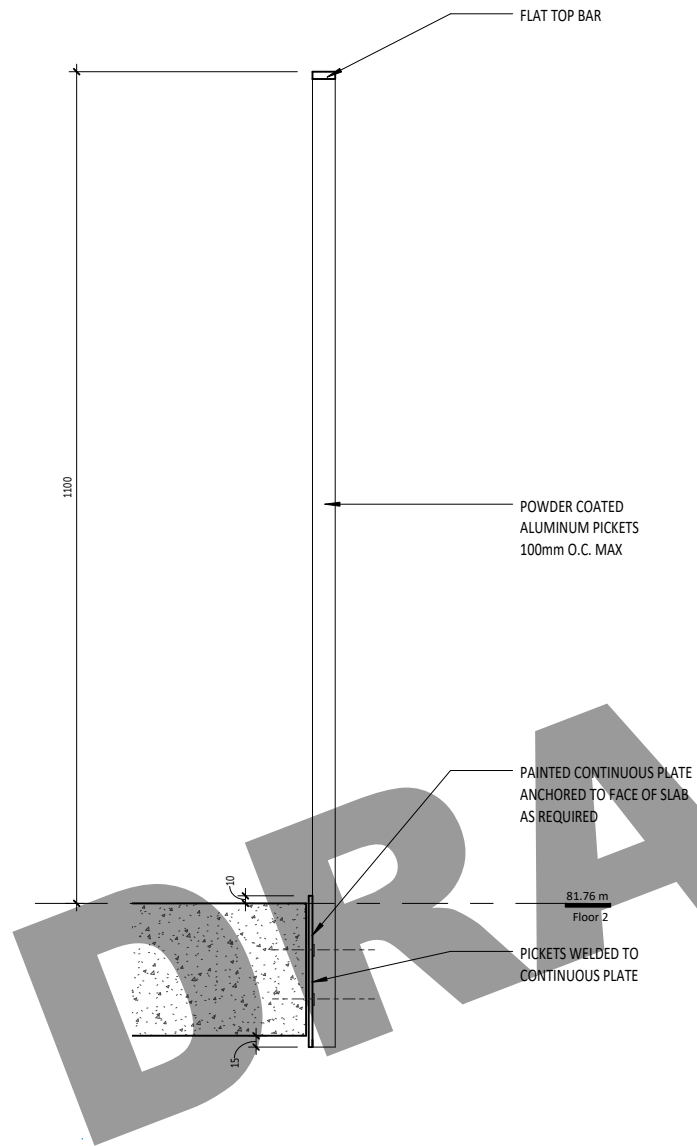


BRICK SCREEN SECTION

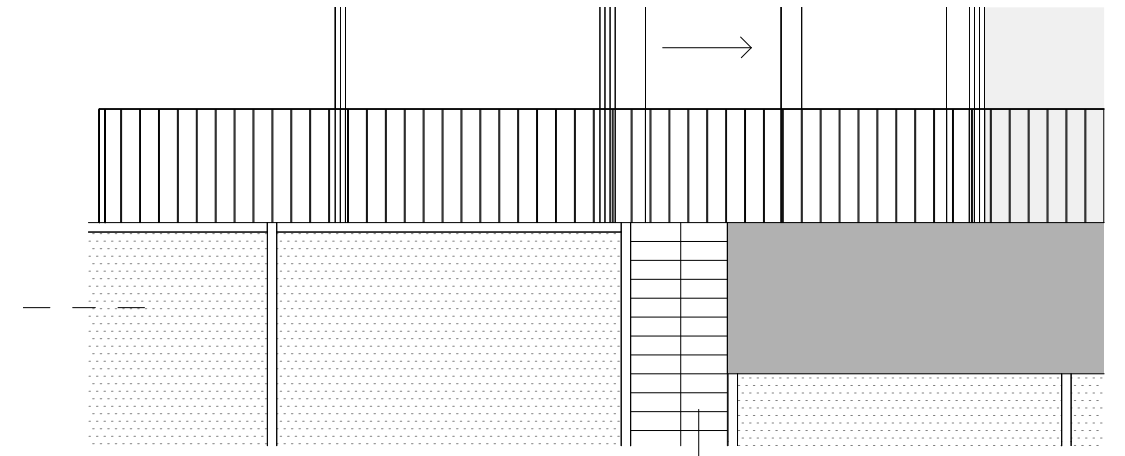


BRICK SCREEN CONNECTION TO VERTICAL T SECTION

# PICKET RAIL



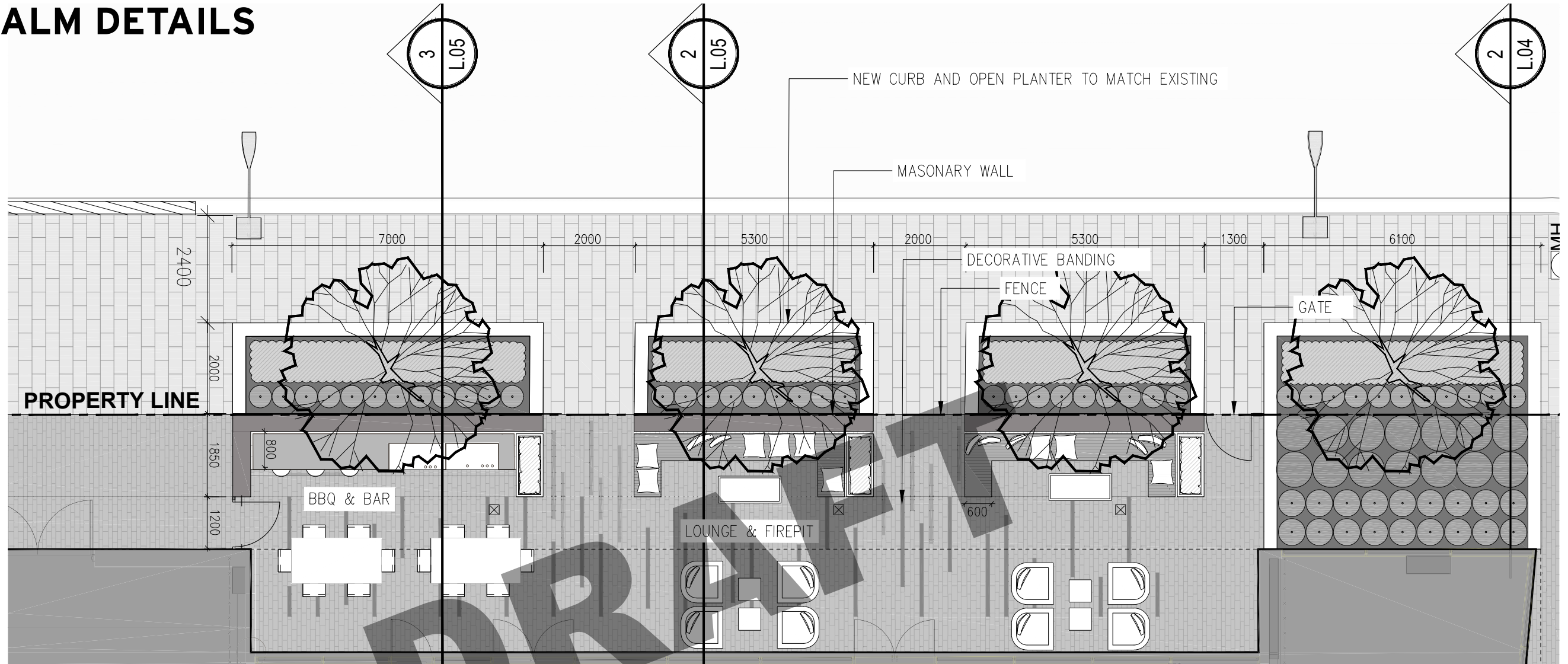
**BYPASS PICKET RAILING AT 2ND FLOOR AMENITY**



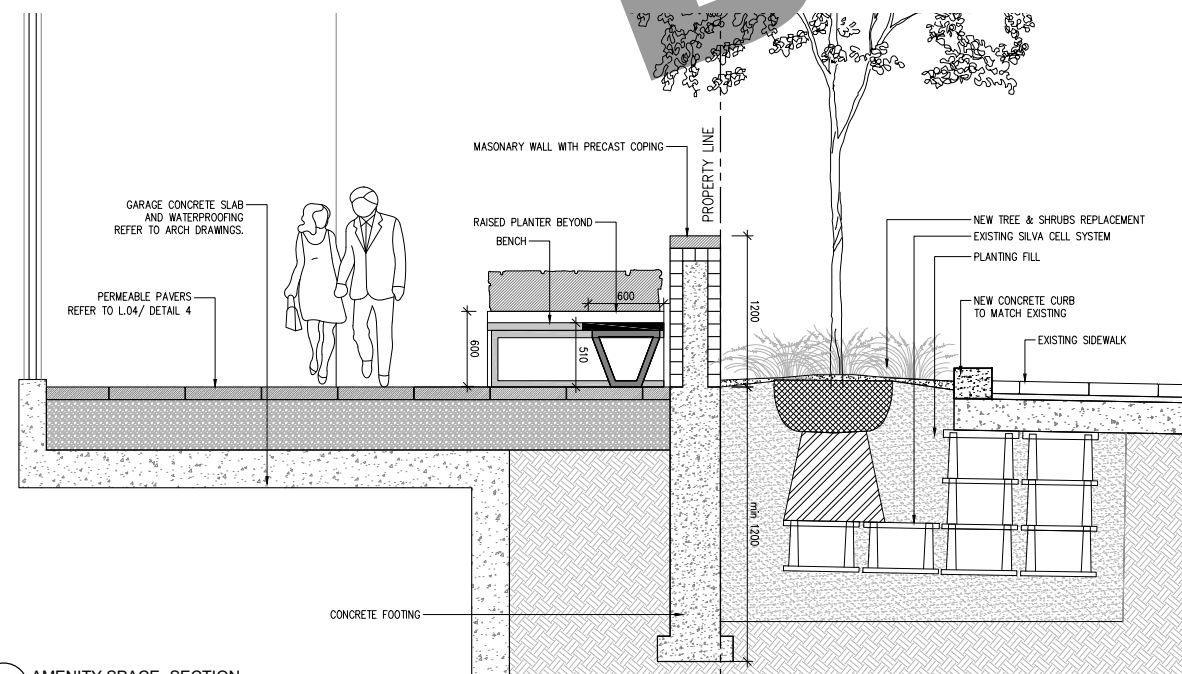
**PICKET RAILING ON SLAB AT 3RD FLOOR**



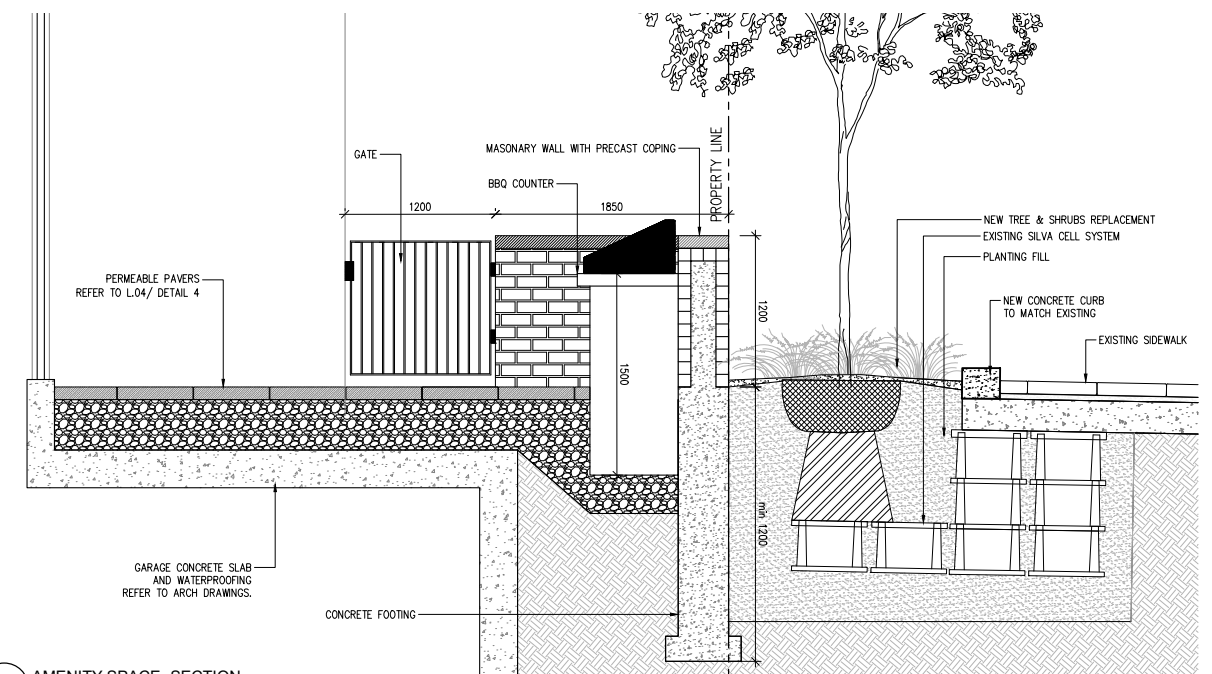
# PUBLIC REALM DETAILS



1 AMENITY SPACE  
1:50



2 AMENITY SPACE- SECTION  
1:30

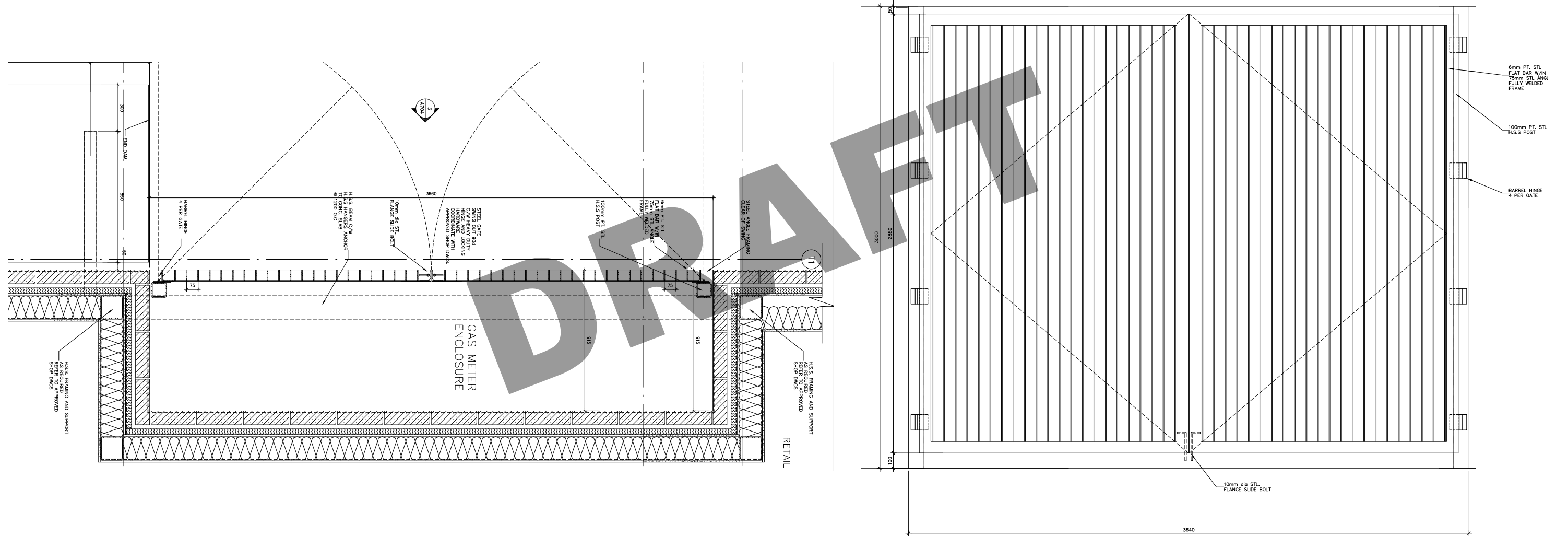


3 AMENITY SPACE- SECTION  
1:30

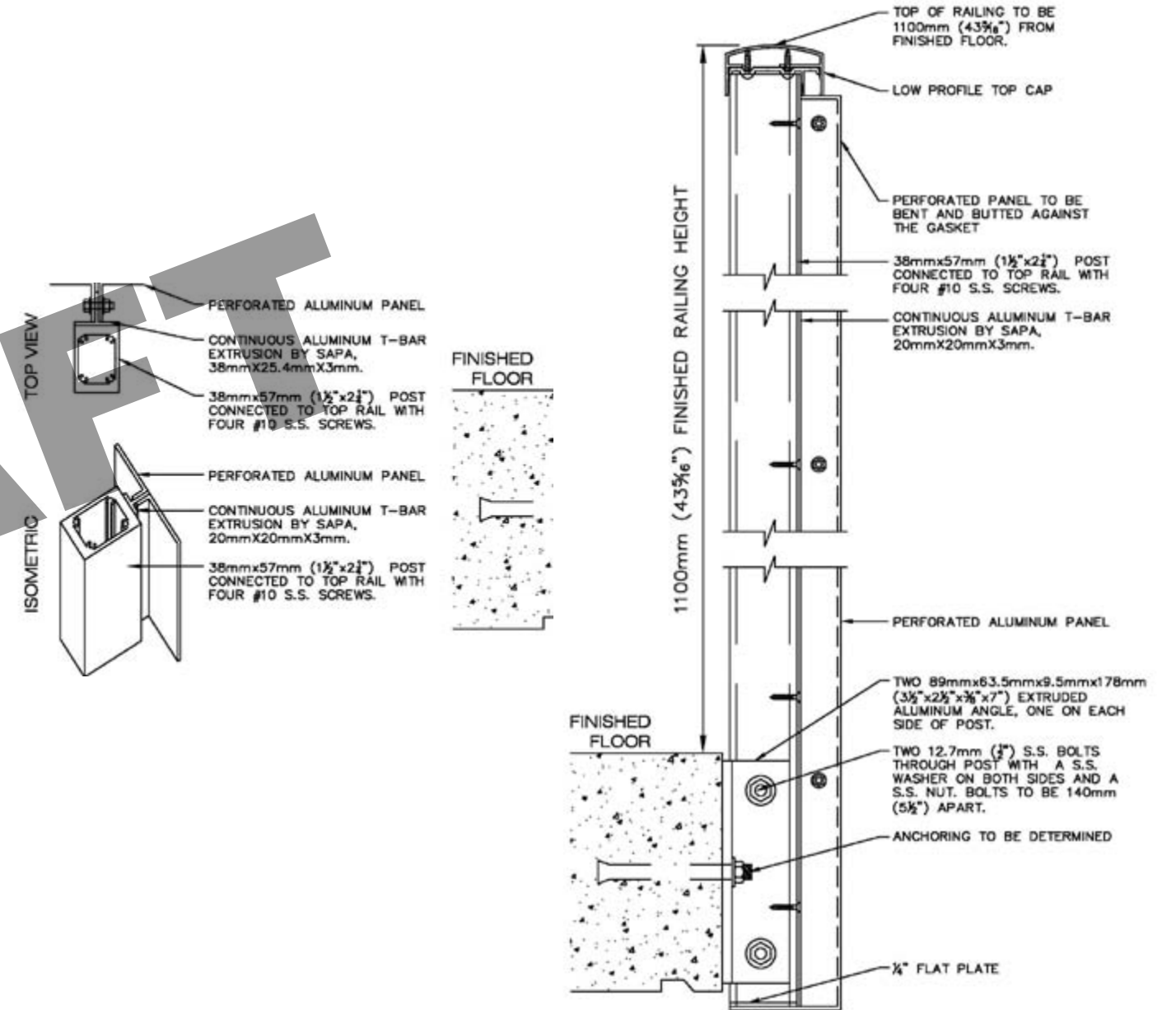
# BIKE SHOP / GAS METER ENCLOSURE



# GAS METER ROOM



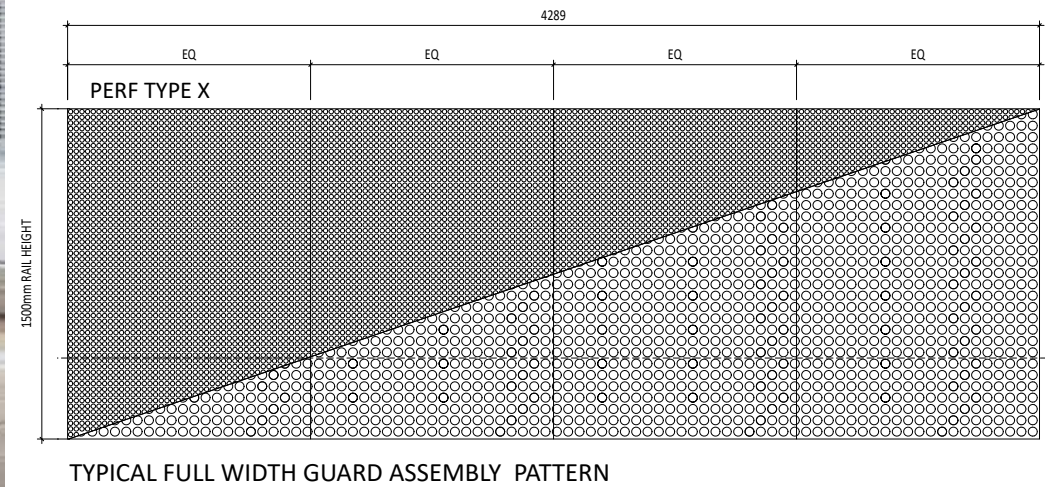
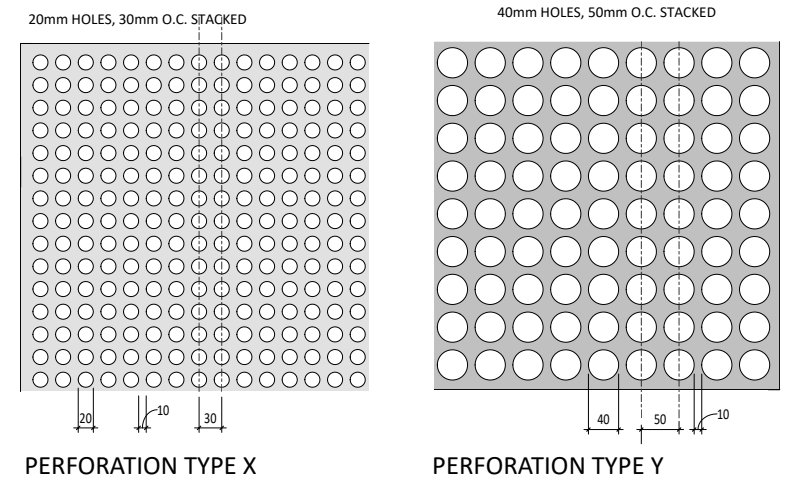
# TORO - BALCONY GUARD SYSTEM



# PERFORATED METAL BALCONY



INTERIOR VIEW OF BALCONY GUARD





# LEEDv2009 Energy Model Results (No Balcony Thermal Break)

- EUI 112.4 ekWh/m<sup>2</sup>
- No Balcony Thermal Break Product
- Spandrel Panel Effective R-3.4 including all thermal bridging at balcony slab edge. (Calculated using BC Hydro Thermal Bridging Guidelines)
- Exposed Balcony U-0.859 (Btu/hr ft<sup>2</sup>°F )
- Coldest Concrete Surface Temperature: -0.5°C (31.1°F)
- 21°C (35% RH) indoor air will condense at 5°C during the winter (-18°C) causing condensation.

Energy End Use	Fuel Type	Baseline [kWh]	Proposed [kWh]	% Reduction	Baseline [kWh/m <sup>2</sup> /year]	Proposed [kWh/m <sup>2</sup> /year]
Internal Lighting	Electricity	630,455	339,728	46%	31.81	17.14
Exterior Lighting	Electricity	0	0	#DIV/0!	0.00	0.00
Misc Equip	Electricity	799,117	792,083	1%	40.33	39.97
Space Heating	Fossil Fuel	1,238,841	175,491	86%	62.51	8.86
Space Heating	Electricity	0	9,964	#DIV/0!	0.00	0.50
Space Cooling	Electricity	478,732	150,052	69%	24.16	7.57
Heat Rejection	Electricity	0	43,081	#DIV/0!	0.00	2.17
Pumps & Aux	Electricity	11,694	58,556	-401%	0.59	2.95
Vent Fans	Electricity	206,205	277,685	-35%	10.41	14.01
Domestic Hot Wtr	Fossil Fuel	585,146	381,110	35%	29.53	19.23
<b>Total Electricity</b>		2,126,202	1,671,150	<b>21%</b>	107.29	84.33
<b>Total Fossil Fuel</b>		1,823,987	556,601	<b>69%</b>	92.04	28.09
<b>Total</b>		3,950,188	2,227,751	<b>44%</b>	199.34	112.42
<b>Electricity Cost</b>		\$ 273,568	\$ 219,343	<b>20%</b>		
<b>Fossil Fuel Cost</b>		\$ 37,767	\$ 12,072	<b>68%</b>		
<b>Total Cost</b>		\$ 311,335	\$ 231,415	<b>25.7%</b>		
				<b>EAc1 LEED Points</b>		<b>7</b>

\* Baseline building as per ASHRAE 90.1-2007 Appendix G



# LEEDv2009 Energy Model Results (With Balcony Thermal Break)

- Balcony with 3" Schöck Isokorb-SB20 Thermal Break Product
- Spandrel Effective **R-5.8** including all thermal bridging at balcony slab edge. (Calculated using BC Hydro Thermal Bridging Guidelines)
- Exposed Balcony **U-0.213** (Btu/hr ft<sup>2</sup>F )
- Coldest Concrete Surface Temperature: **7.0°C (44.6°F)**
- Balcony Thermal Break product improves **space heating energy savings by 6% (\$1,161/yr)**.
- The natural gas heating cost has low impact due to buildings high efficient water source heat pumps, condensing boilers and ERVs which help absorb heat lost through the balconies.

Energy End Use	Fuel Type	Baseline [kWh]	Proposed [kWh]	% Reduction	Baseline [kWh/m <sup>2</sup> /year]	Proposed [kWh/m <sup>2</sup> /year]
Internal Lighting	Electricity	630,455	339,728	46%	31.81	17.14
Exterior Lighting	Electricity	0	0	#DIV/0!	0.00	0.00
Misc Equip	Electricity	799,117	792,083	1%	40.33	39.97
Space Heating	Fossil Fuel	1,238,841	165,263	87%	62.51	8.34
Space Heating	Electricity	0	6,506	#DIV/0!	0.00	0.33
Space Cooling	Electricity	478,732	157,115	67%	24.16	7.93
Heat Rejection	Electricity	0	45,954	#DIV/0!	0.00	2.32
Pumps & Aux	Electricity	11,694	58,468	-400%	0.59	2.95
Vent Fans	Electricity	206,205	263,354	-28%	10.41	13.29
Domestic Hot Wtr	Fossil Fuel	585,146	381,110	35%	29.53	19.23
<b>Total Electricity</b>		2,126,202	1,663,208	<b>22%</b>	107.29	83.93
<b>Total Fossil Fuel</b>		1,823,987	546,372	<b>70%</b>	92.04	27.57
<b>Total</b>		3,950,188	2,209,580	<b>44%</b>	199.34	111.50
<b>Electricity Cost</b>		\$ 273,568	\$ 218,398	<b>20%</b>		
<b>Fossil Fuel Cost</b>		\$ 37,767	\$ 11,856	<b>69%</b>		
<b>Total Cost</b>		\$ 311,335	\$ 230,254	<b>26.0%</b>		
				<b>EAc1 LEED Points</b>		<b>8</b>

\* Baseline building as per ASHRAE 90.1-2007 Appendix G



## TGS Tier 2 Energy Model Results (No Balcony Thermal Break)

- **42%** energy savings exceeding the minimum required 25% for TGS Tier 2
- EUI: **112.4 ekWh/m<sup>2</sup>**
- Peak Demand Savings: **124kW**
- GHG Emission Reduction: **217,871 kgCO<sub>2</sub>**

Energy End Use	Fuel Type	Baseline [kWh]	Proposed [kWh]	% Reduction	Baseline [kWh/m <sup>2</sup> /year]	Proposed [kWh/m <sup>2</sup> /year]
Internal Lighting	Electricity	596,282	339,728	43%	30.09	17.14
Exterior Lighting	Electricity	0	0	#DIV/0!	0.00	0.00
Misc Equip	Electricity	799,117	792,083	1%	40.33	39.97
Space Heating	Fossil Fuel	1,007,549	175,491	83%	50.84	8.86
Space Heating	Electricity	4,044	9,964	-146%	0.20	0.50
Space Cooling	Electricity	383,952	150,052	61%	19.38	7.57
Heat Rejection	Electricity	35,315	43,081	-22%	1.78	2.17
Pumps & Aux	Electricity	113,067	58,556	48%	5.71	2.95
Vent Fans	Electricity	347,846	277,685	20%	17.55	14.01
Domestic Hot Wtr	Fossil Fuel	570,258	381,110	33%	28.78	19.23
<b>Total Electricity</b>		<b>2,279,624</b>	<b>1,671,150</b>	<b>27%</b>	<b>115.04</b>	<b>84.33</b>
<b>Total Fossil Fuel</b>		<b>1,577,807</b>	<b>556,601</b>	<b>65%</b>	<b>79.62</b>	<b>28.09</b>
<b>Total</b>		<b>3,857,431</b>	<b>2,227,751</b>	<b>42%</b>	<b>194.65</b>	<b>112.42</b>
<b>Electricity Cost</b>		<b>\$ 296,587</b>	<b>\$ 219,343</b>	<b>26%</b>		
<b>Fossil Fuel Cost</b>		<b>\$ 32,847</b>	<b>\$ 12,072</b>	<b>63%</b>		
<b>Total Cost</b>		<b>\$ 329,434</b>	<b>\$ 231,415</b>	<b>29.8%</b>		

\* Baseline building as per ASHRAE 90.1-2010 ECB + SB10 Chapter 2





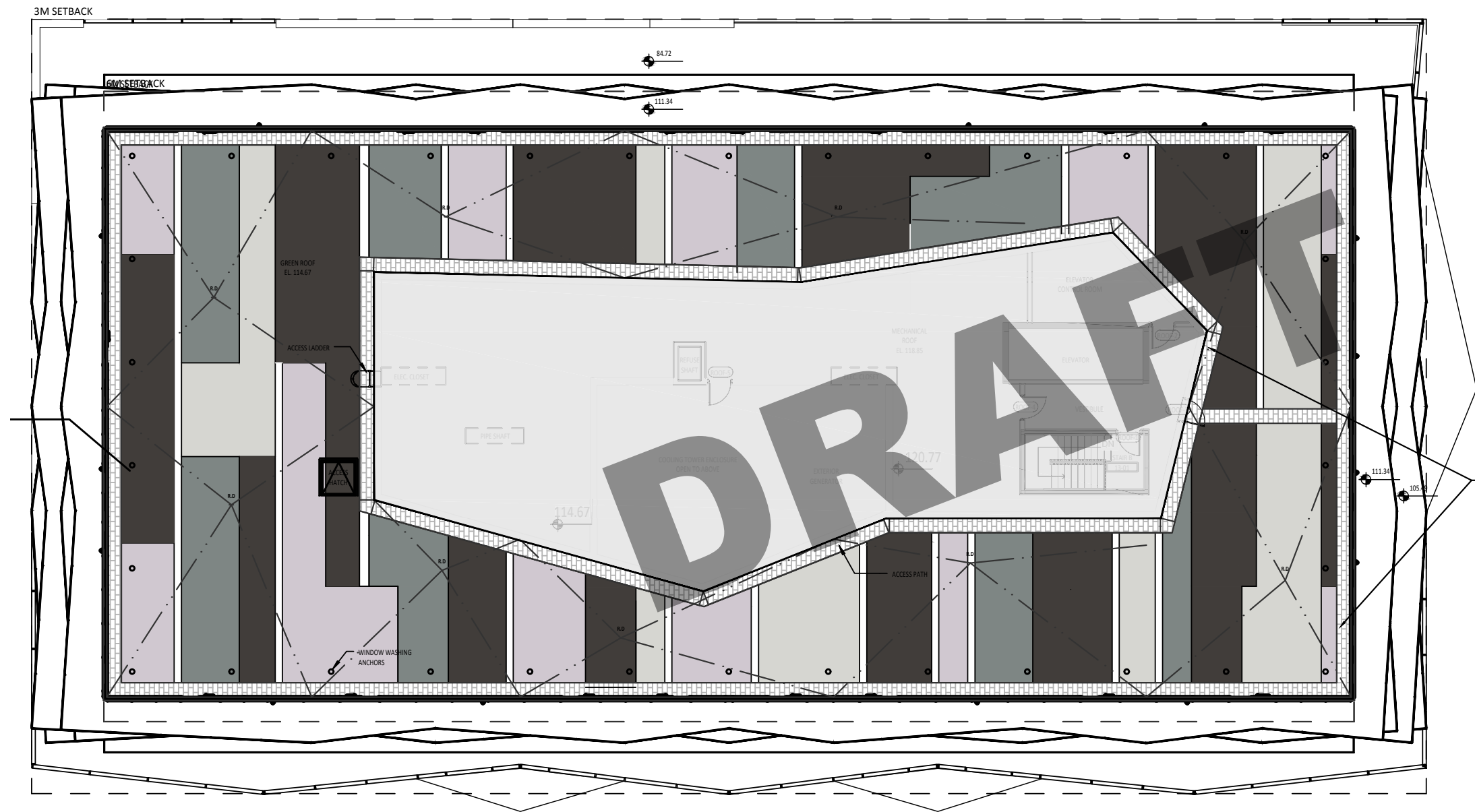
## Balcony Thermal Break Impact Summary

- Balcony thermal break products have a greater impact on **improving indoor occupant thermal comfort** and **condensation mitigation** rather than **space heating energy savings**.
- Balcony thermal bridging has a greater potential for space heating savings on building envelopes with higher R-Values.
- As Canary Block 16 is a window-wall system with relatively low effective spandrel wall R-Values at **R-3.4**, the addition of balcony thermal break products improved the overall effective R-Value to **R-5.8** yielding **only a 6% savings in annual space heating**.
- Improving the building's spandrel system with interior spray foam or Architectural Insulation Modules (AIM), the improved effective R-Value with a balcony thermal product can yield **up to 14%** savings on space heating energy.
- Manufactured balcony structural thermal break products are costly and for Canary Block 16 the cost is estimated at approximately **\$500,000** (5,000ft of wrap around balcony x \$100/ft installed) with only approx. **\$1,200/year in savings** which would result in a **payback longer than the life of the building**.
- Economically the thermal break products are a large investment for this project and do not justify a significant enough savings in energy, utility costs, peak demand or GHG reductions.

The findings from this study are in line with the results published in a journal from the Council on Tall Building and Urban Habitat (CTBUH) titled **“Thermal Breaks and Energy Performance in High-rise Concrete Balconies”**, written by Dieter Hardock from Schöck and Patrick Roppel from Morrison Hershfield Limited. The case study included the analysis of a 32 storey high-rise MURB in Toronto with predominantly window-wall system and wrap around balconies.

(<http://global.ctbuh.org/resources/papers/download/907-thermal-breaks-and-energy-performance-in-high-rise-concrete-balconies.pdf>)


# ROOF





## SURFACING


 MAINTENANCE PATH


## PLANTING

 EXTENSIVE GREEN ROOF  
ON 3RD FLOOR

 INTENSIVE GREEN ROOF TYPE 1:  
Liveroof Carefree Shade Serene Mix

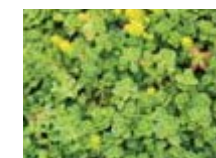
 INTENSIVE GREEN ROOF TYPE 2:  
Liveroof Carefree Rustic Mix

 INTENSIVE GREEN ROOF TYPE 3:  
Liveroof Carefree School Pride Mix

 INTENSIVE GREEN ROOF TYPE 4:  
Liveroof Carefree Heather Mix



**INTENSIVE GREEN ROOF  
TYPE 1**



**INTENSIVE GREEN ROOF  
TYPE 2**



**INTENSIVE GREEN ROOF  
TYPE 3**

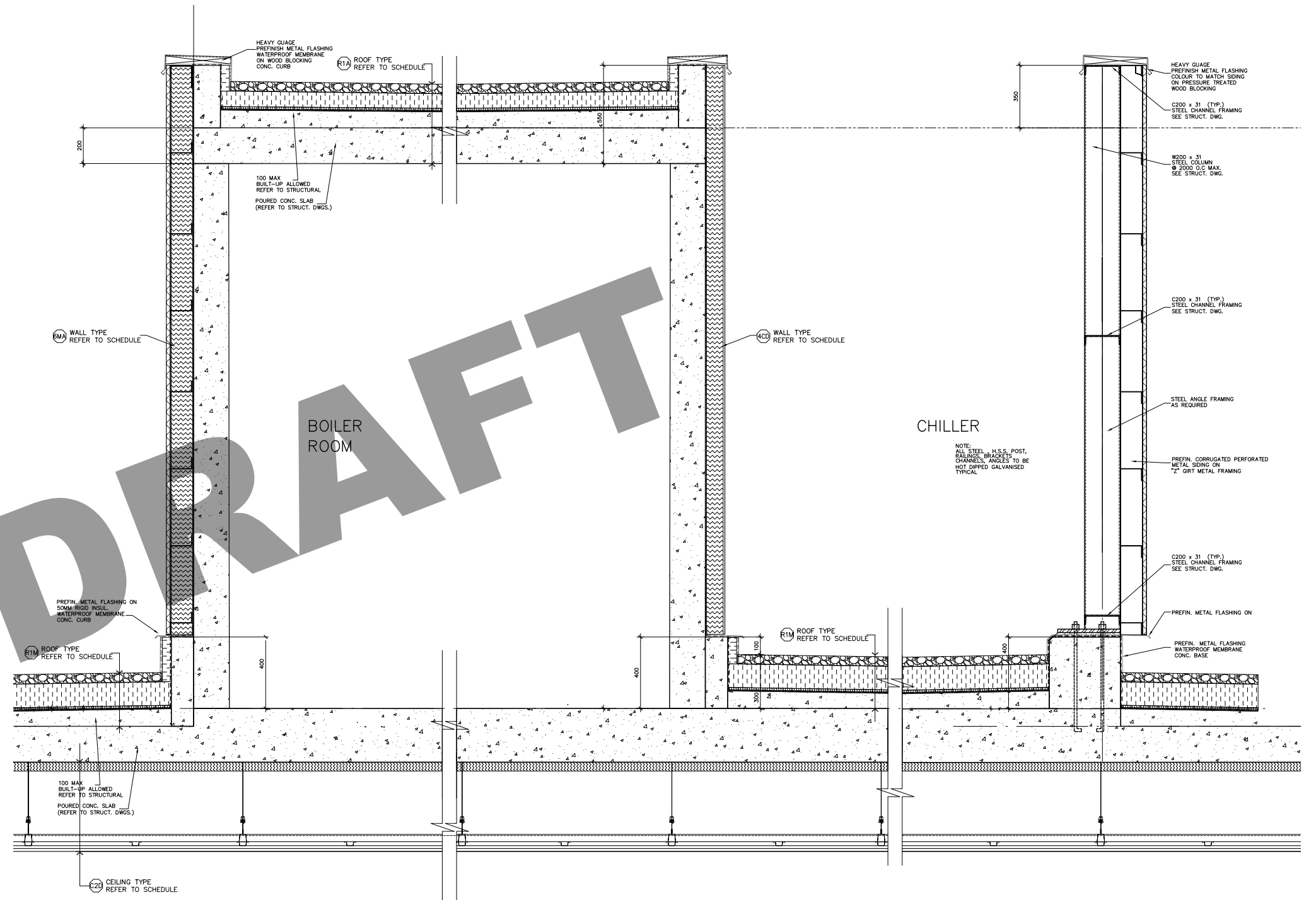


**INTENSIVE GREEN ROOF  
TYPE 4**

# MECHANICAL PENTHOUSE



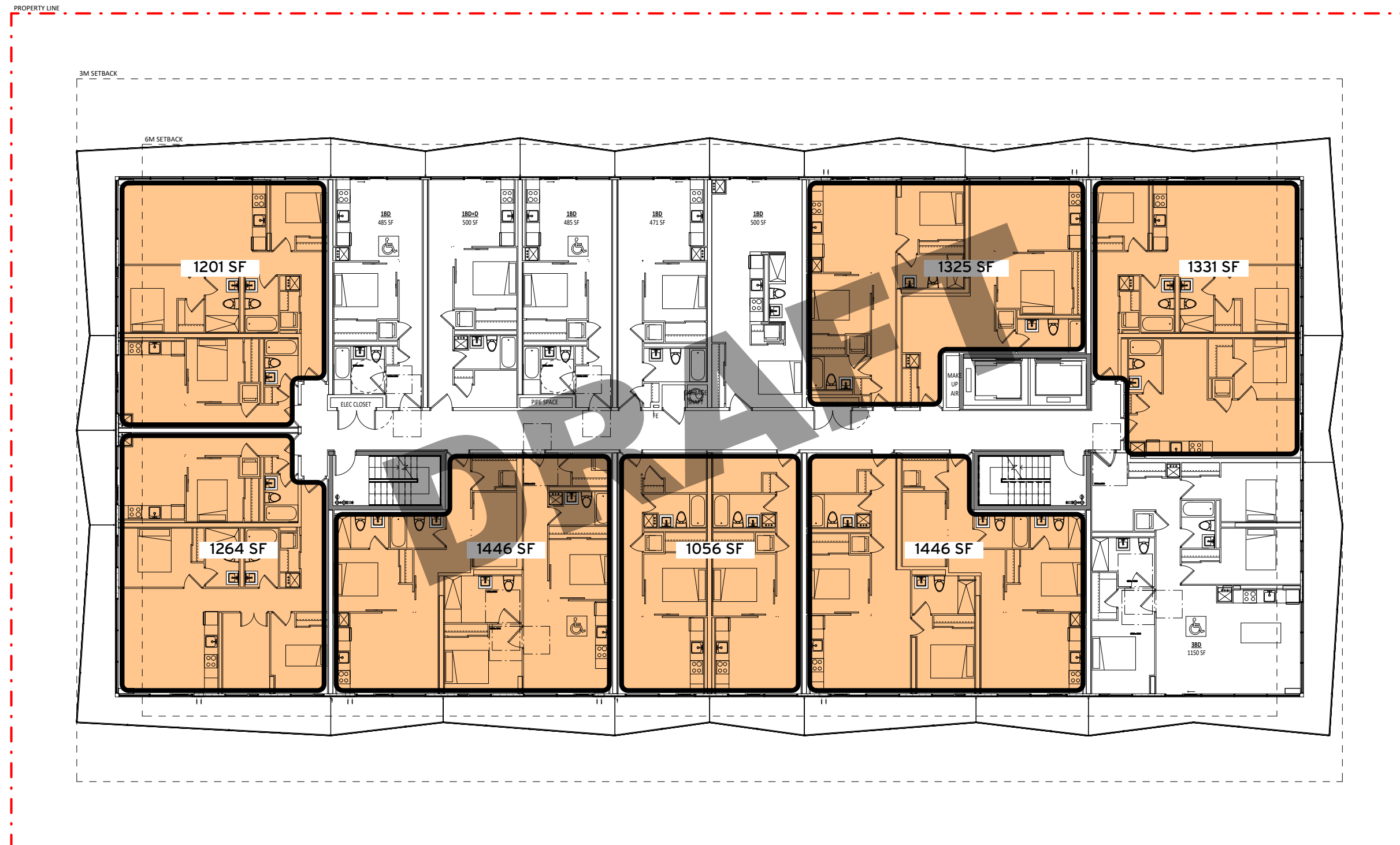
SOLID / PERFORATED CORRUGATED METAL



5 SECTION - DETAIL AT MECH. ROOM / CHILLER ENCLOSURE

A-7116 / SCALE: 1:10

# CONVERTIBLE UNITS - ADAPTING FOR LARGER UNITS



UNITS PER FLOOR: 13

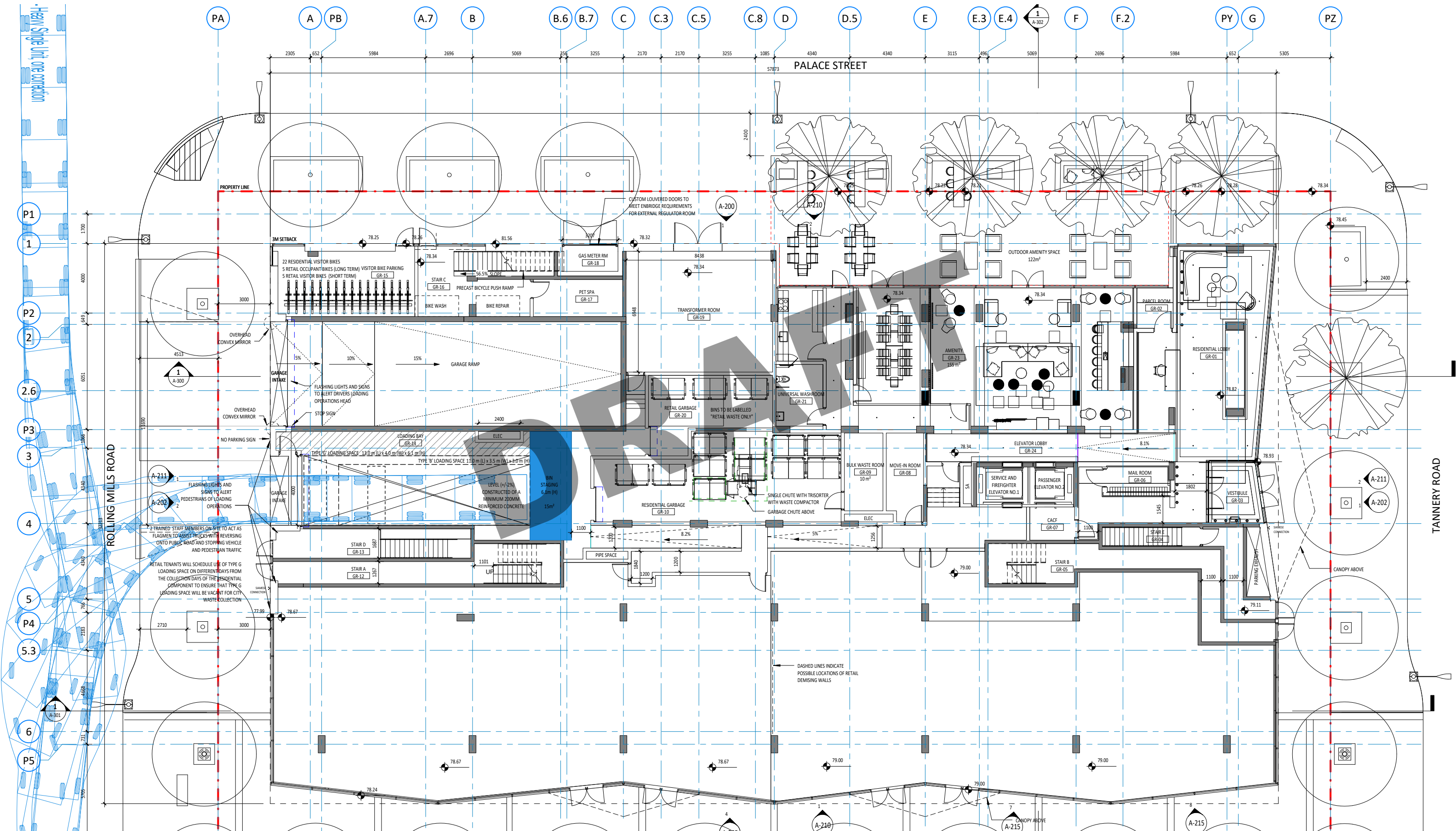
## **SITE PLAN APPROVAL COMMENTS**

**THE FOLLOWING TWO DIAGRAMS ILLUSTRATE TWO SEPARATE LOADING BAY STRATEGIES FOR THE DESIGN PANEL'S REVIEW.**

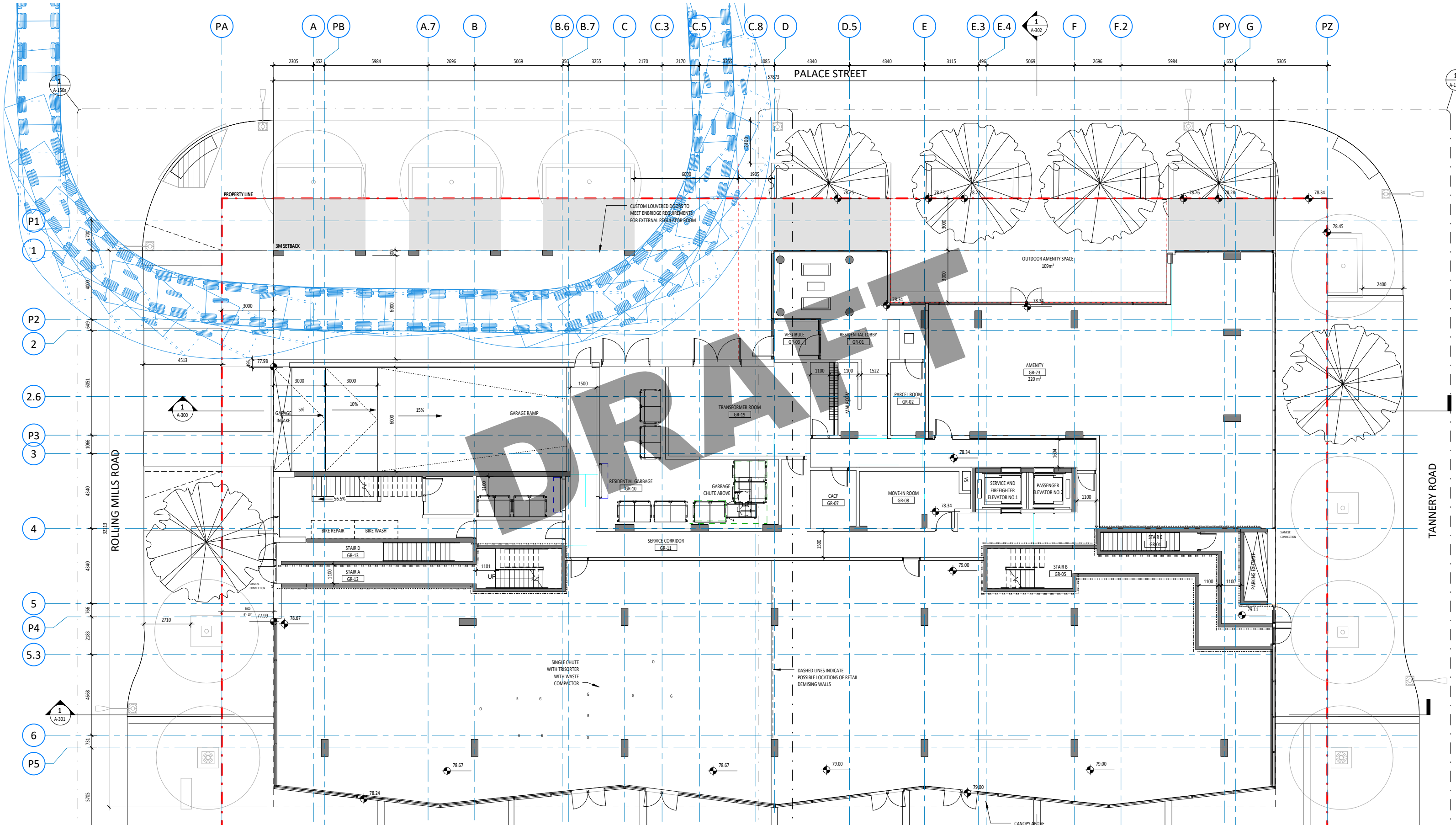
- **THE FIRST STRATEGY IS AS PER PREVIOUS PRESENTATION "FRONT IN/REVERSE OUT" SERVICE BAY.**
- **THE SECOND STRATEGY ILLUSTRATES AN ALTERNATIVE PLAN PROPOSAL AS SUGGESTED BY SOLID WASTE MANAGEMENT AT THE CITY OF TORONTO.**

**WE ARE SEEKING DESIGN REVIEW PANEL SUPPORT FOR THE ORIGINAL PROPOSED STRATEGY AS WE BELIEVE THIS IS A PEDESTRIAN FIRST PUBLIC REALM DESIGN WITH FULL ACTIVE FRONTAGES.**

# LOADING BAY STUDY AS PROPOSED



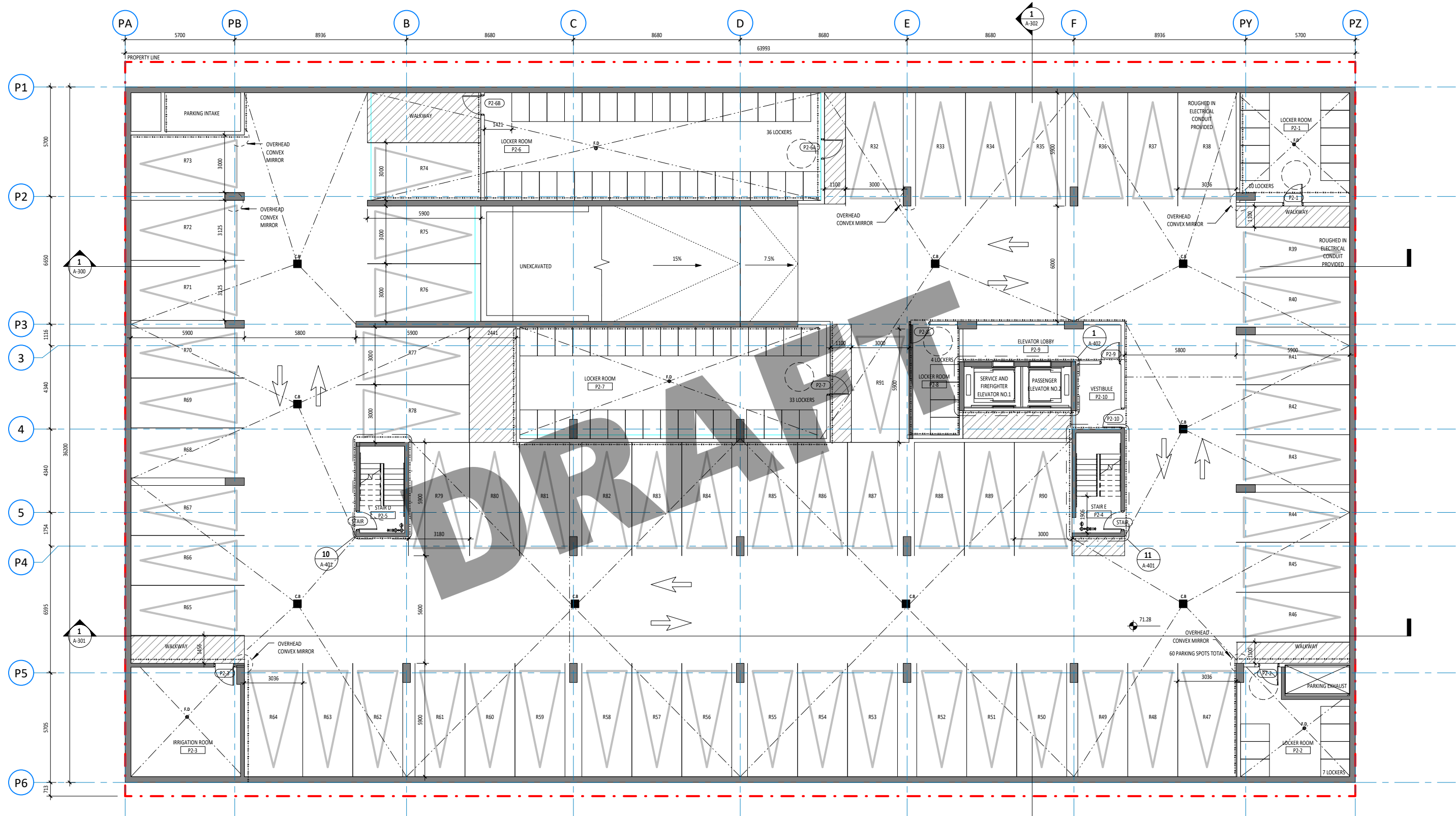
# LOADING BAY STUDY AS PER SPA COMMENTS



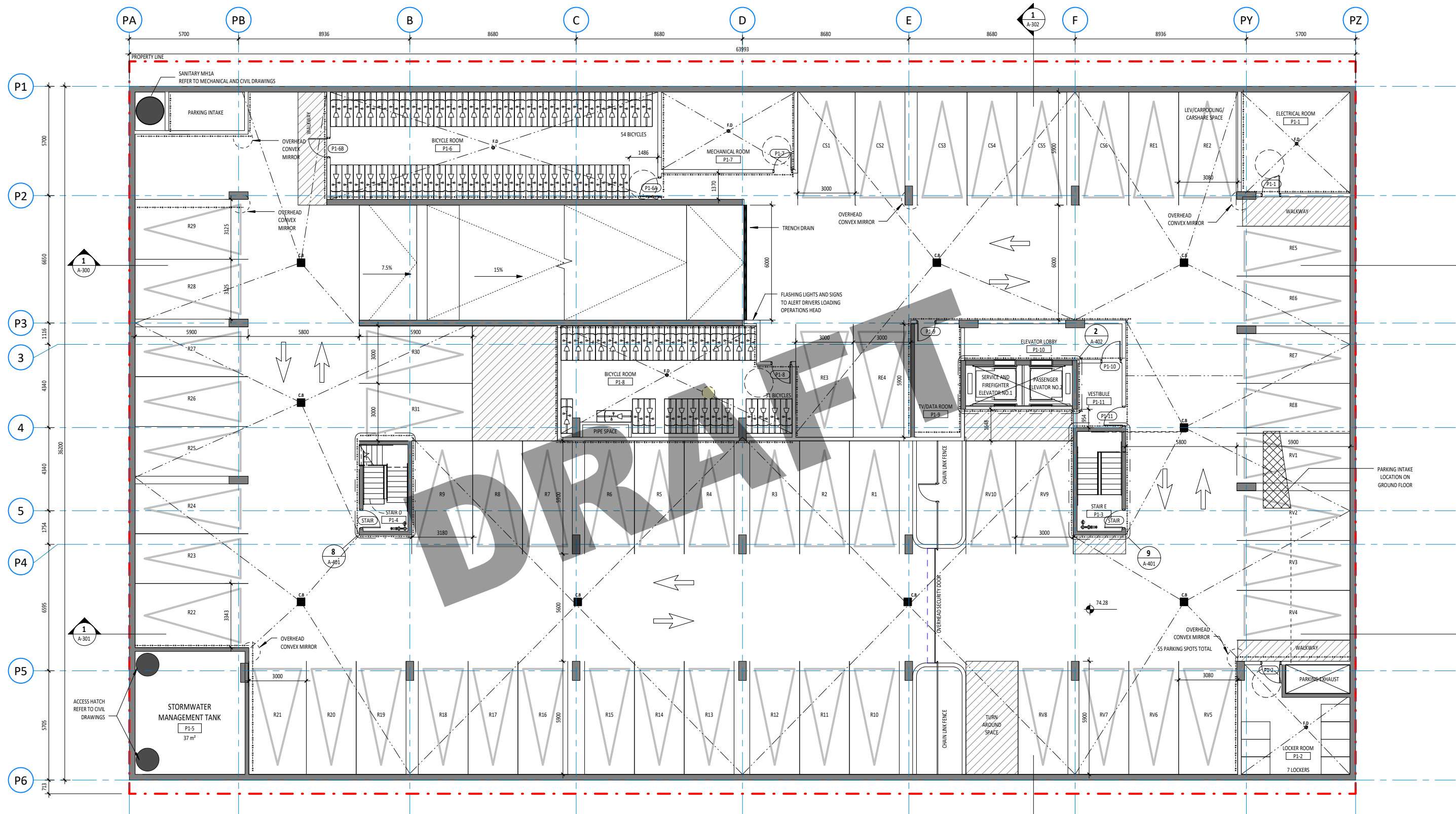
APPENDIX: FLOOR PLANS, ELEVATIONS AND SECTION

DRAFT

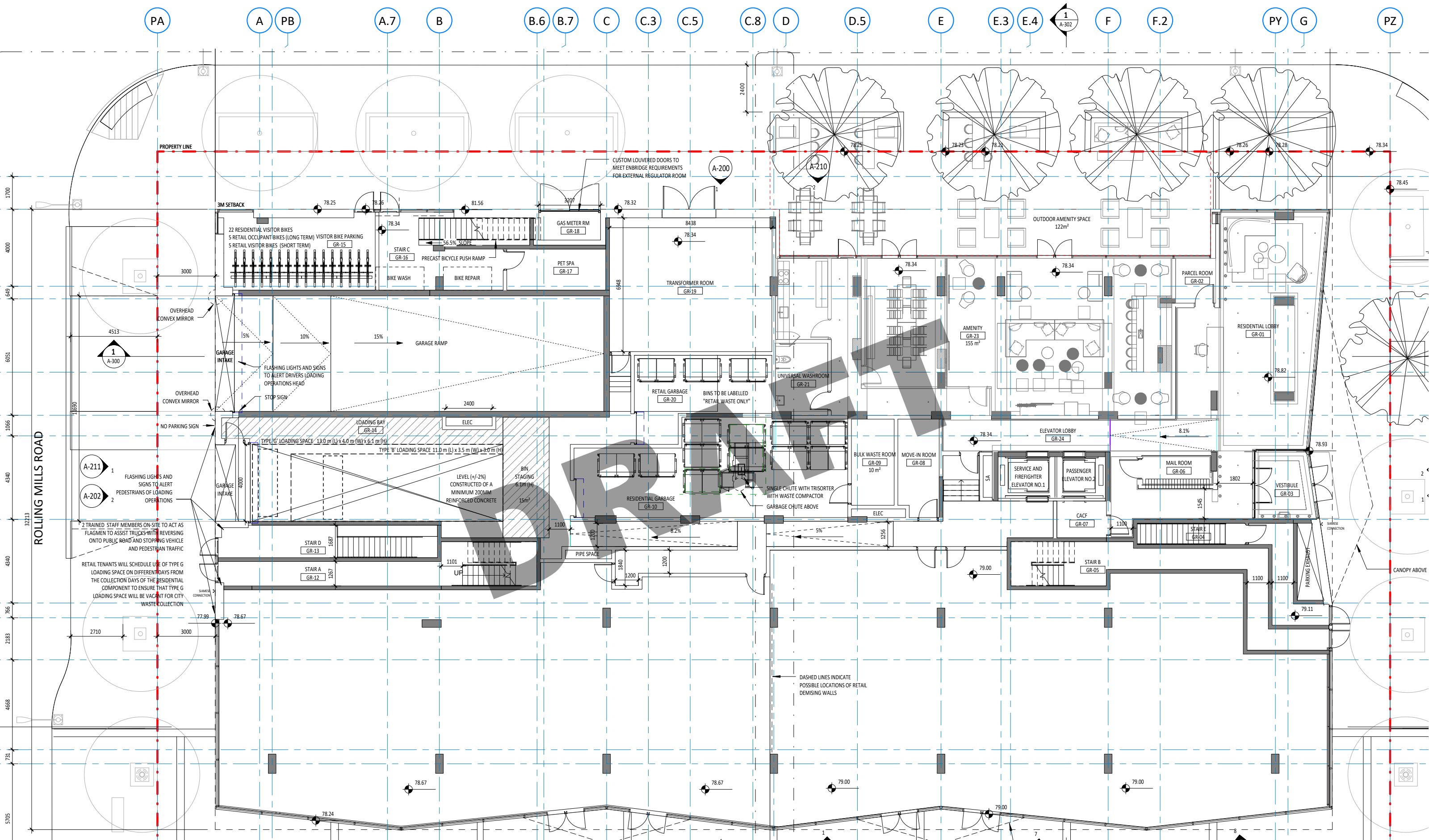




1 P2 FLOOR PLAN  
A4.01 SCALE: 1/32



**2 P1 FLOOR PLAN**  
 A4.01 SCALE: 1:100



PA A PB A.7 B B.6 B.7 C C.3 C.5 C.8 D D.5 E E.3 E.4 1 A-302 F F.2 PY G PZ

PROPERTY LINE

3M SETBACK

22 RESIDENTIAL VISITOR BIKES  
5 RETAIL OCCUPANT BIKES (LONG TERM) VISITOR BIKE PARKING  
5 RETAIL VISITOR BIKES (SHORT TERM) GR-15

STAIR C GR-16

PRECAST BICYCLE PUSH RAMP

BIKE WASH

BIKE REPAIR

PET SPA GR-17

GAS METER RM GR-18

TRANSFORMER ROOM GR-19

OUTDOOR AMENITY SPACE 122m<sup>2</sup>

PARCEL ROOM GR-02

RESIDENTIAL LOBBY GR-01

AMENITY GR-23 155 m<sup>2</sup>

UNIVERSAL WASHROOM GR-21

ELEVATOR LOBBY GR-24

SERVICE AND FIREFIGHTER ELEVATOR NO.1

PASSENGER ELEVATOR NO.2

MAIL ROOM GR-06

VESTIBULE GR-03

STAIR E GR-04

STAIR B GR-05

STAIR A GR-12

STAIR D GR-13

LOADING BAY GR-14

TYPE 'G' LOADING SPACE 13.0 m (L) x 4.0 m (W) x 6.1 m (H)

TYPE 'B' LOADING SPACE 11.0 m (L) x 3.5 m (W) x 3.0 m (H)

LEVEL (+/-2%) CONSTRUCTED OF A MINIMUM 200MM REINFORCED CONCRETE

RIN STAGING 6.1m (H) 15m<sup>2</sup>

RESIDENTIAL GARBAGE GR-10

RETAIL GARBAGE GR-20

BINS TO BE LABELLED "RETAIL WASTE ONLY"

BULK WASTE ROOM GR-09 10 m<sup>2</sup>

MOVE-IN ROOM GR-08

SINGLE CHUTE WITH TRISORTER WITH WASTE COMPACTOR GARBAGE CHUTE ABOVE

ELEC

PIPE SPACE

NO PARKING SIGN

FLASHING LIGHTS AND SIGNS TO ALERT PEDESTRIANS OF LOADING OPERATIONS

FLASHING LIGHTS AND SIGNS TO ALERT DRIVERS LOADING OPERATIONS HEAD

STOP SIGN

OVERHEAD CONVEX MIRROR

OVERHEAD CONVEX MIRROR

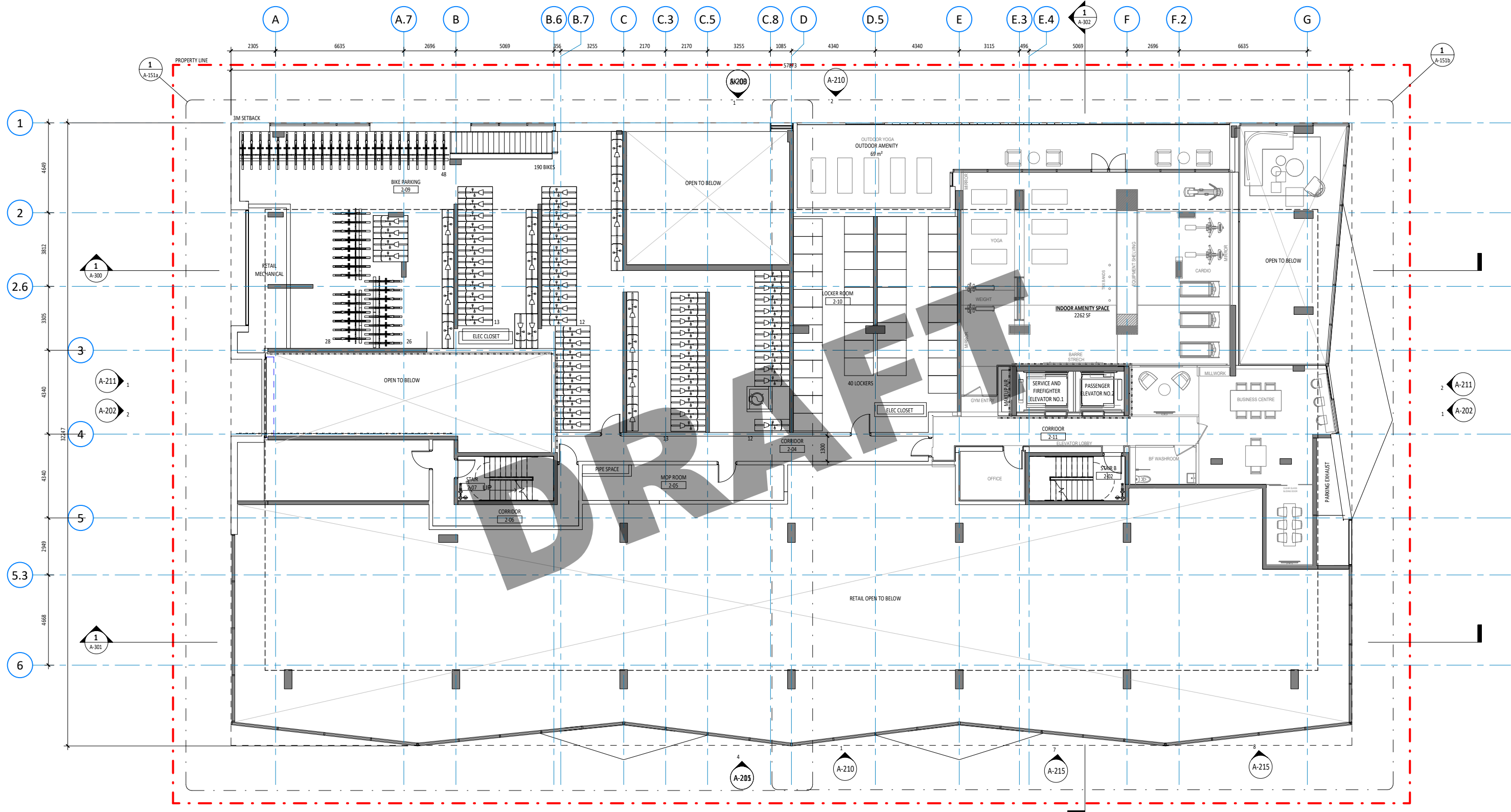
FLASHING LIGHTS AND SIGNS TO ALERT PEDESTRIANS OF LOADING OPERATIONS

2 TRAINED STAFF MEMBERS ON-SITE TO ACT AS FLAGMEN TO ASSIST TRUCKS WITH REVERSING ONTO PUBLIC ROAD AND STOPPING VEHICLE AND PEDESTRIAN TRAFFIC

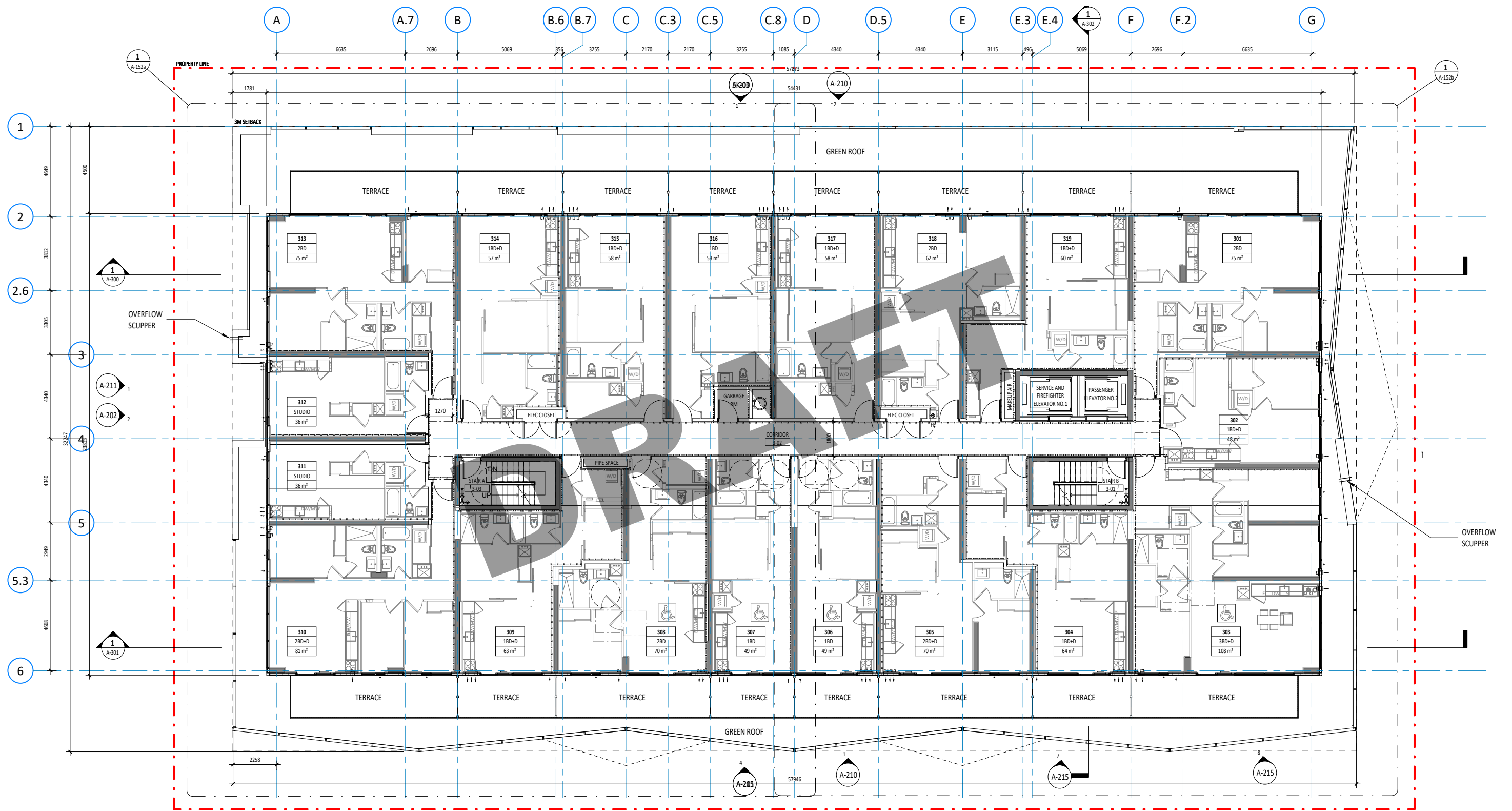
RETAIL TENANTS WILL SCHEDULE USE OF TYPE G LOADING SPACE ON DIFFERENT DAYS FROM THE COLLECTION DAYS OF THE RESIDENTIAL COMPONENT TO ENSURE THAT TYPE G LOADING SPACE WILL BE VACANT FOR CITY WASTE COLLECTION

DASHED LINES INDICATE POSSIBLE LOCATIONS OF RETAIL DEMISING WALLS

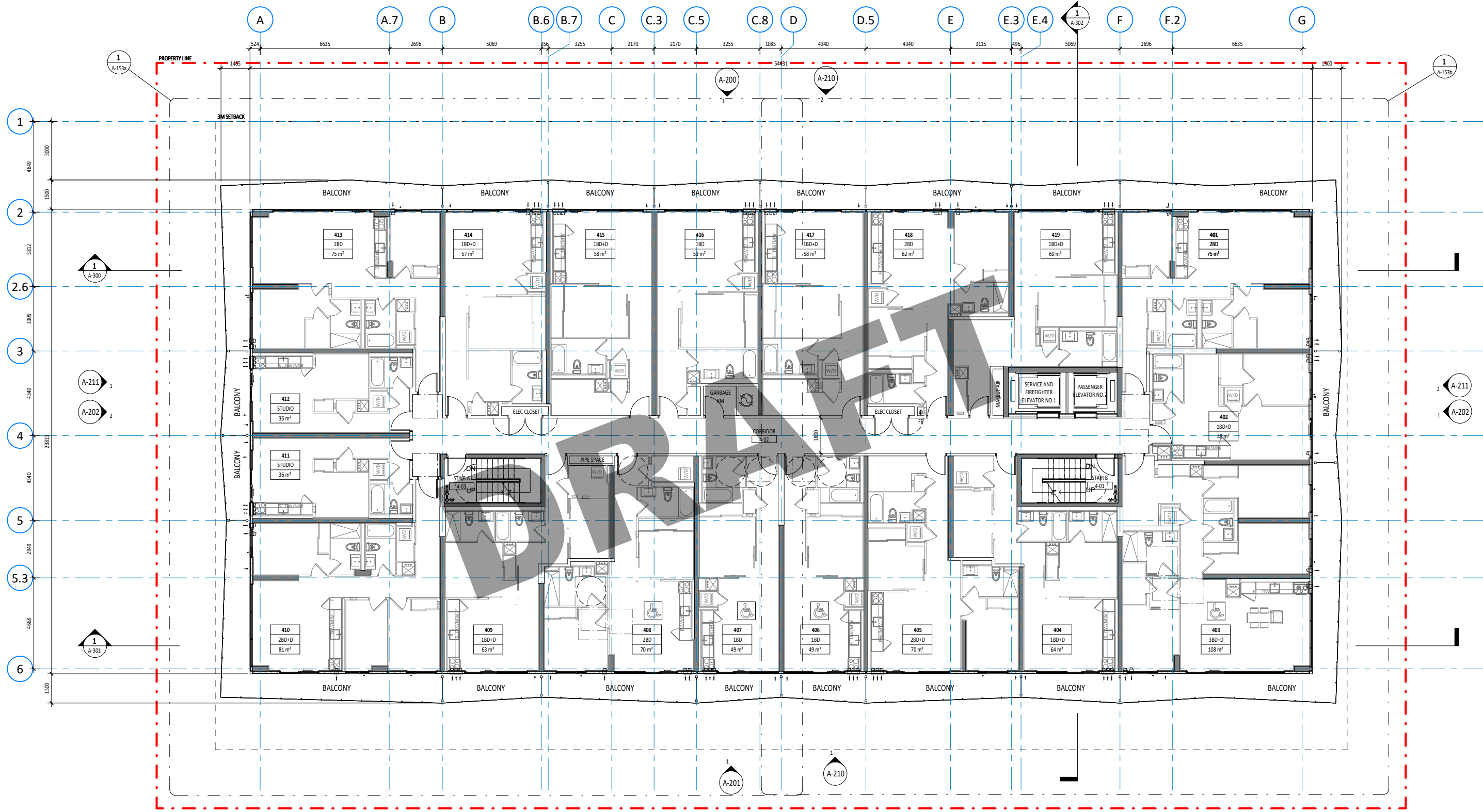
1 FLOOR 1 PLAN  
A3.01 SCALE: 1:100



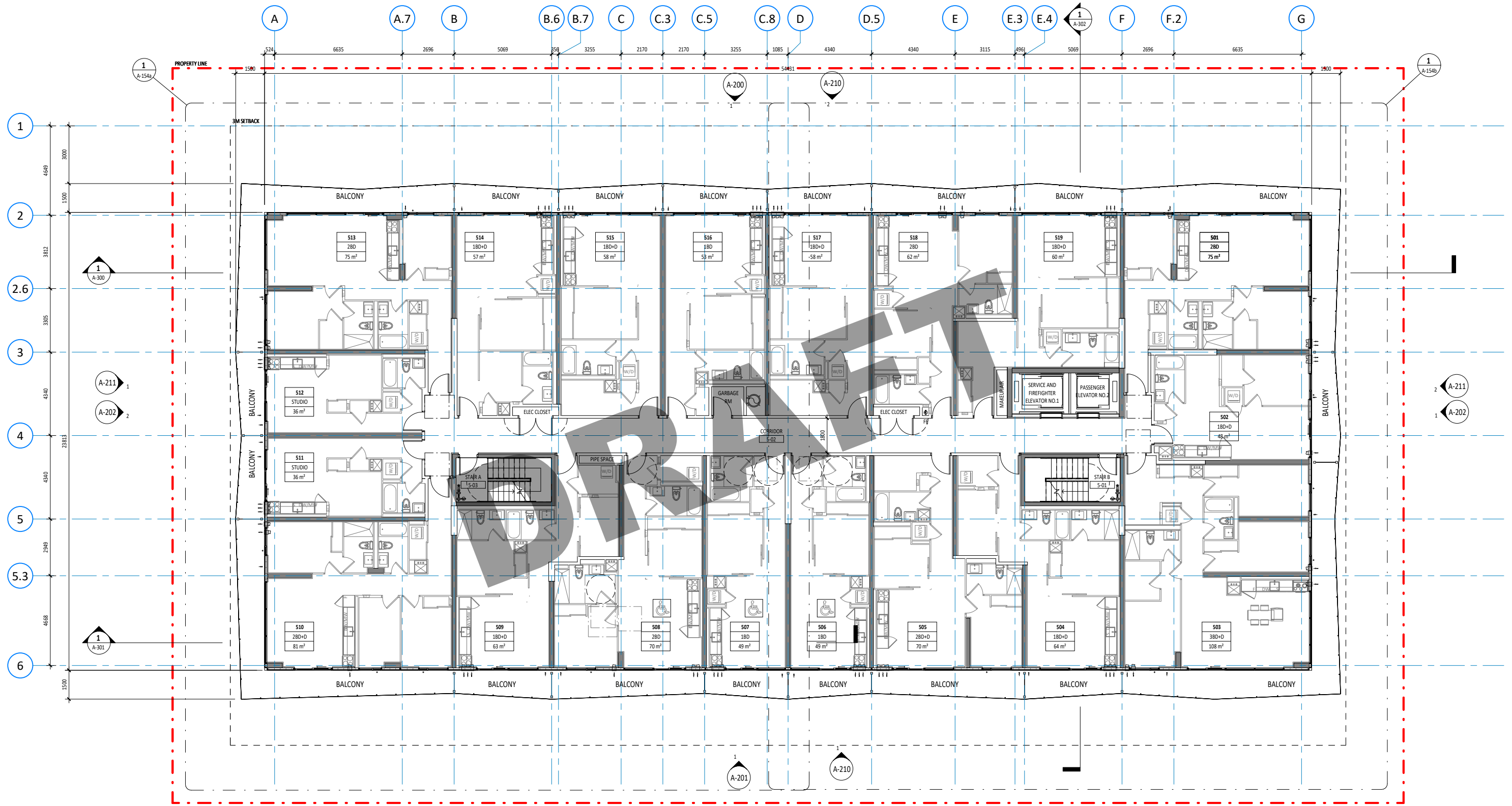
1 FLOOR 2 PLAN  
A3.01 SCALE 1:100



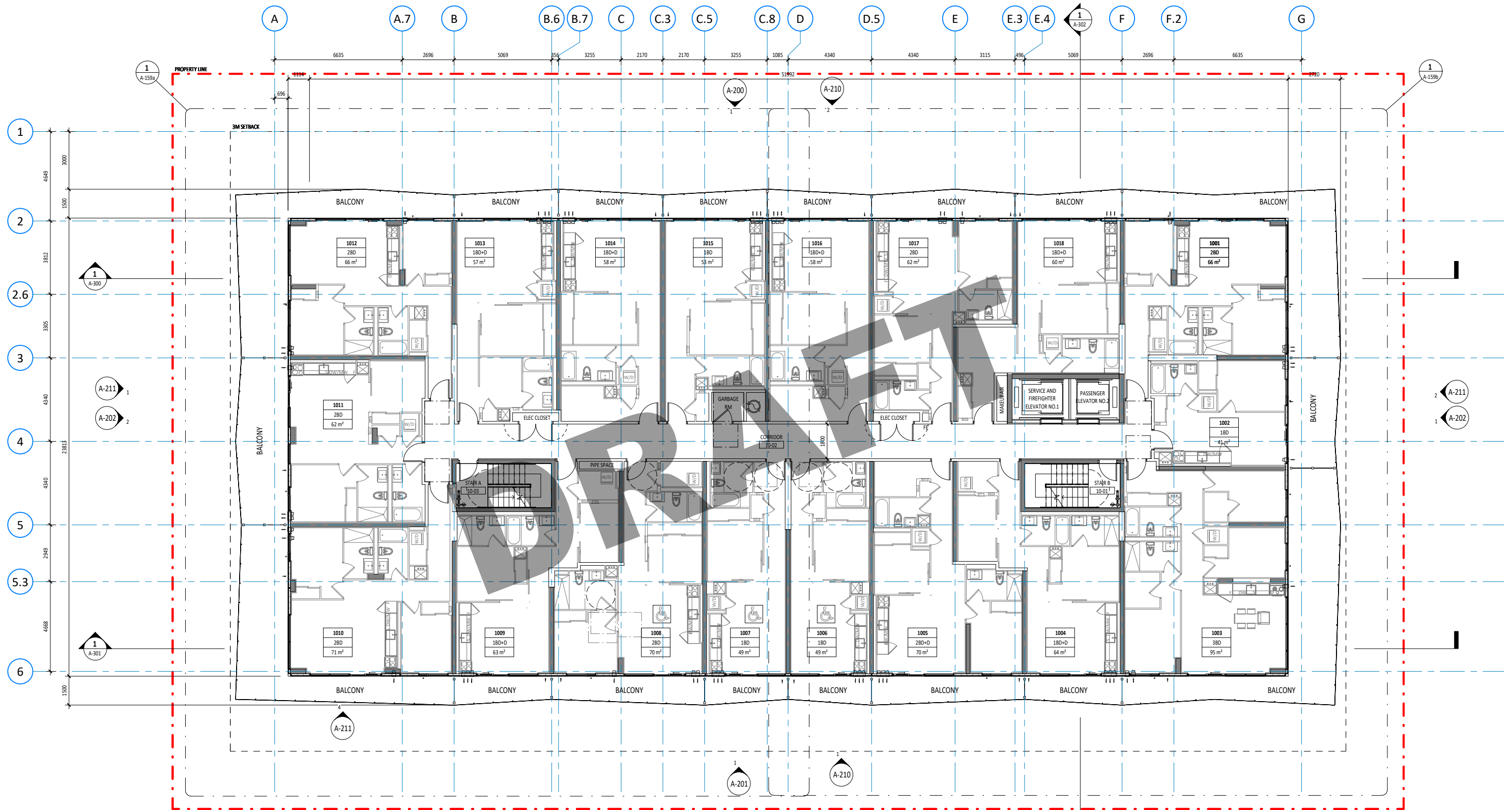
2 FLOOR 3 PLAN  
A3.01 SCALE: 1:100



1 FLOOR 4 PLAN  
A3.01 SCALE: 1:100

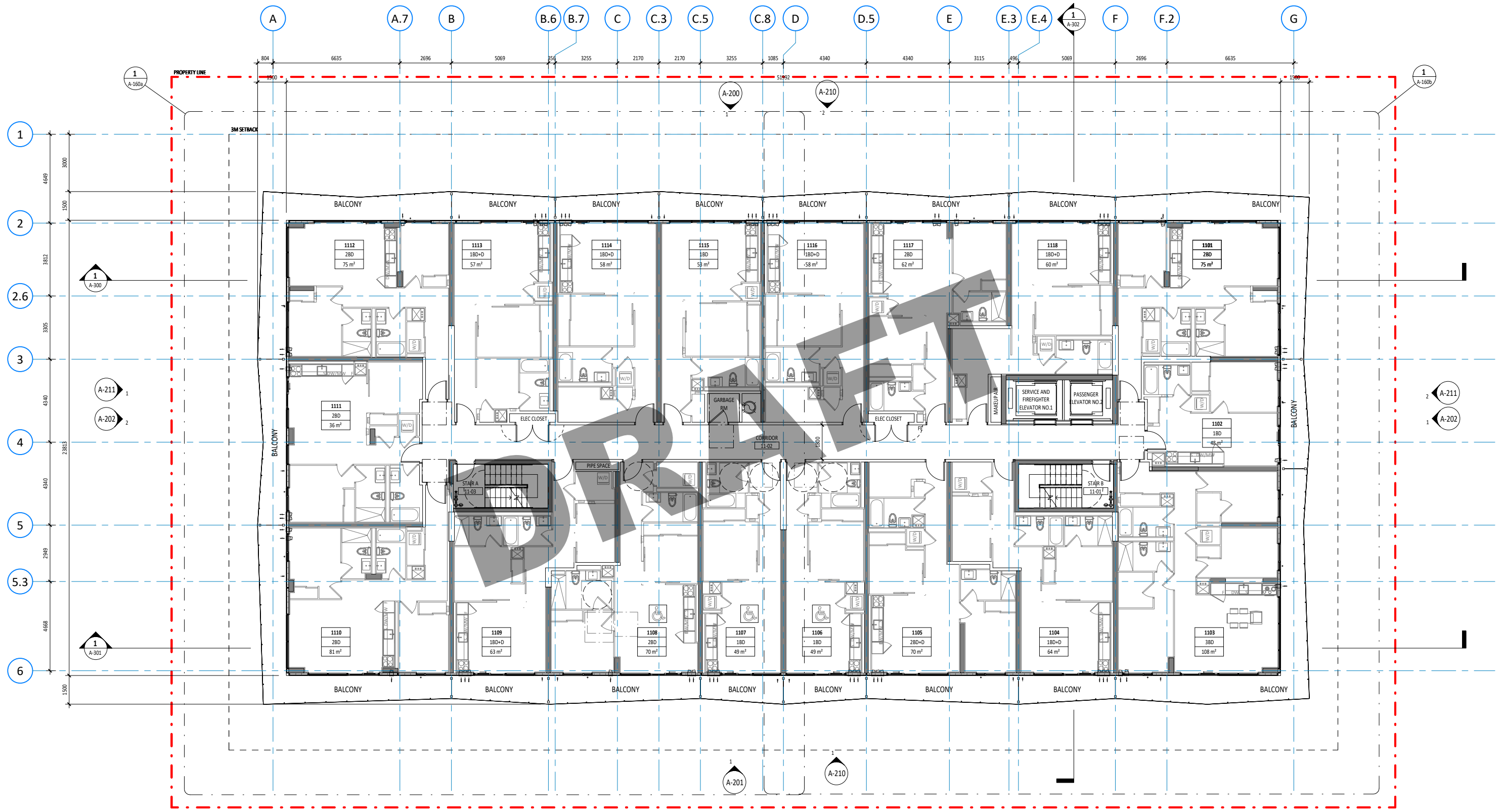


2 FLOOR 5 - PLAN  
A3.01 SCALE: 1/100

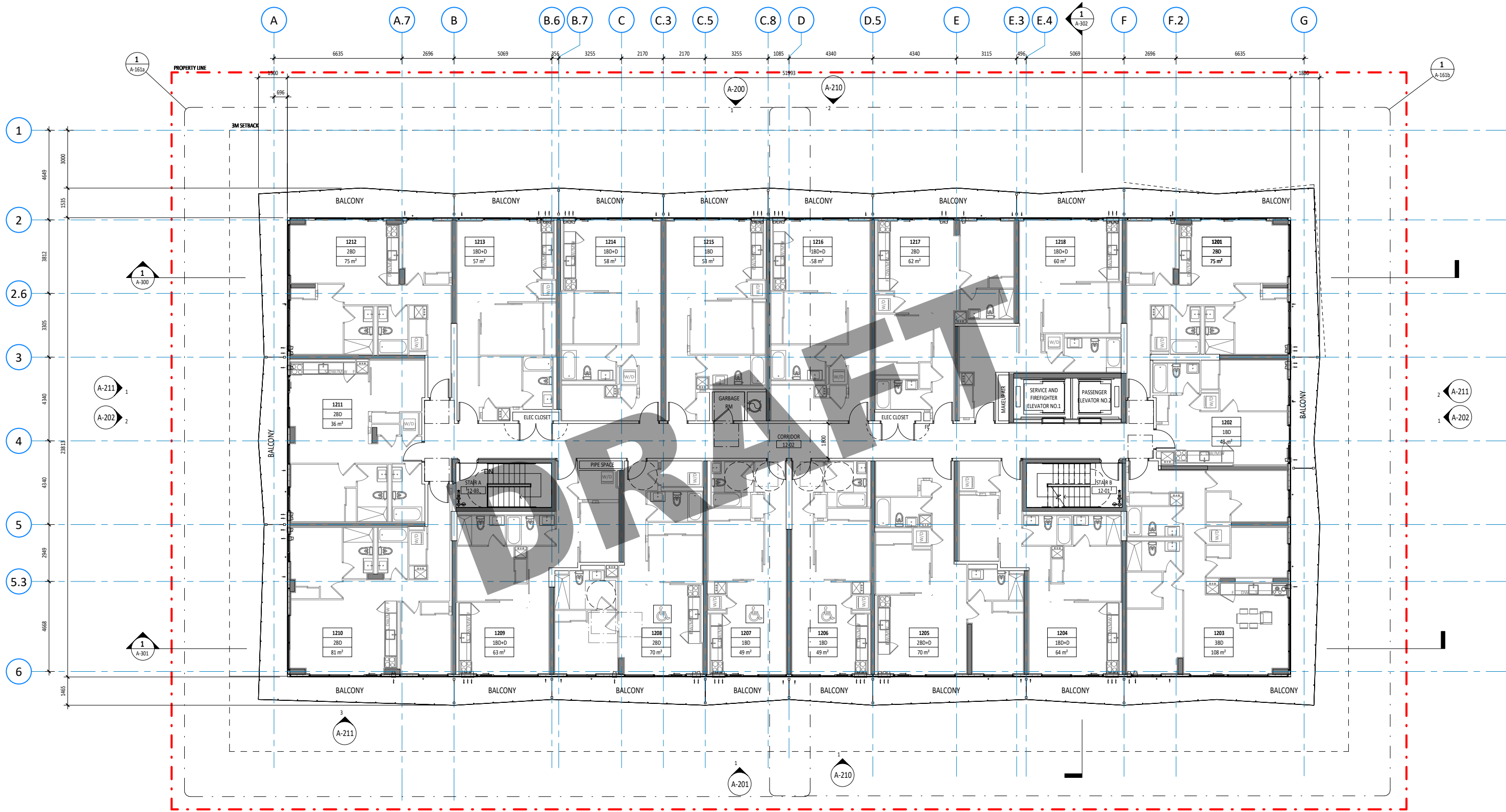


1 **FLOOR 10 PLAN**  
A3.01 SCALE: 1:100

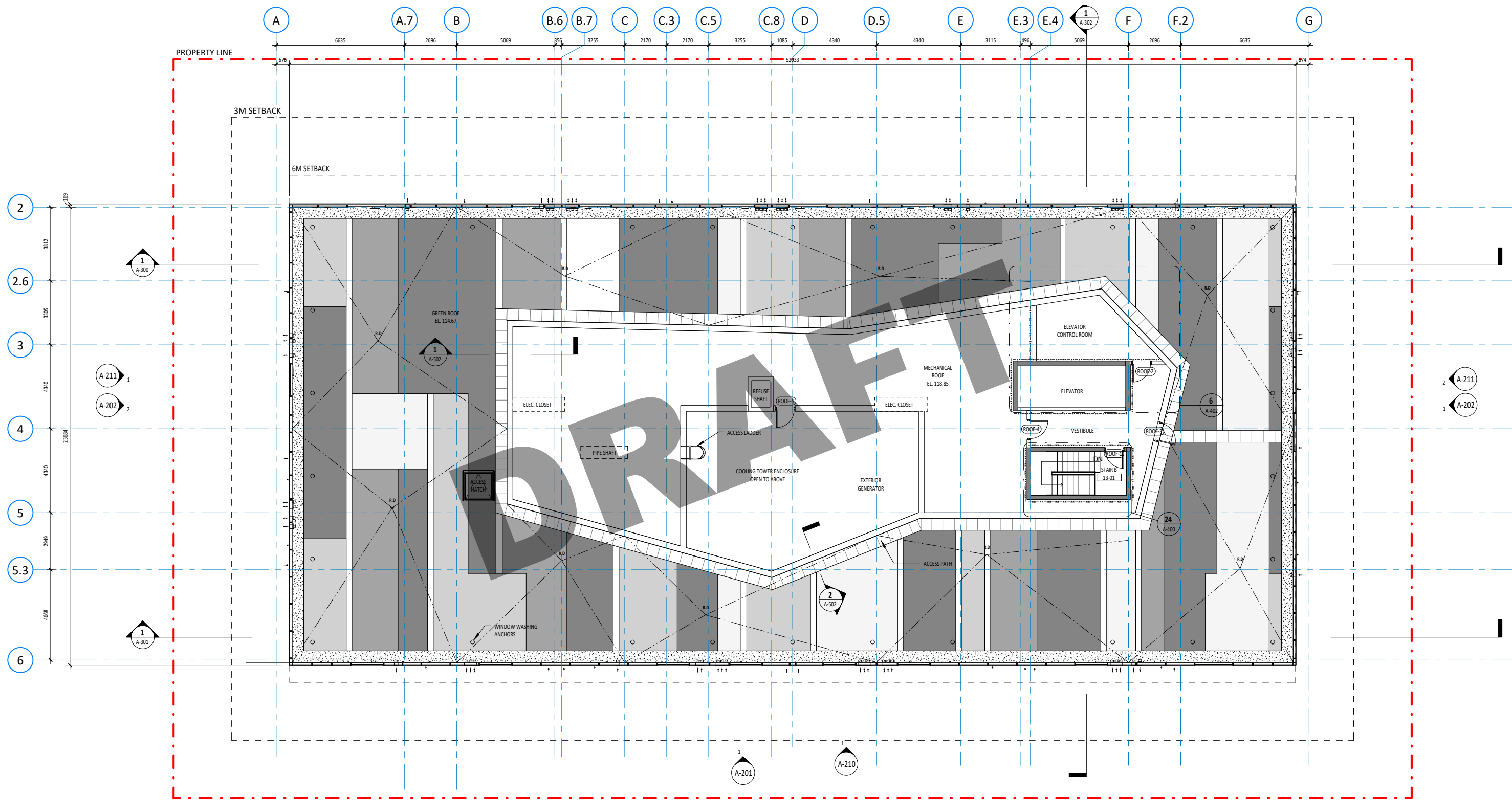




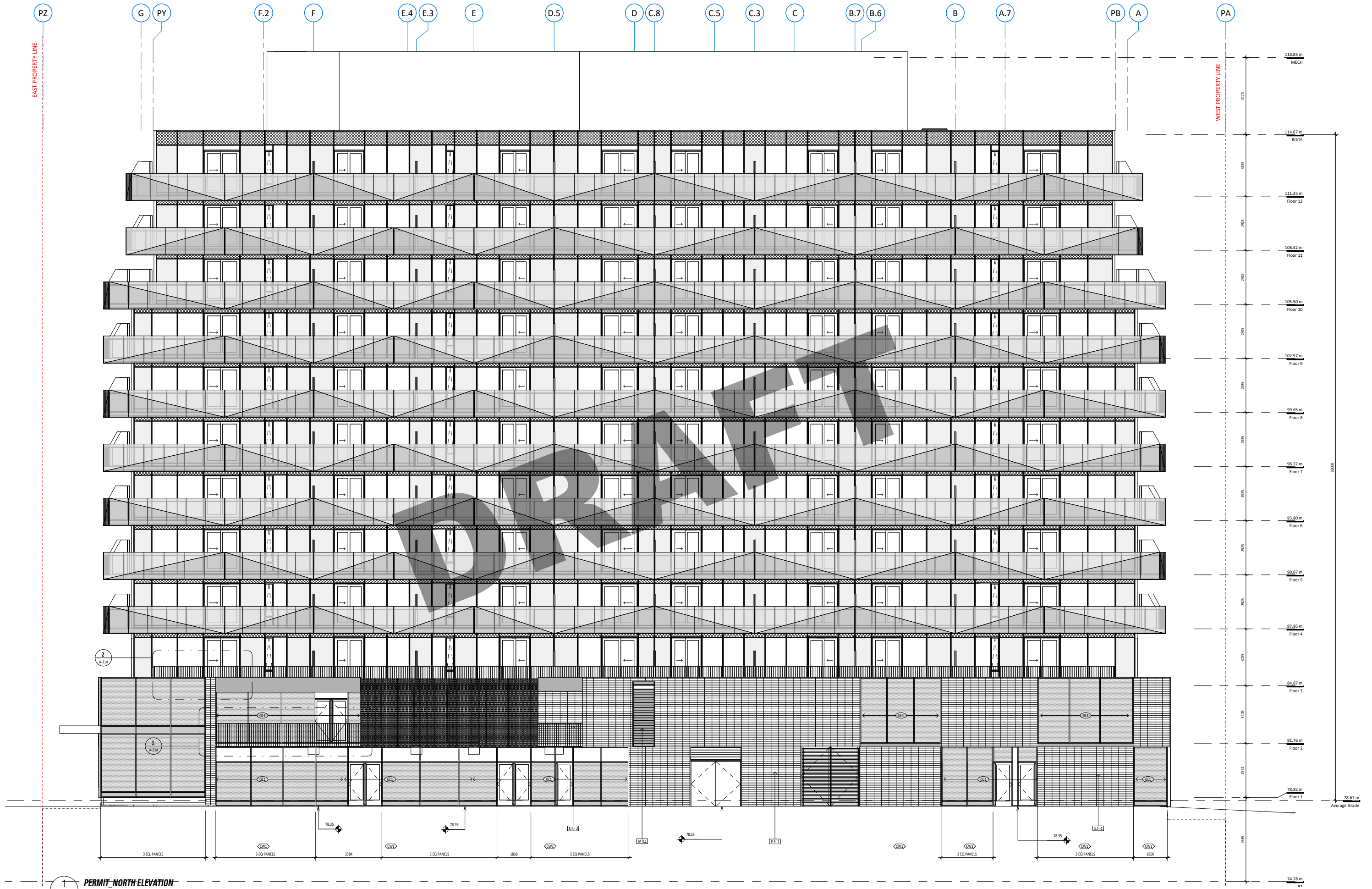
2 FLOOR 11 PLAN  
A3.01 SCALE: 1:100



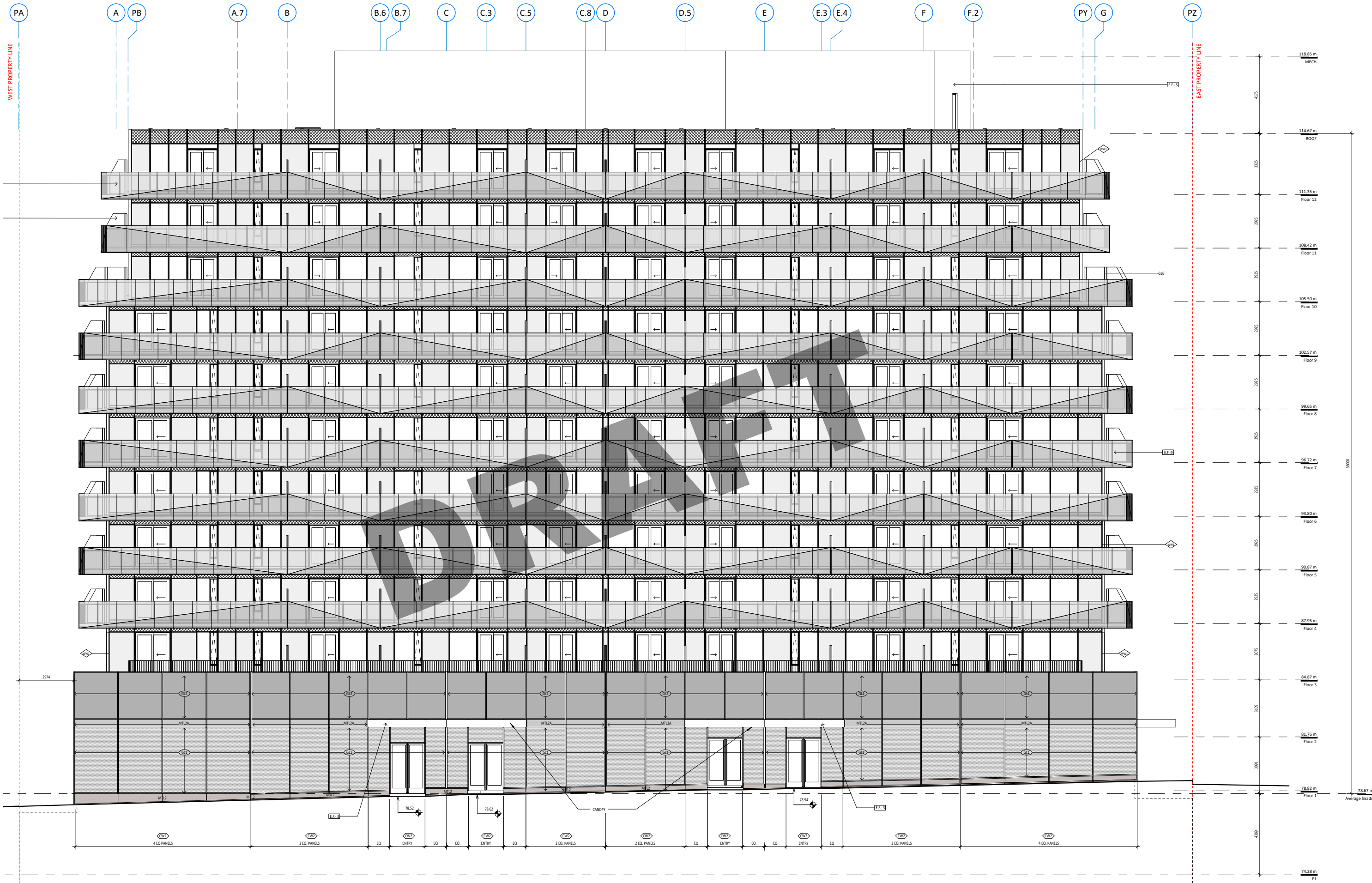
1 FLOOR 12 PLAN  
A3.01 SCALE: 1:100



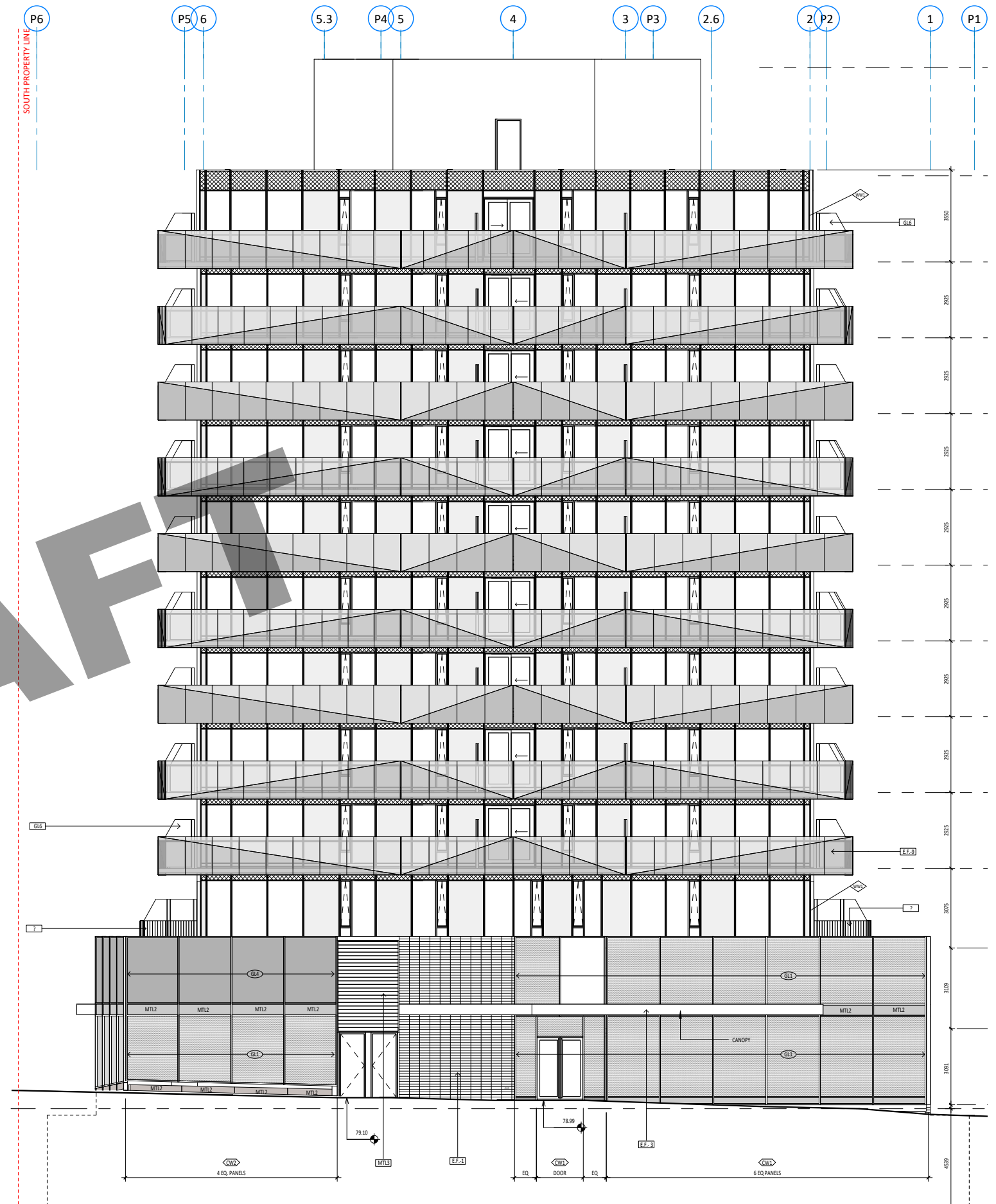
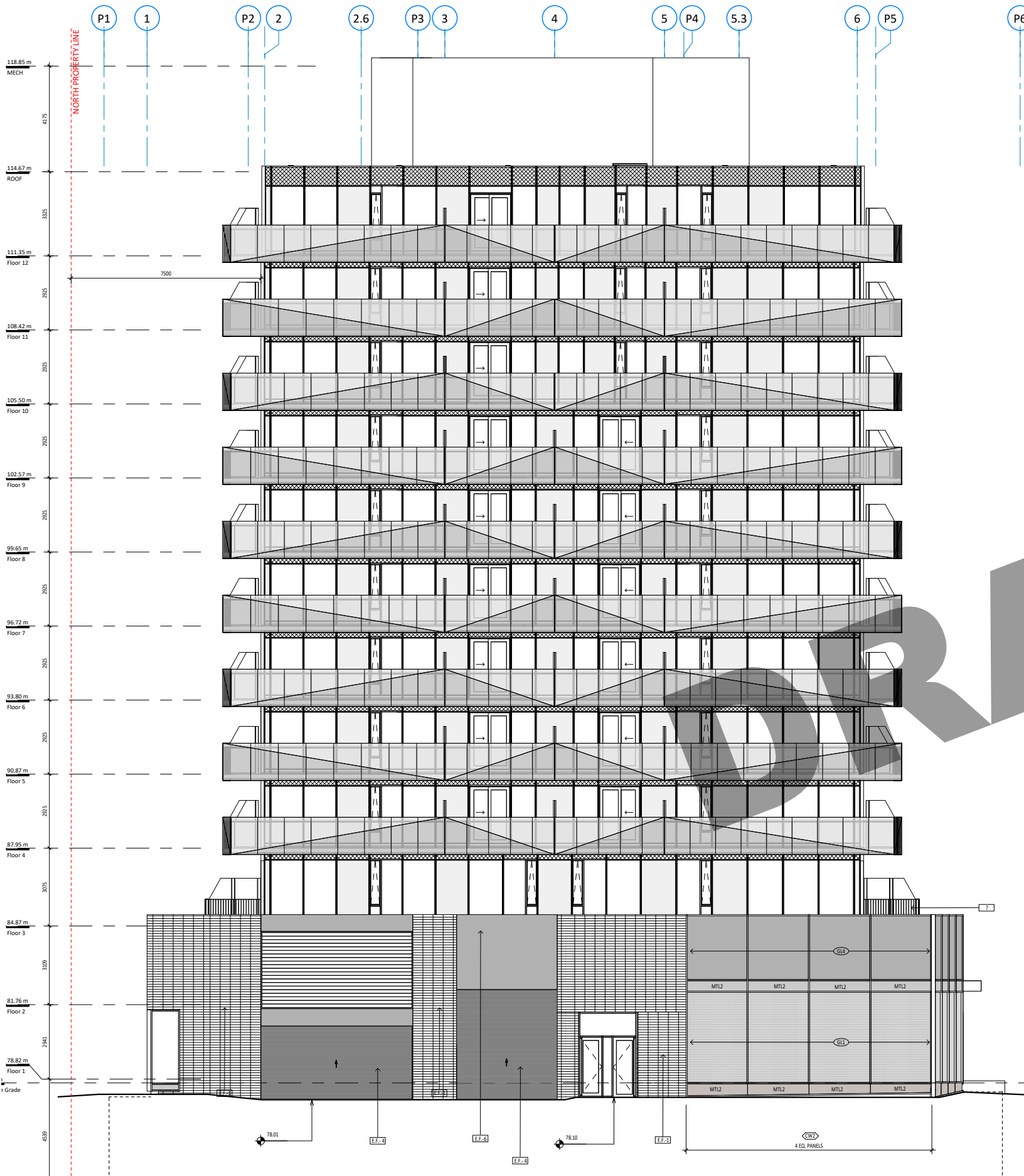
2 ROOF PLAN  
A3.01 SCALE: 1:100



1 PERMIT NORTH ELEVATION  
A2.03 SCALE: 1/8"



1 PERMIT SOUTH ELEVATION  
SCALE: 1/32



2 WEST ELEVATION  
SCALE 1:75

1 EAST ELEVATION  
SCALE 1:75



1 BUILDING SECTION  
A2.03 SCALE: 1/8"