



# 752 MARINE DRIVE

## DEVELOPMENT PERMIT APPLICATION SUMMARY DOCUMENT

NOVEMBER 2014

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Mayor and Council  
District of West Vancouver  
750 - 17th Street  
West Vancouver, B.C.  
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Dear Mayor and Council,

**Re: 752 Marine Drive - The Residences at Park Royal**

We are very pleased to submit this application for the Development Permit for 752 Marine Drive, *The Residences at Park Royal*.

This is an exciting project not only for the evolution of Park Royal, but also for the District of West Vancouver. 752 Marine Drive sits at the entrance to West Vancouver. It is one of the most prominent sites in the District and has the potential to build upon and contribute to the character of West Vancouver and Park Royal. Most importantly, it represents an opportunity to add activities to the Park Royal site that are not currently present. The proposed uses of retail, restaurant, office and residential will lead to a more "complete community" for this part of West Vancouver.

This application document summarizes the context and rationale for the development, the detailed design, and the development statistics. Park Royal is actively involved in an ongoing process of community consultation with respect to this project and is committed to delivering a product that will be embraced by the broader community of West Vancouver.

We remain available to provide any additional information that may be requested by Council and District staff.

Respectfully submitted,

DIALOG BC Architecture Engineering Interior Design Planning Inc.



Norman Hotson Architect AIBC AAA OAA FRAIC RCA

Cc Mansoor Lalji, Larco Investments Ltd.  
Rick Amantea, Park Royal Shopping Centre



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# 1.0 EXECUTIVE SUMMARY

This Application for the site at 752 Marine Drive outlines Park Royal's proposed approach for the future development of two towers that will promote a mix of residential, commercial and community uses.

The proposed development builds on the rich history of the site, and seeks to take the conventional definition of the shopping mall to the next level, reflecting an evolution in thinking around the contemporary shopping centre that promotes mixed-use development. The strength of this development concept relies largely on the interplay between the towers and the land use and design quality of the public realm. The objective is to create a vibrant and welcoming public realm while introducing a significant number of residential units to expand the availability and choice of housing types in the District of West Vancouver.

The proposed site is located at the nexus of retail, office, residential, and recreational uses and activities. The building and landscape designs are based on extensive public consultation and Park Royal's Vision and Neighbourhood Principles. The ultimate goal is to create a place where people can shop, live, learn, be entertained, and enjoy their leisure time, day and evening.

This Development Application is for that portion of the project that lies within the District of West Vancouver jurisdiction. That portion of the project that lies within the Squamish First Nation lease is provided here for information purposes and subject to SNADP review but will be developed in the manner shown.

Two towers are proposed atop a two-storey base plane development. The ground plane will be devoted to public-oriented uses including retail, restaurant and community activities. This base also provides an ideal scale for the pedestrian realm and the Village Square that sits at the heart of the development. This Square is designed to accommodate and host a broad range of outdoor activities, such as small concerts, fairs, farmers markets, and casual socializing at outdoor cafes.

The two towers are designed at significantly different heights with the East Tower at 26 storeys and the West Tower 15 storeys. The intent is to differentiate the East Tower as a landmark and iconic structure marking the easterly gateway to West Vancouver. A bold, vertical expression in the architecture of this building marks the corner of Taylor Way and Marine Drive. Facades are designed on both towers such that the north and east sides are more urban, with greater solidity, while the south sides are bold, horizontal treatments in glass, open to the southern, waterfront views.

The project aspires to build on the distinctive, west coast character of West Vancouver, while achieving greater sustainability through urban strategies.





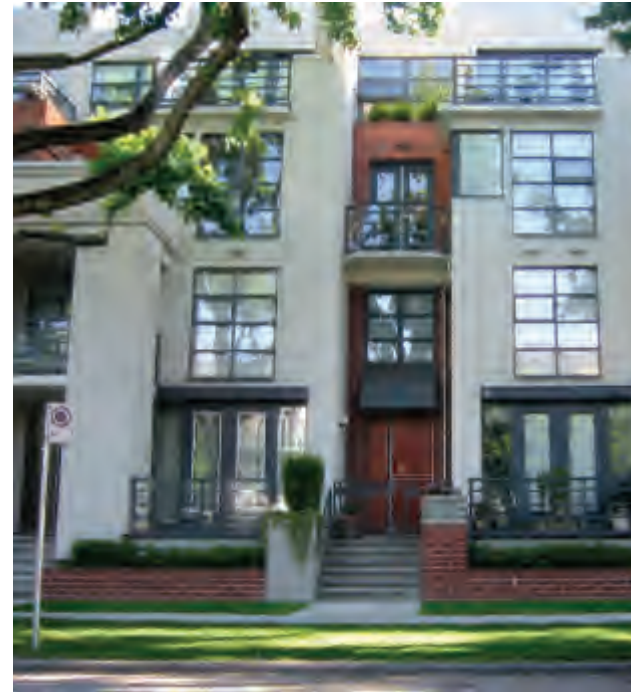
# 2.0 PROJECT CONTEXT



Community



Design Excellence



Living



Connectivity



Public Realm



Sustainability

## 2.1 PARK ROYAL VISION

Park Royal will continue to be a thriving neighbourhood – a community within a community – where people can shop, live, learn, be entertained and enjoy their leisure time, day and evening. Guided by the goals of the broader community, Park Royal will draw on principles of sustainable neighbourhood design to grow and set the foundation for a vibrant and active community into the future.

Park Royal is committed to achieving this Vision of a mixed-use, complete community for the site at 752 Marine Drive. To realize the Vision, six principles will guide future development at Park Royal.

## 2.2 PARK ROYAL NEIGHBOURHOOD PRINCIPLES

### 1. COMMUNITY

Promote a healthy and sustainable community by supporting community amenities and services, housing choice, and a strong local economy.

### 2. DESIGN EXCELLENCE

Provide high quality urban design that adds to the village experience, creates a sense of neighbourhood, and delivers a sustainable community.

### 3. LIVING

Introduce suitable, sustainable and varied housing types in a highly desirable urban setting.

### 4. CONNECTIVITY

Improve connections on the site and to West Vancouver, including walking, biking, and public transit.

### 5. PUBLIC REALM

Extend the outdoor village street experience by expanding retail and improving the public realm, based on the high standards of the broader community. Introduce opportunities for community connection and cultural activities on site.

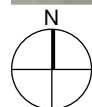
### 6. SUSTAINABILITY

Consider sustainable design principles at all stages of project development so that sustainability permeates from construction through occupancy.









### 2.3 SITE

The proposed site is located at the nexus of retail, office, residential, and recreational uses and activities, and will enhance the existing conditions.

- To the North, are the ‘Evelyn Drive’ development and retail services
- To the East, are the West Royal residential towers and residential developments planned for Marine Drive in North Vancouver
- To the South, are retail services, office and commercial interests, the Spirit Trail, the waterfront, and Squamish First Nation lands
- To the West, are the Ambleside shopping district, Ambleside Park, West Vancouver Playing Fields, and Park Royal Towers

Park Royal Towers consist of 3 towers, that stand at 18, 18, and 17 storeys, and have a total of 505 units. West Royal Towers are comprised of 2 residential towers, that stand at 17 and 23 storeys, and have a total of 171 units. The ongoing redevelopment activity to North, East, and West (as well as the renovations to the shopping centre) suggest that higher-density, mixed-use developments are suitable for the area, and that the proposed site aligns with the current development and planning goals and initiatives for Park Royal and, more broadly, West Vancouver





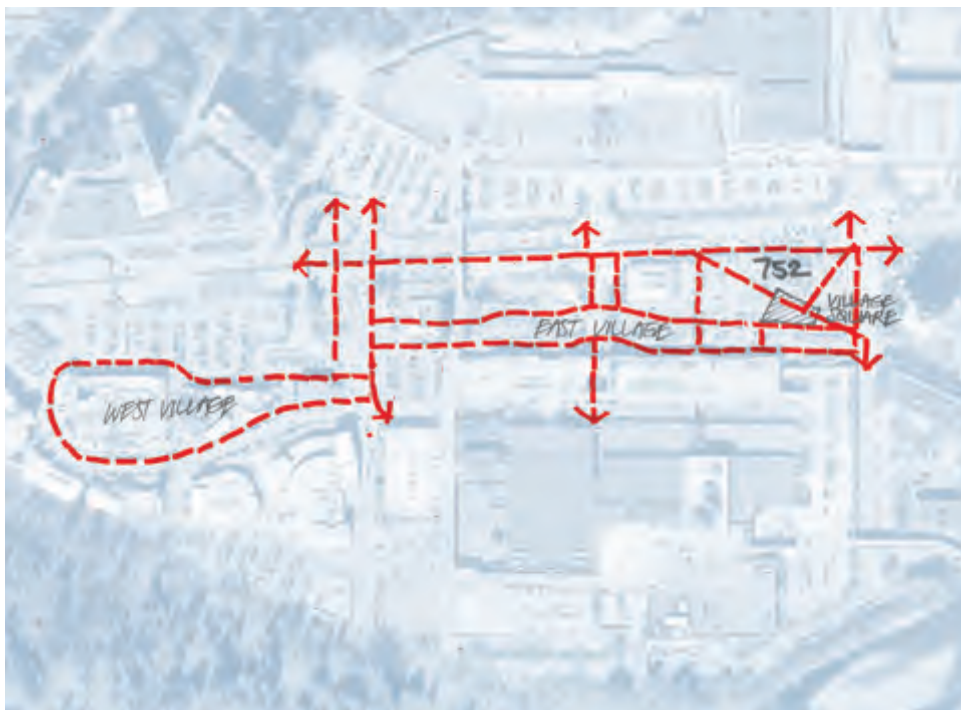
# 3.0 URBAN DESIGN ANALYSIS



3.1



3.2



3.3



3.4

## 3.1 PARK ROYAL AS A TOWN CENTRE

The long-term vision for Park Royal is to allow it to evolve over time to become a more complete community. This means that new residential, office and community activities will be added to both north and south mall sites to round out the mix of uses and reduce the current dominance of commercial retail. The existing pattern of residential development is located on the perimeter edges of the malls. This model is appropriate for the future infill of residential uses where the perimeter is of higher scale and the retail villages occupy the centre.

The proposed site organization is derived from the interplay of two geometries: the orthogonal grid of the Marine Drive/Taylor Way intersection; and, the diagonal line between the jurisdictions of the Squamish First Nation and the District of West Vancouver. This collision of angles has guided the architecture for 752 that is unique and part of this place.

## 3.2 REINFORCING THE URBAN STREET EDGES

One of the District's planning policies is to create a more urban street interface along Marine Drive. This strategy of defining urban edges is also appropriate along the internal streets that are evolving as part of the fabric of both North and South Malls.

## 3.3 PEDESTRIAN CONTINUITY

Although the malls are largely car-oriented today there will be an increasing use of alternative means of access and movement over time. Therefore, pedestrian and bicycle linkages form an important piece of the new urbanism of Park Royal.

## 3.4 NETWORK OF VILLAGE OPEN SPACES

Several small plaza spaces either exist, or are being added to, the South Mall as new retail is developed along Marine Drive. In the future more open space will likely be required to support the outdoor activities of residents living in the community. One such space is being planned for the 752 Marine project as a "village square".

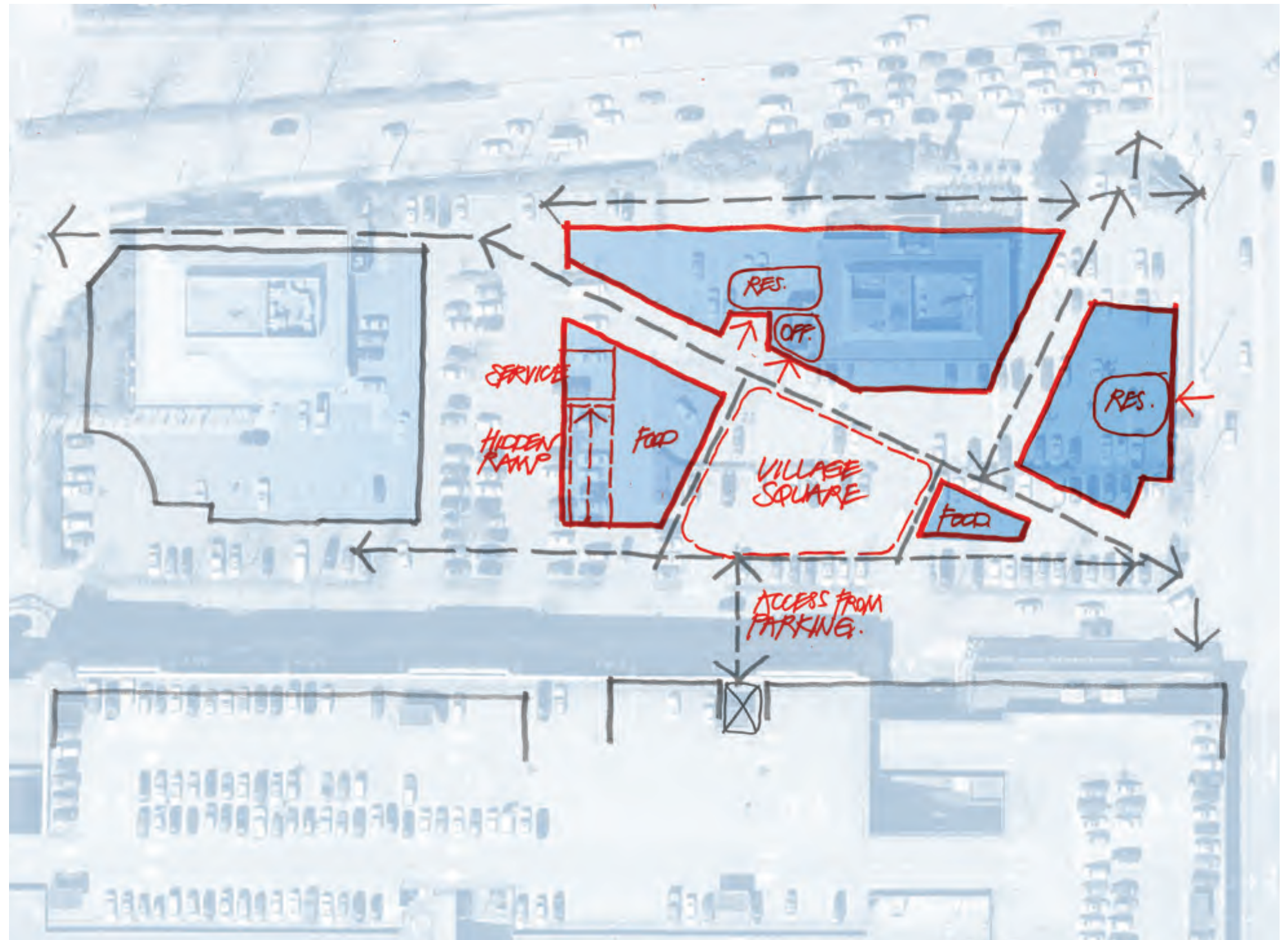


### 3.5 SITE ORGANIZED ON TWO GEOMETRIES

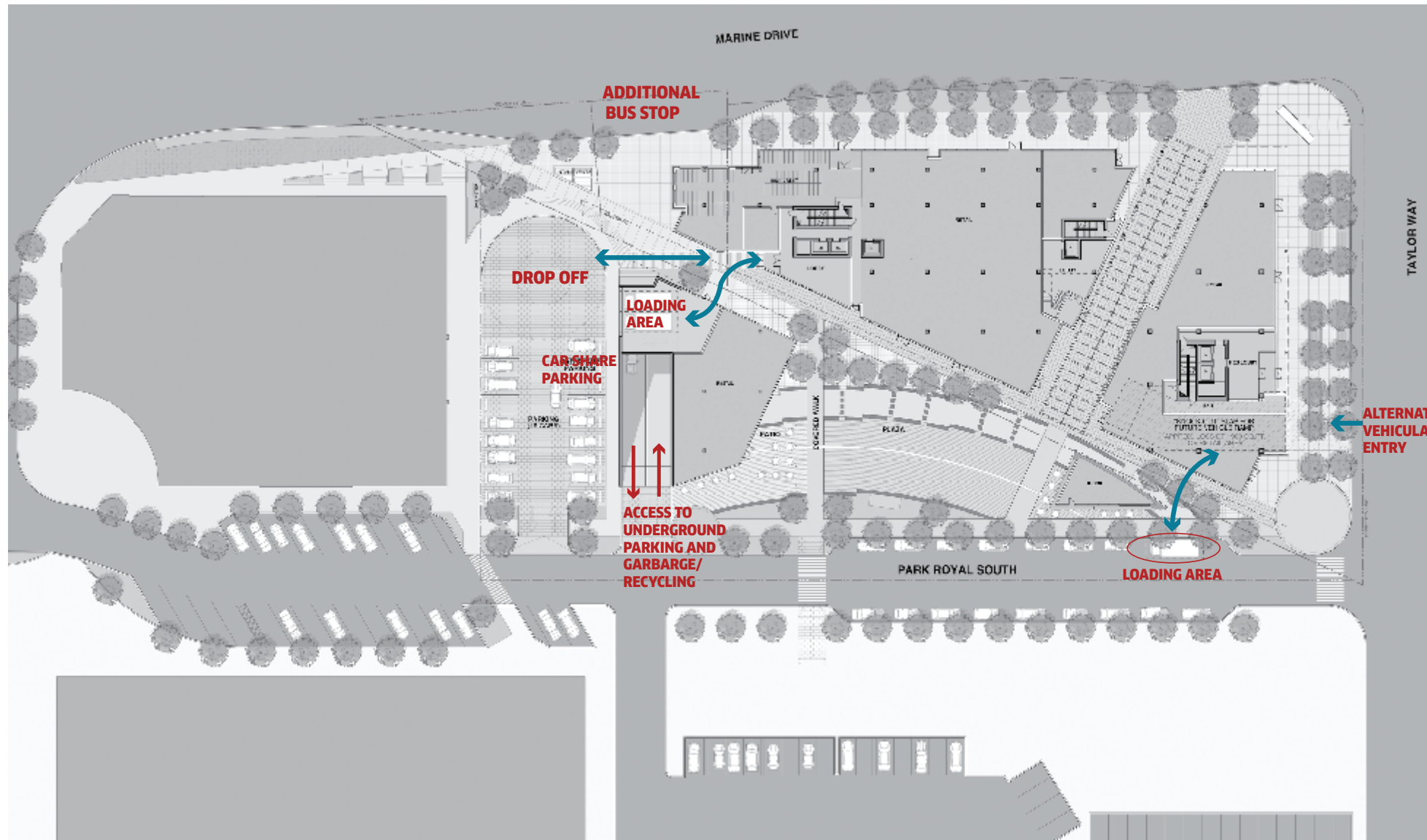
The proposed site organization is derived from the interplay of two geometries: the orthogonal grid of the Marine Drive/Taylor Way intersection and the diagonal line between the jurisdictions of the Squamish First Nation and the District of West Vancouver. This collision of angles will lead to an architecture that is unique and part of this place.

### 3.6 AN ACTIVE PUBLIC MEETING PLACE

The village square is positioned as an anchor at the east end of the new East Village. It will be a place of coming together for both local residents and the general public, both day and evening. Many varied activities can take place here such as Saturday markets, small concerts, café seating, food truck parking, antique car shows, festivals and many more community and cultural events. The space will be largely hard-surfaced to ensure it is usable during all seasons. And, it will be animated at its edges through the selection of retail tenants that will attract people.







### 3.7 LONG TERM TRAFFIC STRATEGY

One of the primary concerns expressed by the public throughout an extensive consultation process led by the District of West Vancouver is the impact of traffic. The mix of uses and scale of development proposed for 752 Marine will actually generate less traffic numbers than all commercial development under existing District policy for this site.

As Park Royal develops over time, a long term traffic strategy will be important to deflect congestion away from the Marine Drive/ Taylor Way intersection. To this end, additional capacity may be achievable through the following strategy:

- intersection improvements at Taylor Way and Marine Drive for Whistler traffic, north and south-bound;
- intersection improvements at Taylor Way and Clyde Avenue;
- a new intersection at Marine Drive and Pound Road at the west end of Park Royal;
- a new street connection on the Squamish First Nation lands; and,
- a new south crossing of the Capilano River with a four lane capacity



# 4.0 DESIGN CONCEPT



View from South West



View from South East



View from North East



View from North West

## 4.1 RESPONSE TO DRC COMMENTS

Earlier designs for 752 Marine Drive were reviewed on three occasions by Planning Staff and the Design Review Committee. The revised design for 752 Marine builds on a very strong urban design idea. The architecture is derived from the two geometries that intersect at this site and, in turn, generate it's uniqueness. The design also responds to the comments we gleaned from the Design Review Committee, with the following highlights:

- 1 - The scheme is more urban in character, better addressing both Marine Drive and Taylor Way.
- 2 - Retail extends along Marine Drive as far as can be accommodated, to relate to the new retail being to the west.
- 3 - The podium is divided into two, rather than including a bridging form.
- 4 - A floor of office has been added at the second level to round out the mix of uses on the site.
- 5 - The Village Square has been reshaped, made more urban, and will serve as an anchor at the east end of the East Village.
- 6 - Retail and food serving uses surround the new square to animate its edges.
- 7 - The ramp to underground parking has been incorporated within a retail building to conceal it from the public realm.
- 8 - An alternate ramp location is designated to access the site from Taylor Way in the unlikely event that the access across First Nation's land is relinquished.
- 9 - The heights of the two towers have been adjusted to create greater differentiation with the west tower of 15 storeys and east tower at 26 storeys of height. This move allows the west tower to take on more of a slab-like form while the east tower becomes the dominant form as a slender, iconic element at the gateway to West Vancouver.









## 4.2 DESIGN ELEMENTS

The 752 Marine Drive project contains seven principal uses: retail, restaurant, bicycle valet, office, residential, child care and parking. The more public uses are arranged on the ground and second floors of a baseplane element. The private residential use is located in two towers, one at 26 storeys from grade adjacent Taylor Way and the second fifteen storeys from grade adjacent Marine Drive. The taller tower is iconic, the tallest building in West Vancouver, with a strong vertical element at its north east corner marking the gateway to West Vancouver and the entrance to Park Royal.

The architecture of 752 is derived from the ingredients of the west coast modern aesthetic, including horizontality, transparency, natural materials and relationship to site. It also expresses the dualities of its location. The Marine and Taylor frontages are more solid and urban in character responding to their north orientation and the busy urban streets they face. The south facades are transparent, with open balconies addressing the beach and seascape views of English Bay.

Facades will make use of curtain wall and window wall glazing, a precast concrete panel wall system, and structural glass balustrades on balconies and roof decks. Wood elements are used in the base plane of the building for trellises and screens. Soffits under overhanging floors and balconies, highly visible from below, will make use of a panel wood product. Storefronts will have full height, clear glazing in aluminum frames. Colourful fabric awnings will adorn storefronts adding pedestrian interest and character to the ground plane.

The public realm is focused on a south facing Village Square bordered by food-related retail. Outdoor seating will offer places to socialize and will animate the square. The fronting streets of Marine Drive and Taylor Way are developed with street-related retail, generous sidewalks and double rows of street trees. A pedestrian mews bisects the project from the intersection of Marine and Taylor providing diagonal access into the square and on to the shops of the new East Village. This route also provides access to the office and child care lobby located at its centre point.



All low level roofs are accessible for outdoor use, one at the third floor for the secured child care play space, and others at the third and fourth floors for terraces off of resident amenity spaces. These green roofs form part of the sustainability strategy for the development, described in Section X of this document.

All parking for the project is underground with the exception of four car share spaces located on the western flank of the site. Truck servicing is also located here in an enclosed loading dock. Parking access is provided from Park Royal South Road via a ramp that is fully enclosed in the retail building at the southwest corner of the site. A ramp location is also allocated for access from Taylor Way, if ever required in the future. Bicycle parking for residents is provided underground at a ratio of 1.5 bikes per unit in the project.

A physical model and a material and colour palette are available to augment this design description for the project.



**PARK ROYAL - MARINE PERSPECTIVE**





MARINE DRIVE PERSPECTIVE





STREET VIEW





VIEW FROM REAR IN COURTYARD





VIEW THROUGH RETAIL STREET



**4.3 ALTERNATE FACADE STUDY**

At the request of District staff, the design team has explored alternative design solutions for the north façade of the east tower. Included here is one alternative that replaces the glass curtain wall assembly with a varied rhythm of solid precast panels similar to that used elsewhere. Conceptually, this approach strengthens the notion of differing façade treatments generated by the intersecting geometries. Large continuous balconies provide shading from solar heat gain on the south, while durable precast panels and high performance glazing systems insulate against heat loss on the north.



**CURRENT**



**ALTERNATE**





CURRENT



ALTERNATE

# 5.0 ARCHITECTURAL DRAWINGS

This section of the application contains the design drawings that describe more specifically the intentions of the development. The drawings include:

## **SITE PLANNING**

Context Plan  
Site Plan

## **PARKING PLANS**

Level P4 Plan  
Level P3 Plan  
Level P2 Plan  
Level P1 Plan

## **BUILDING PLANS**

Level 1 Plan  
Level 2 Plan  
Level 3 Plan  
Level 4 Plan  
Level 5 Plan  
Level 15 Plan  
Level 25 Plan  
Level 26 Plan  
Roof Level

## **SECTIONS**

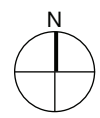
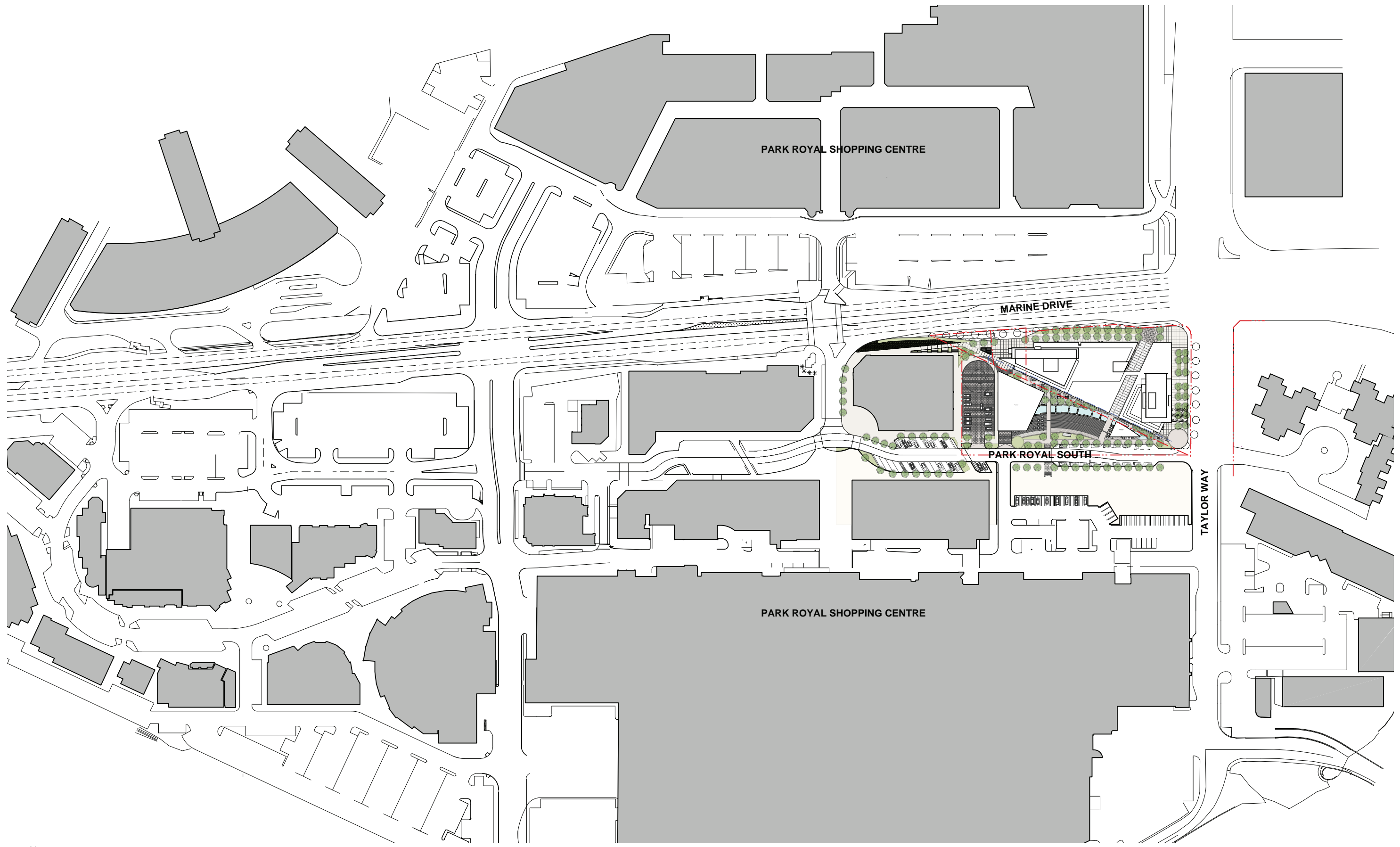
Section 1  
Section 4  
Section 5  
Section 7  
Section 3  
Section 2  
Section 8  
Section 6

## **ELEVATIONS**

East Elevation  
North Elevation  
South Elevation  
West Elevation  
East Elevation  
West Elevation



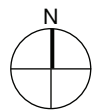
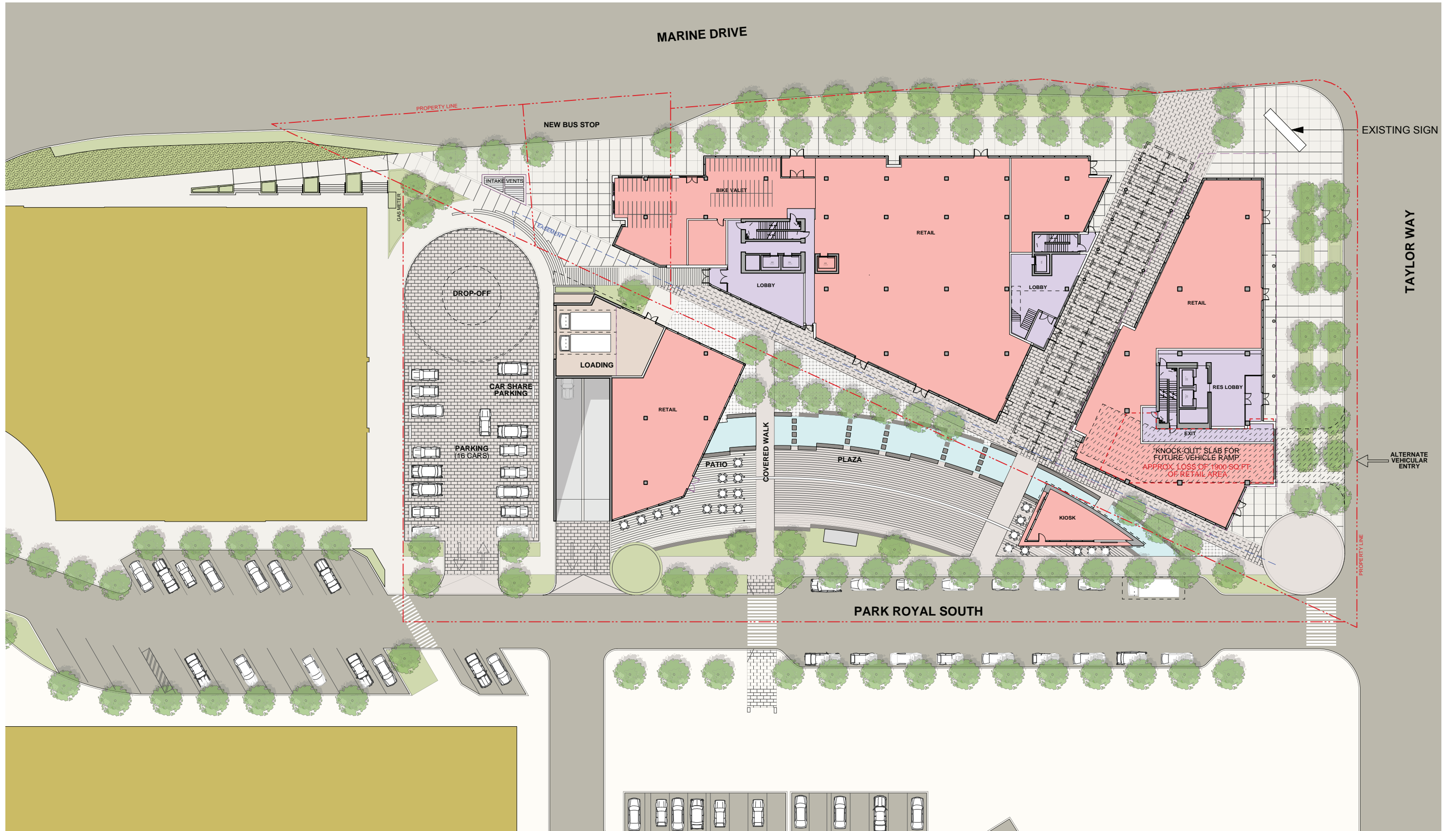




**CONTEXT PLAN**



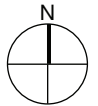
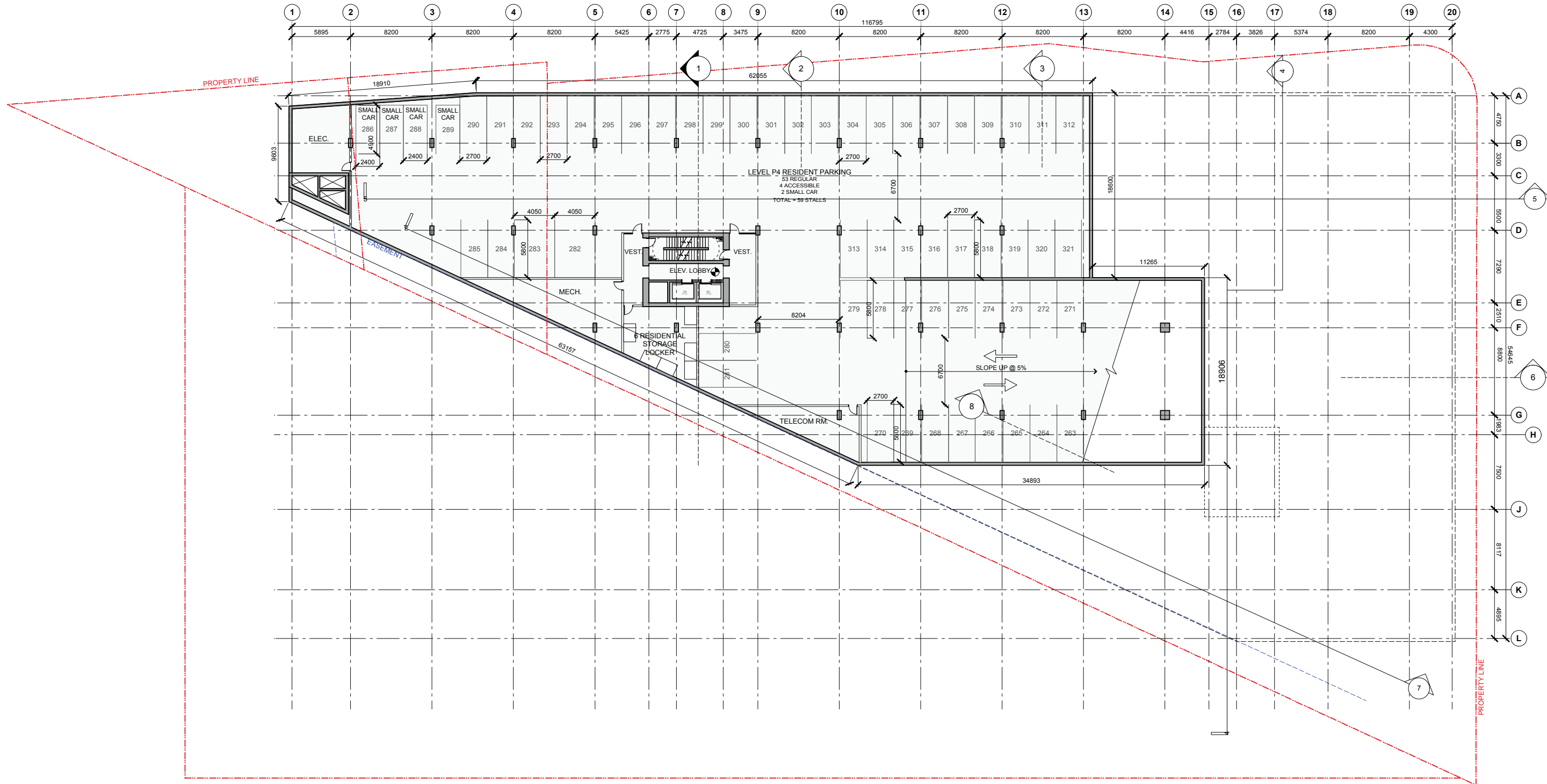




**SITE PLAN**



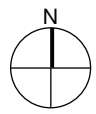
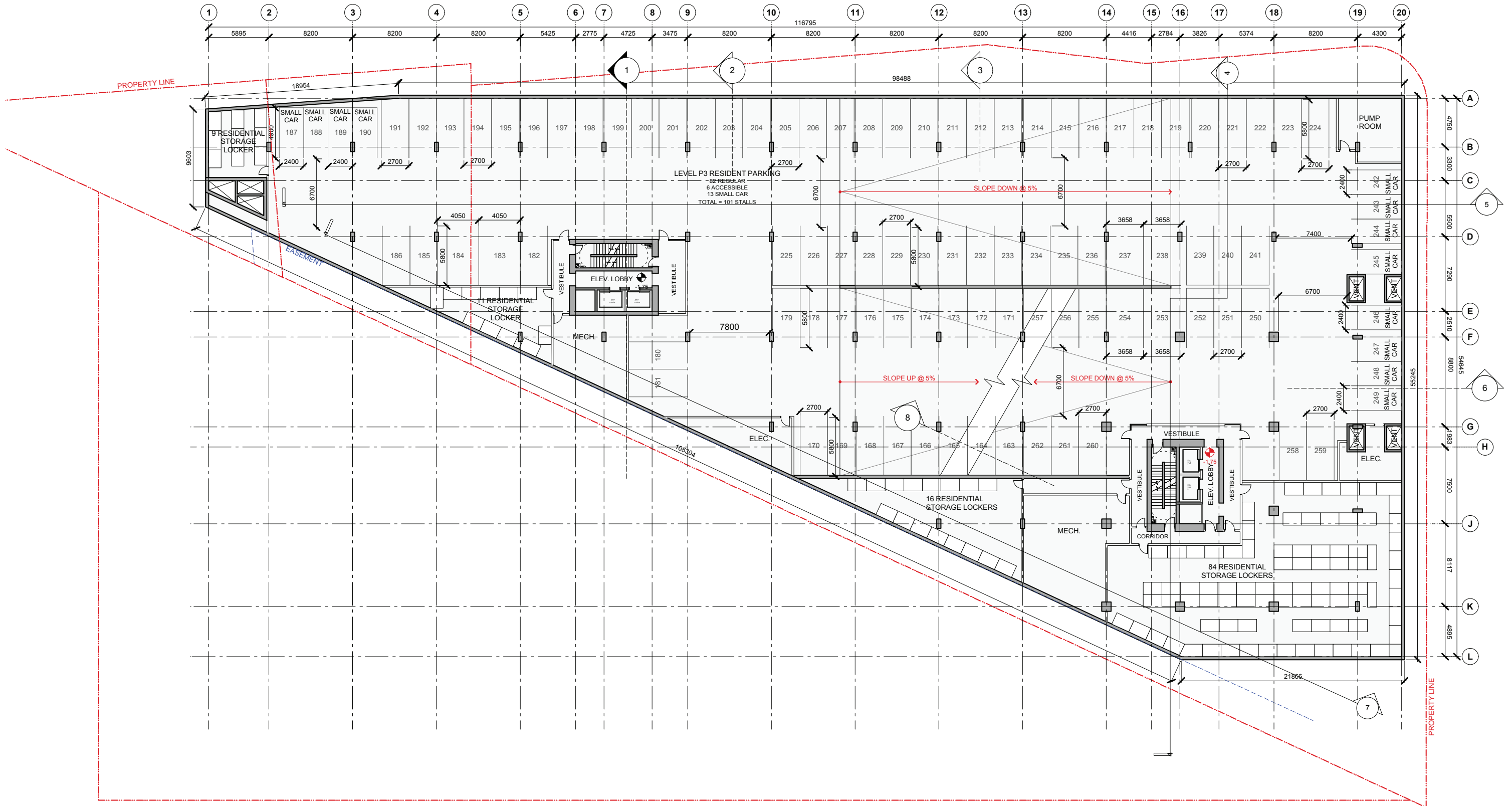




**LEVEL P4**



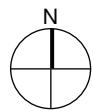
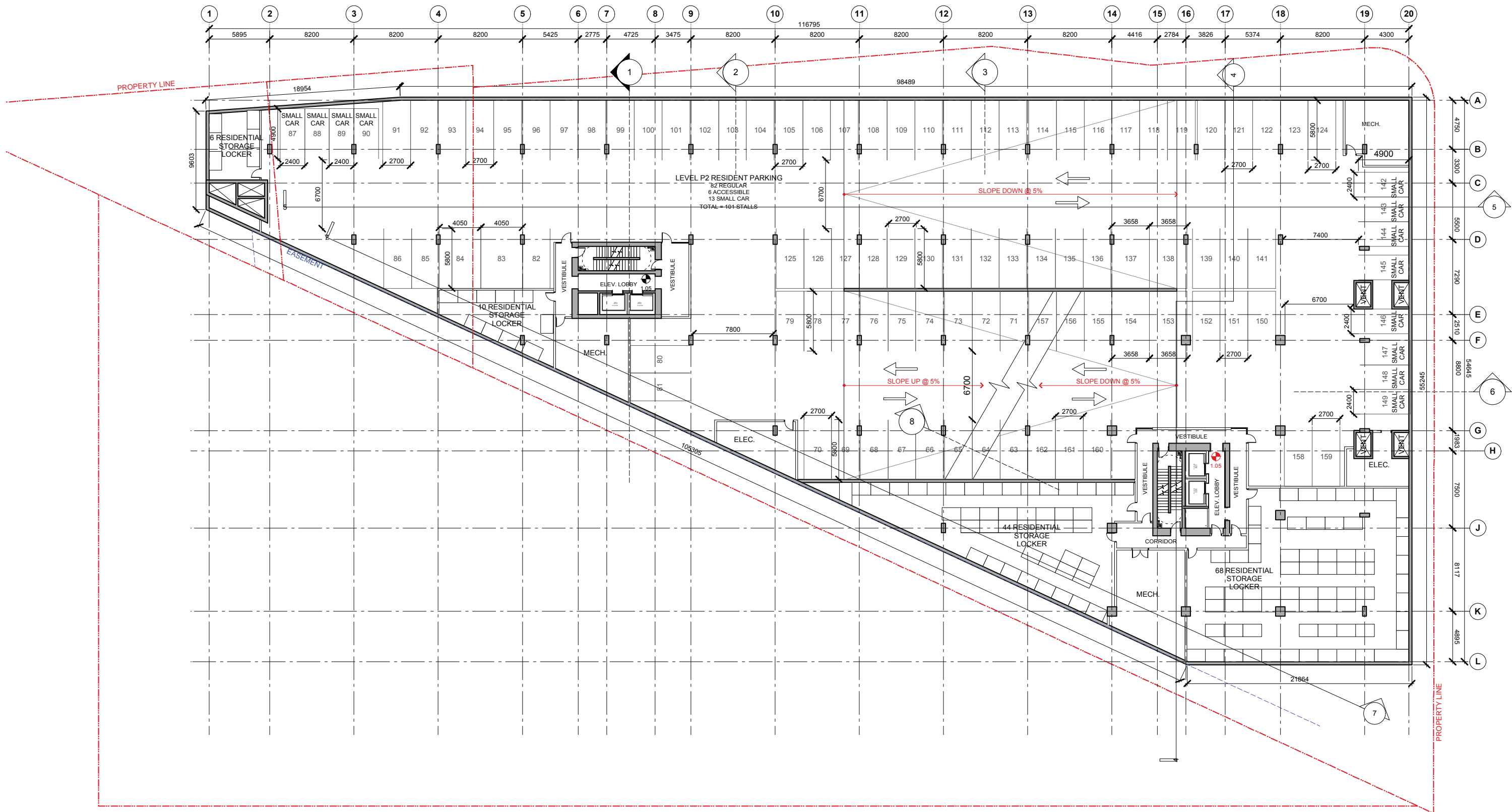




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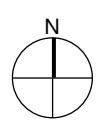
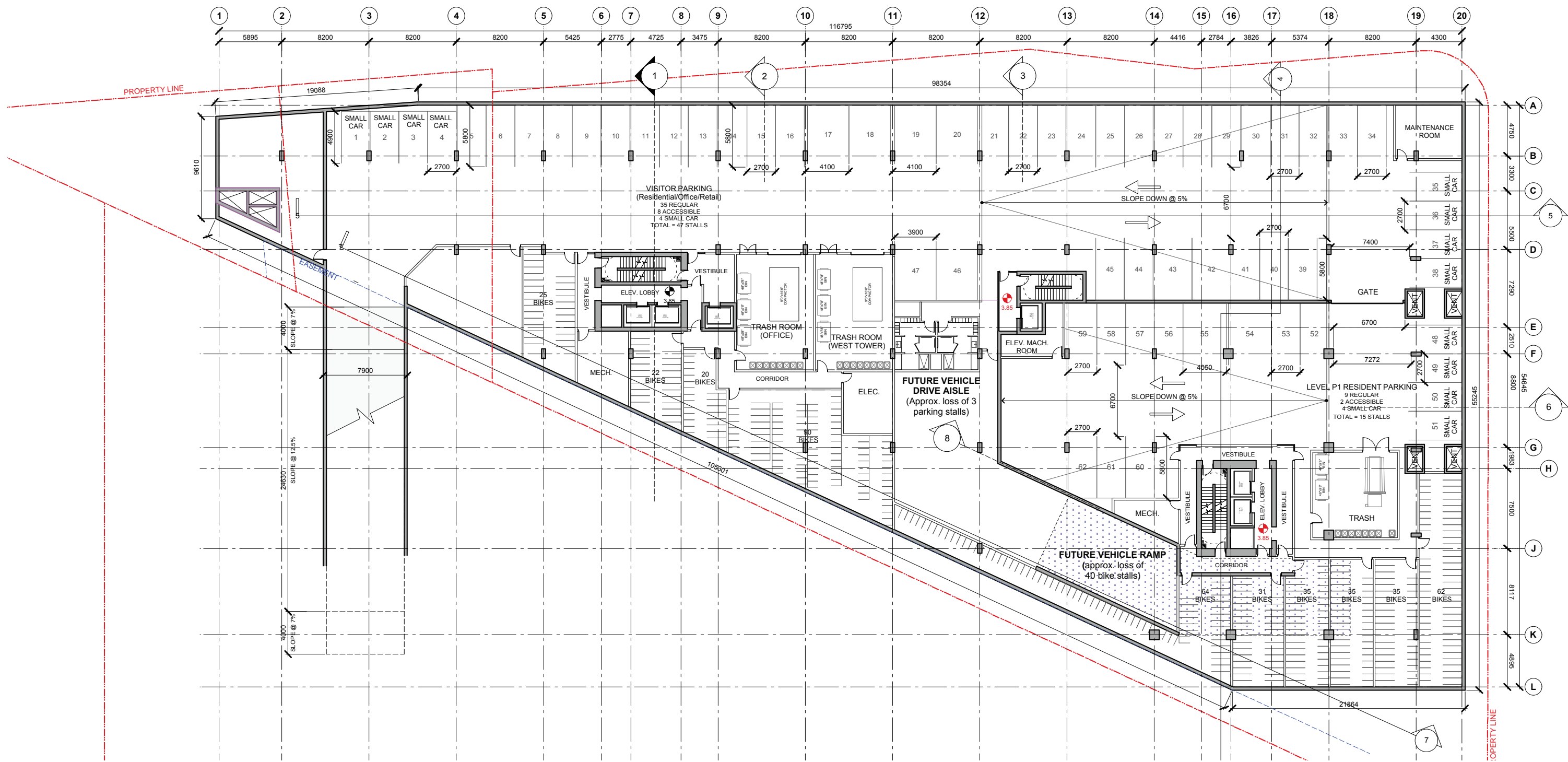




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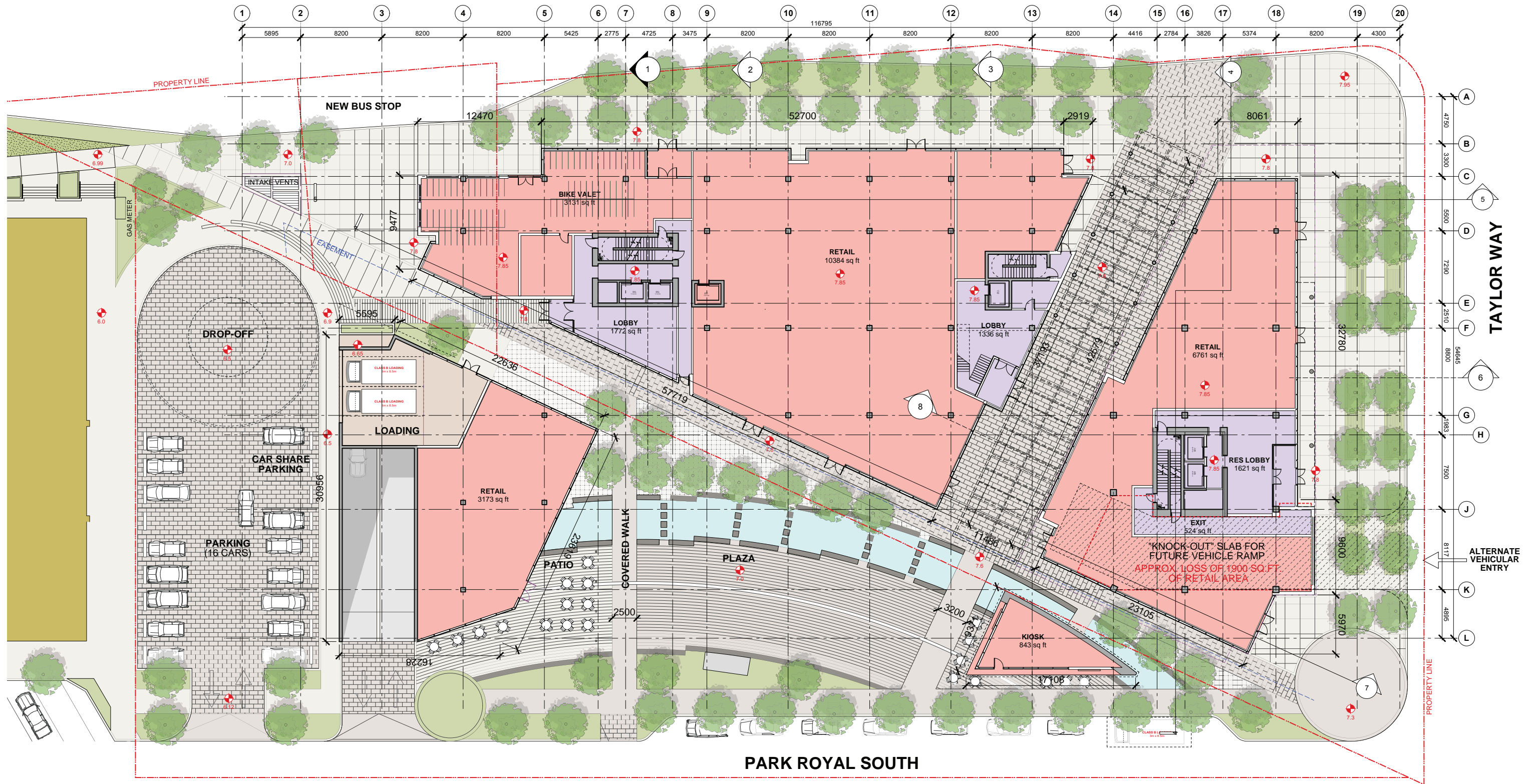




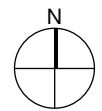
**LEVEL P1**







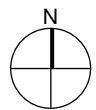
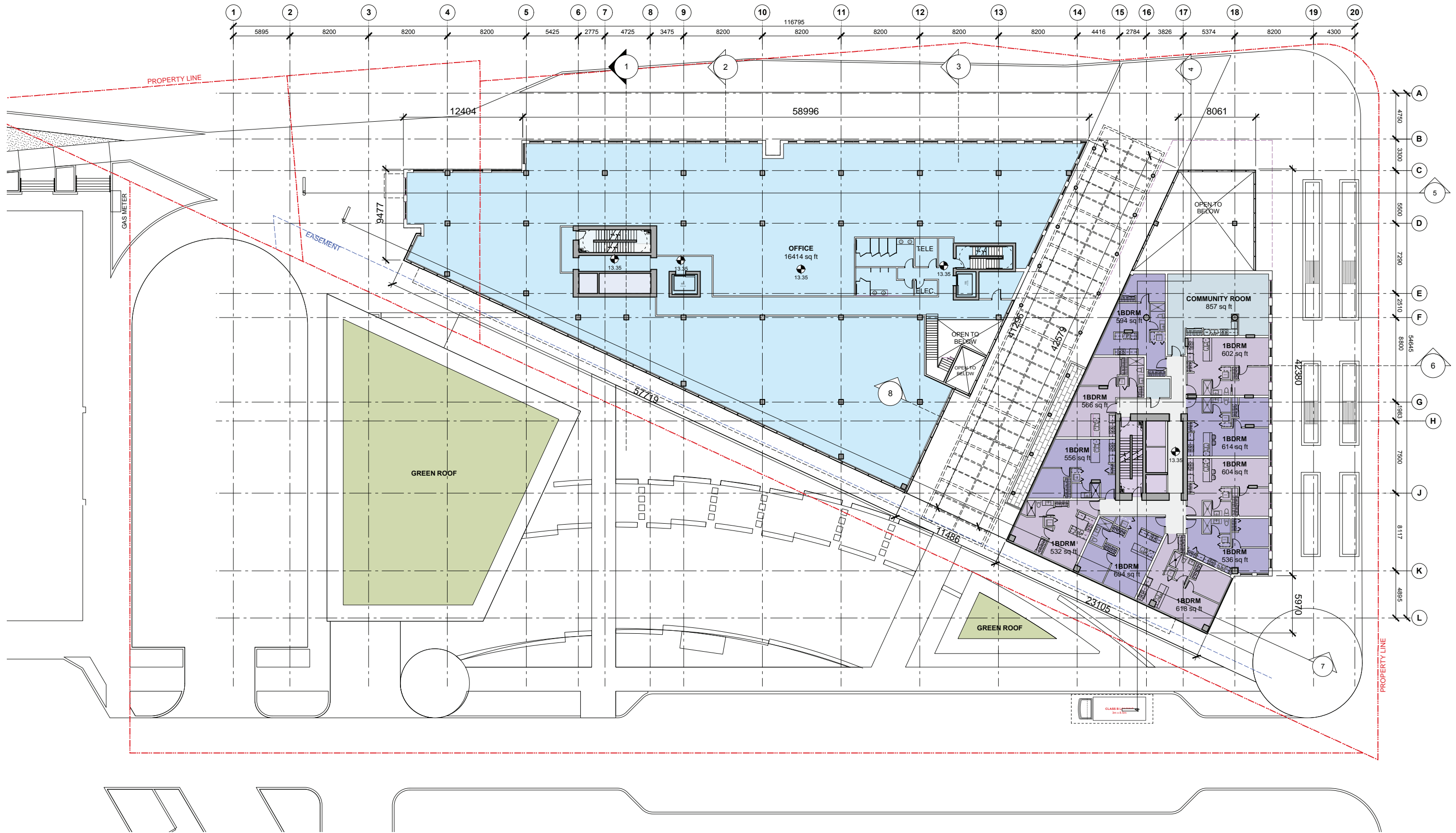
**PARK ROYAL SOUTH**



**LEVEL 1 PLAN**







**LEVEL 2 PLAN**

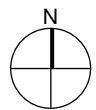
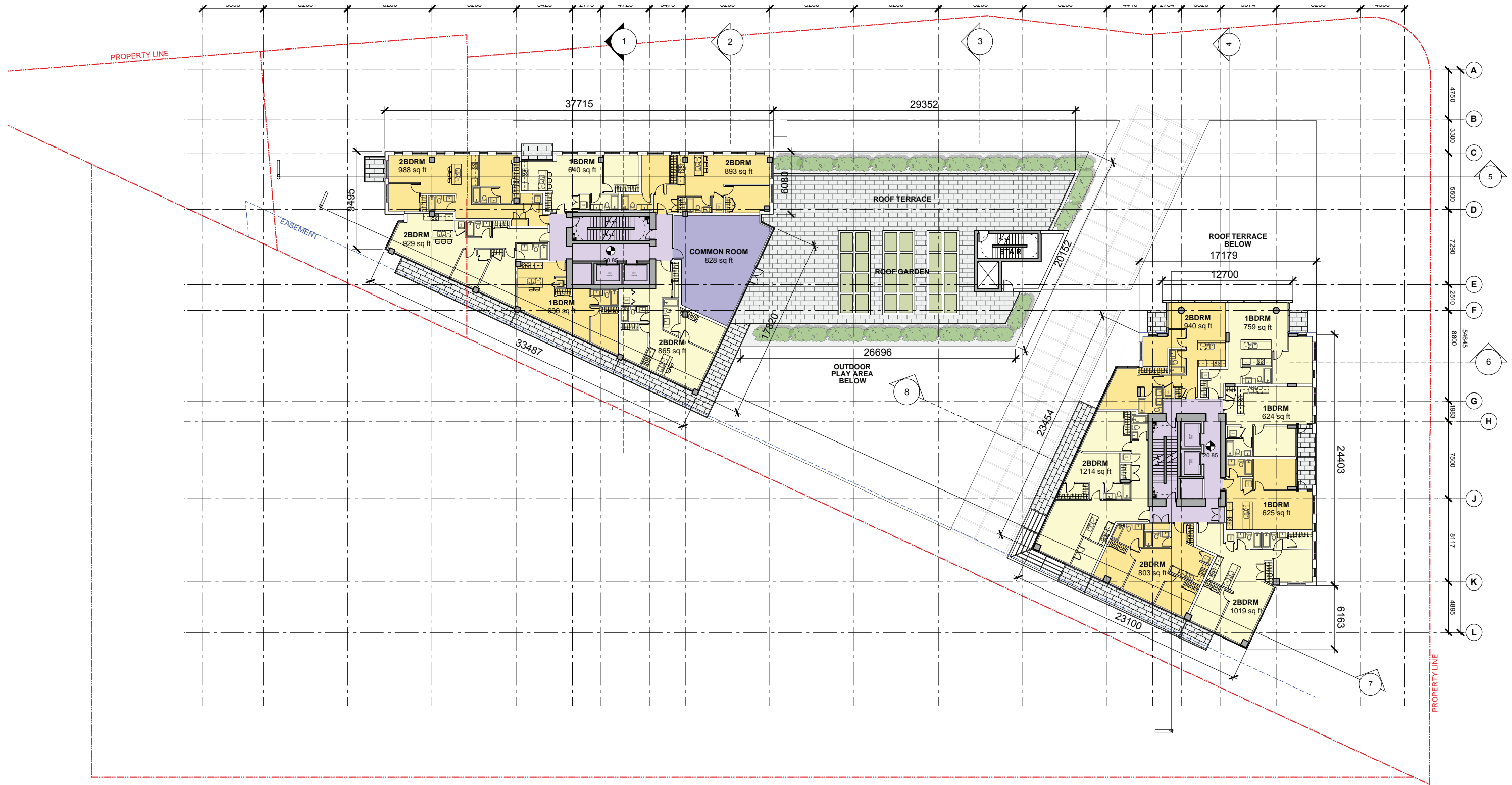








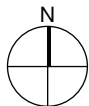
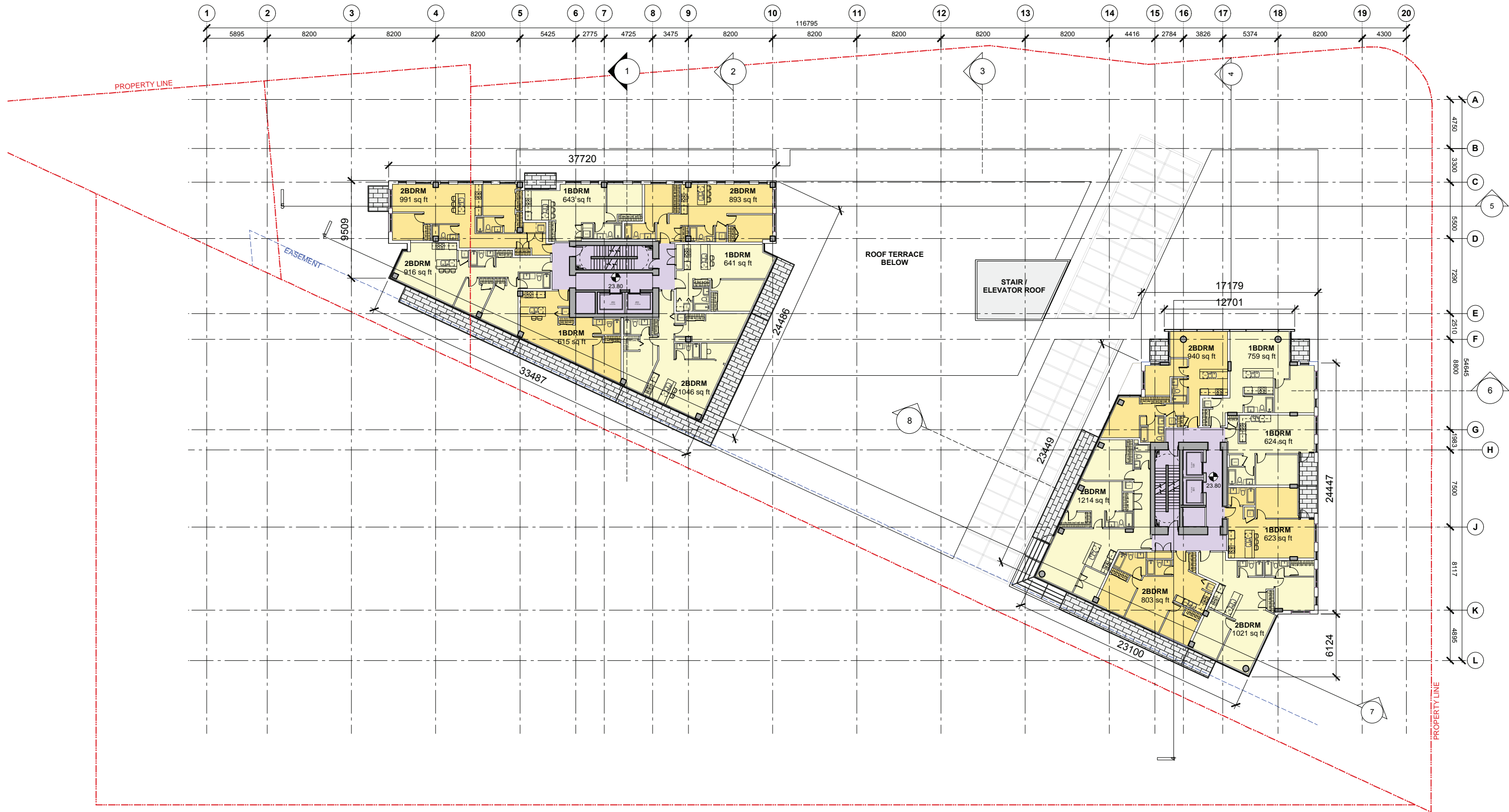




**LEVEL 4 PLAN**



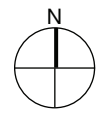
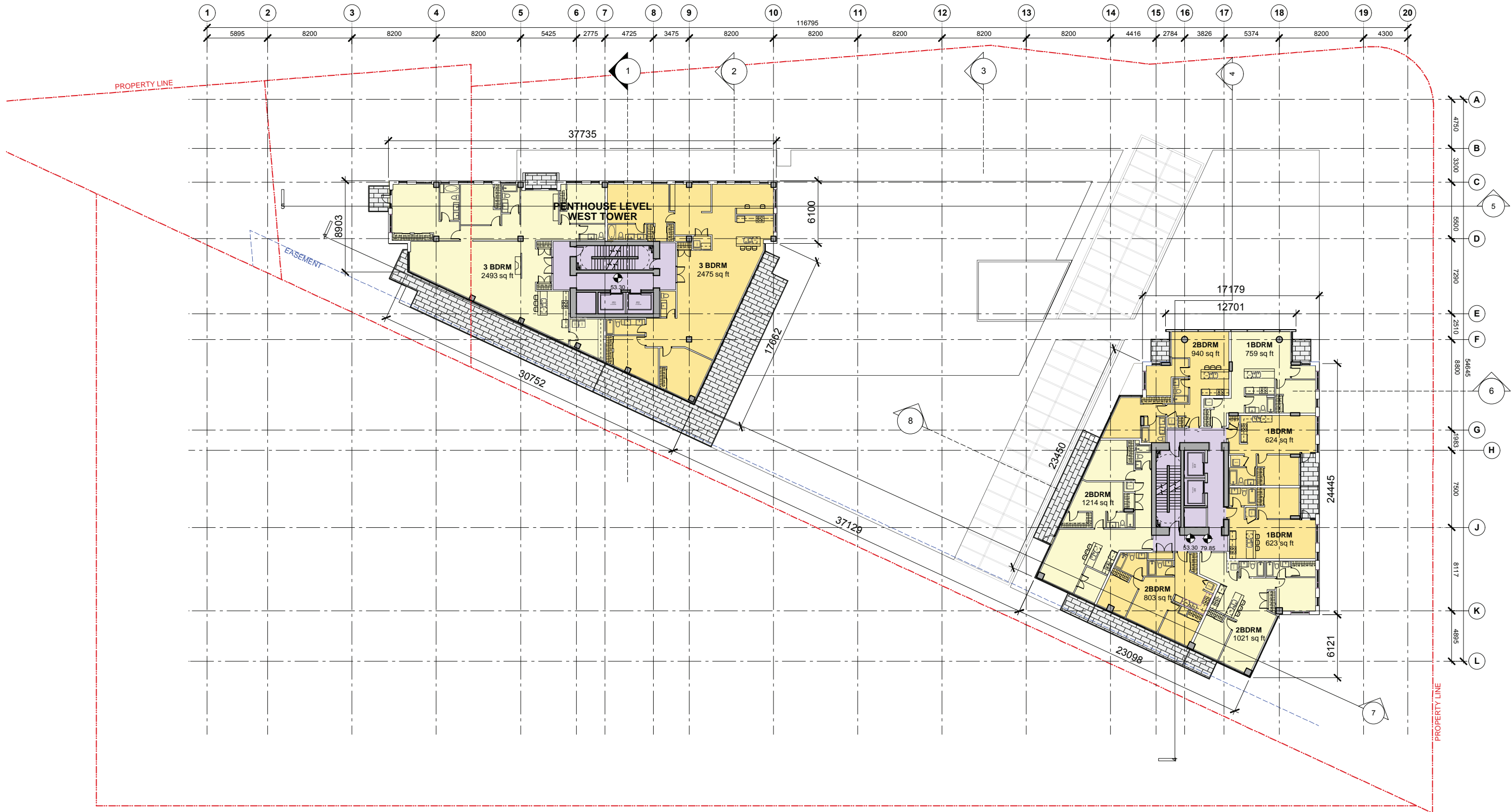




**LEVEL 5 PLAN**



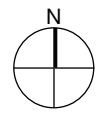
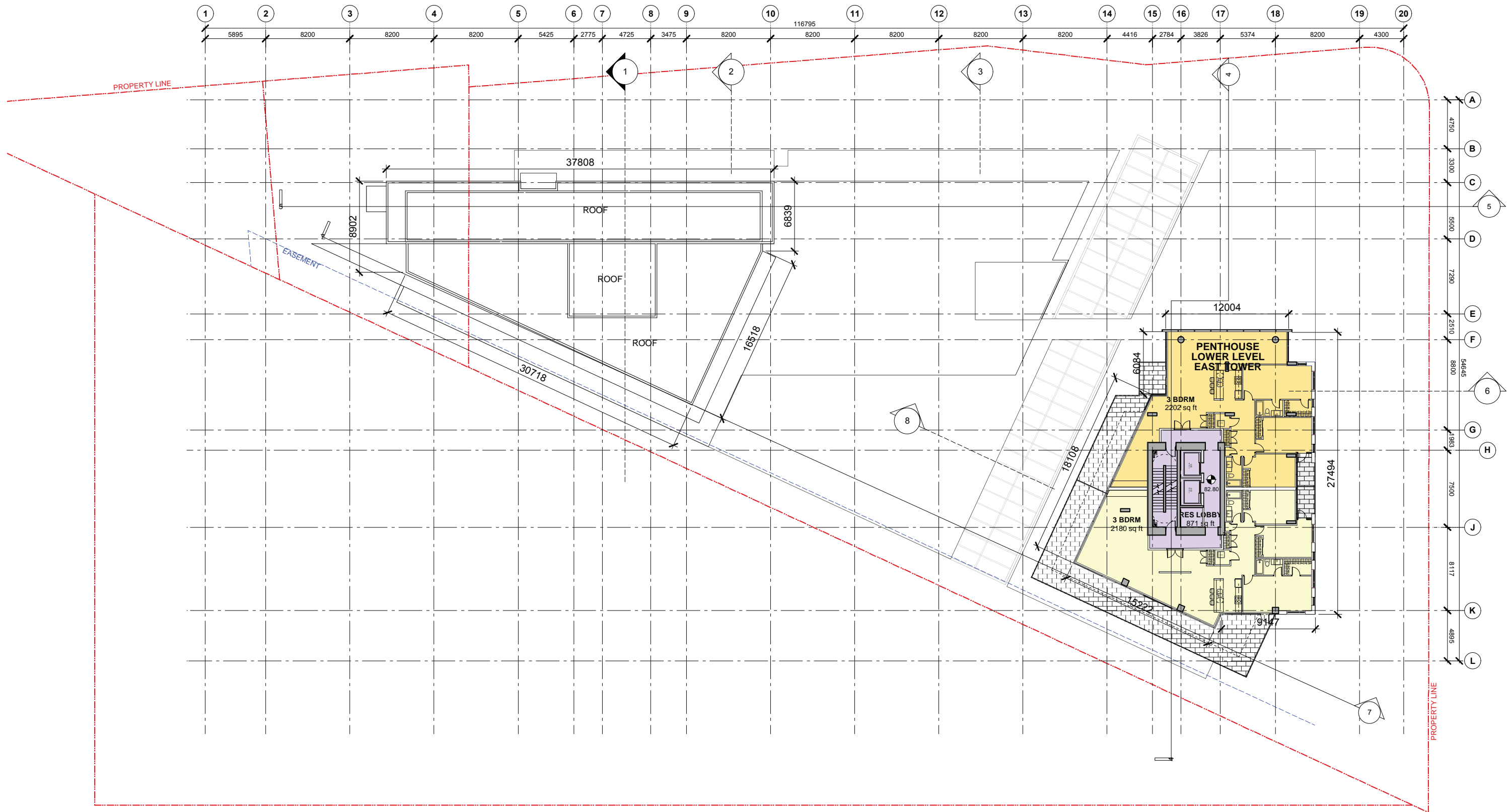




LEVEL 15 PLAN



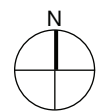
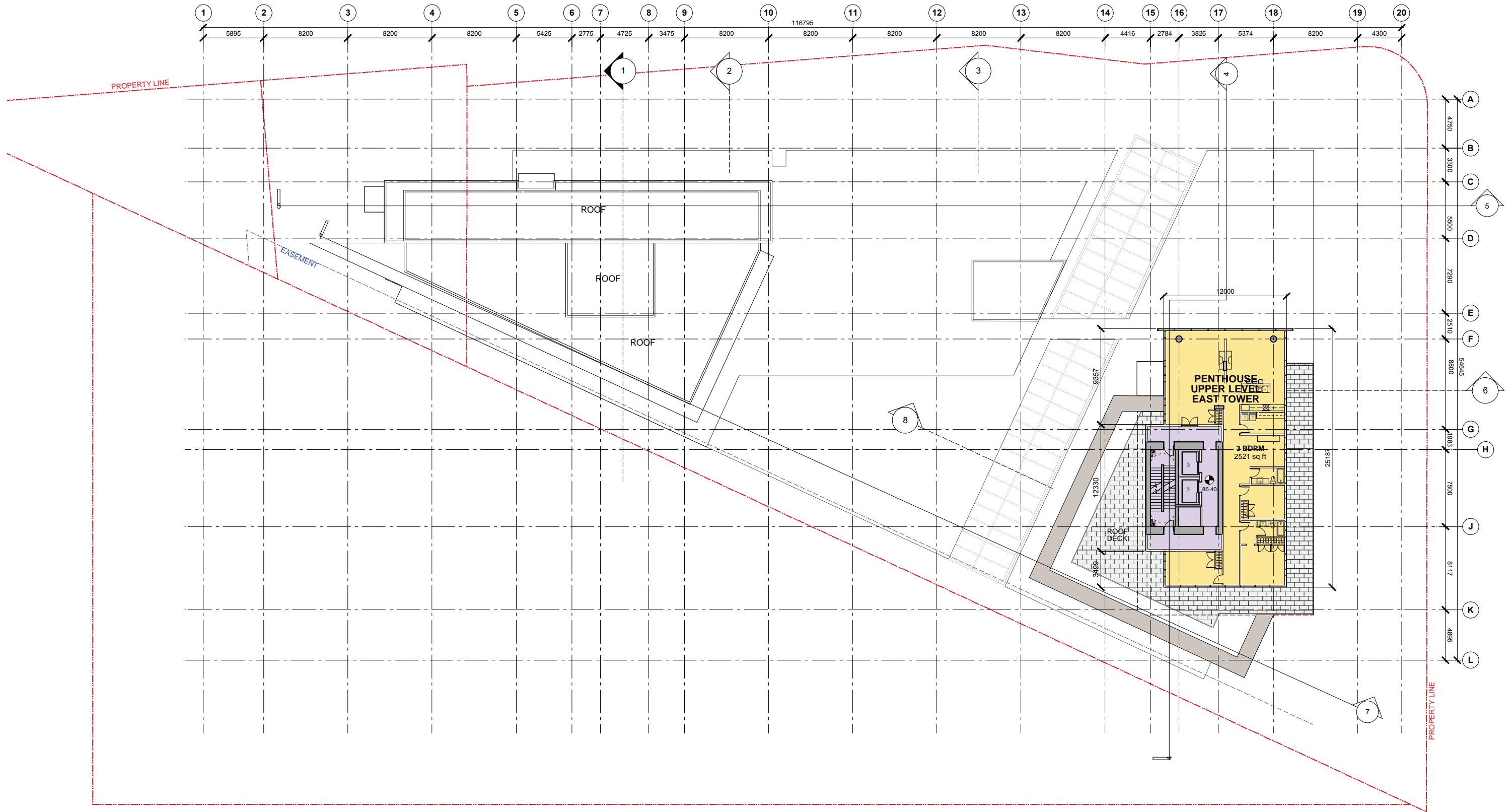




**LEVEL 25 PLAN**



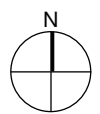
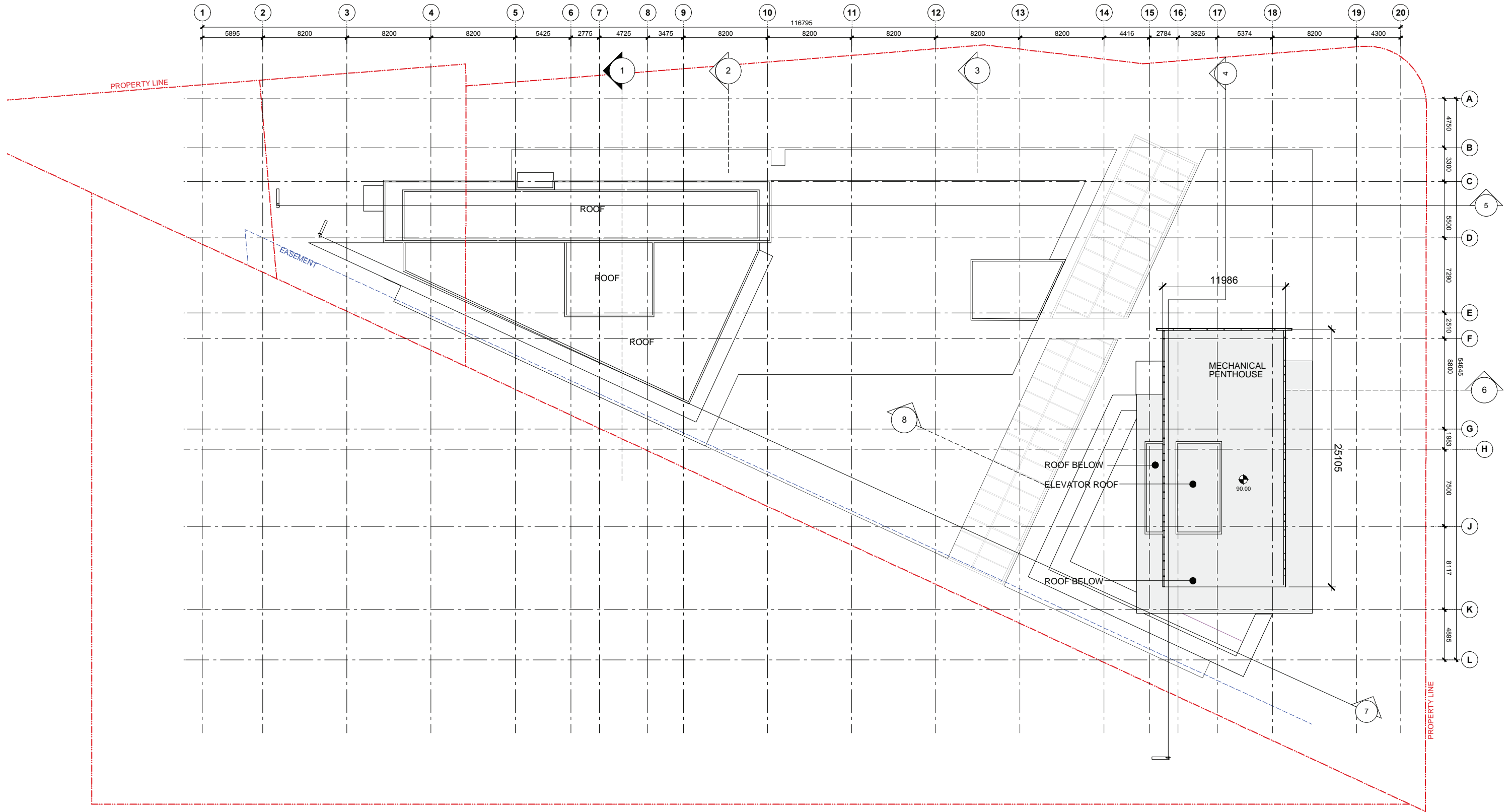




**LEVEL 26 PLAN**



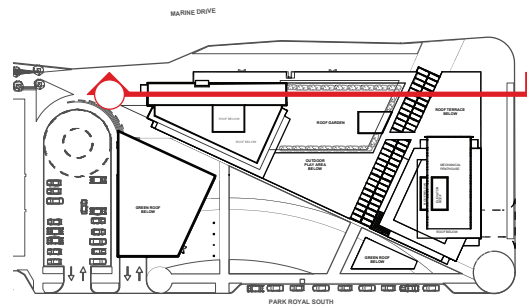




**ROOF LEVEL**

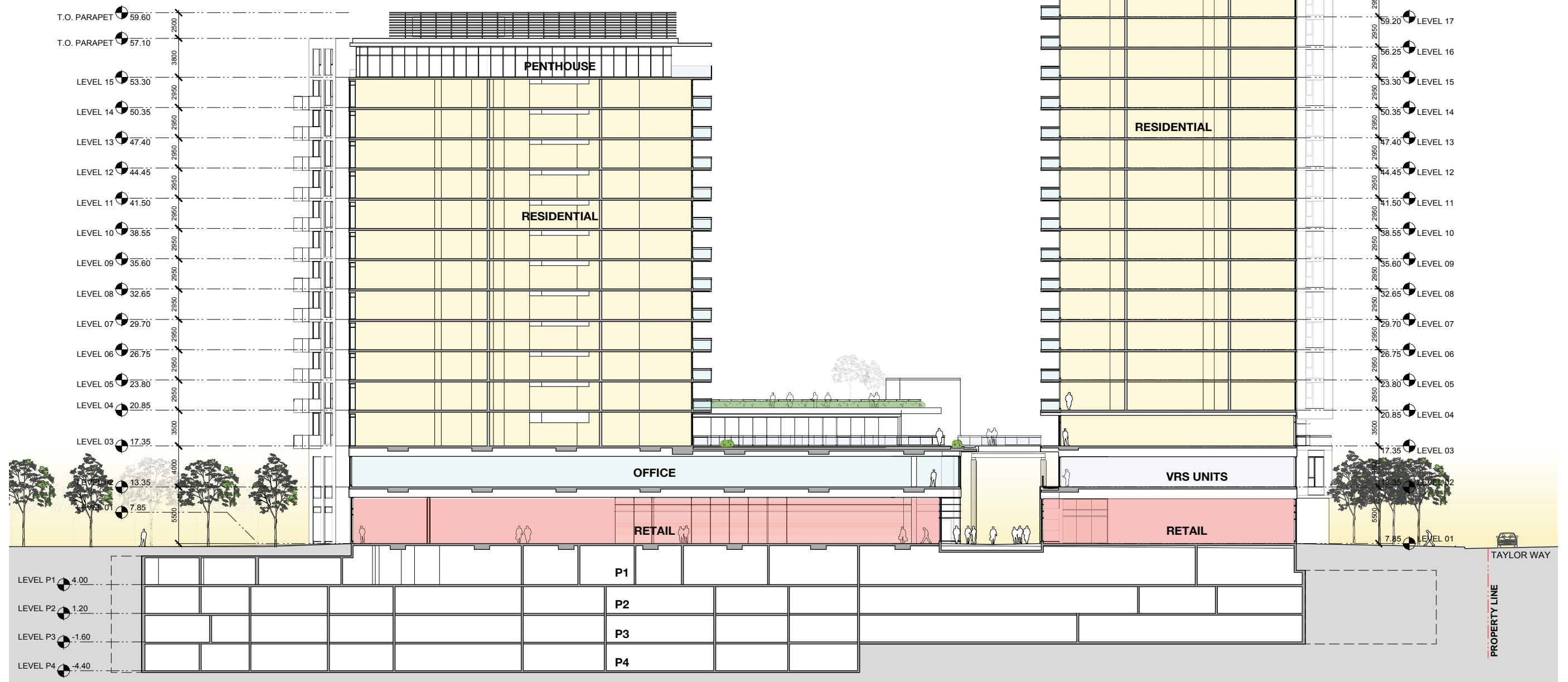




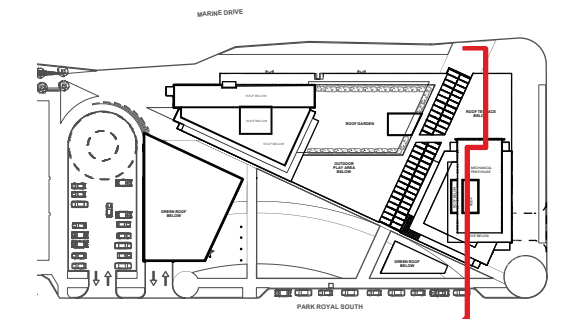
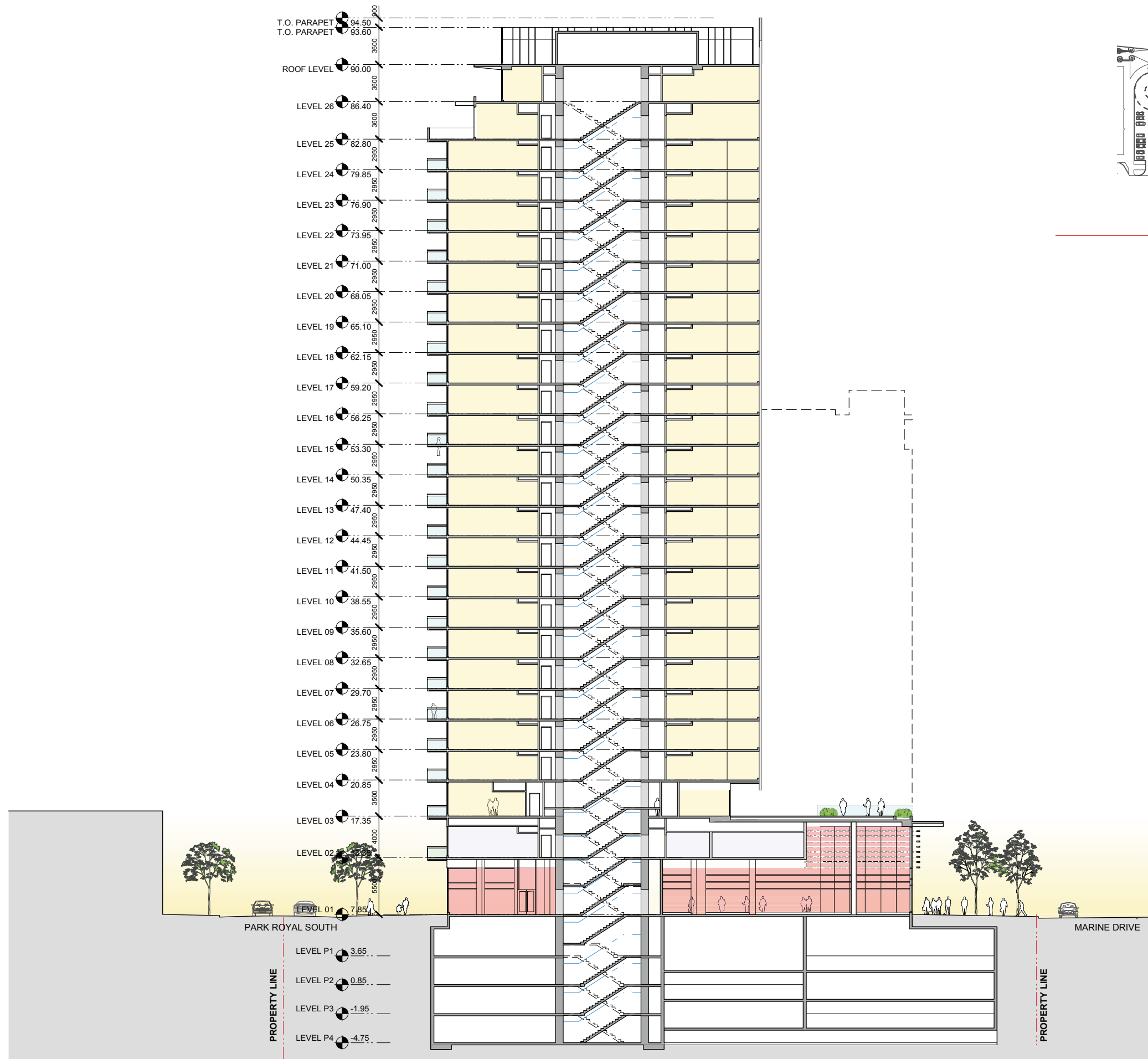


**KEY PLAN**

SCALE: NTS



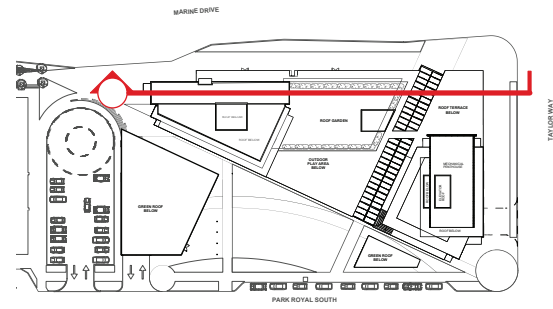




**KEY PLAN**  
SCALE: NTS

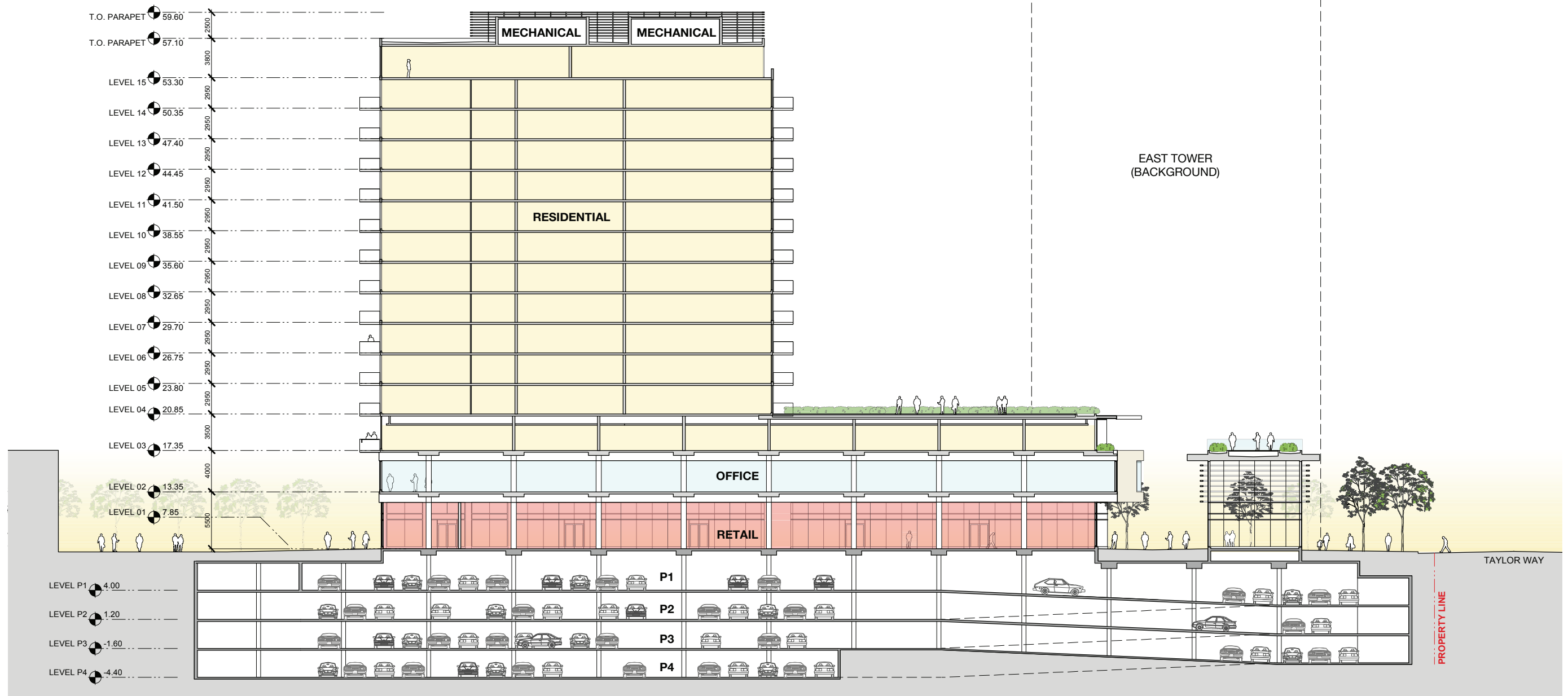
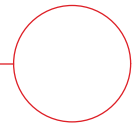






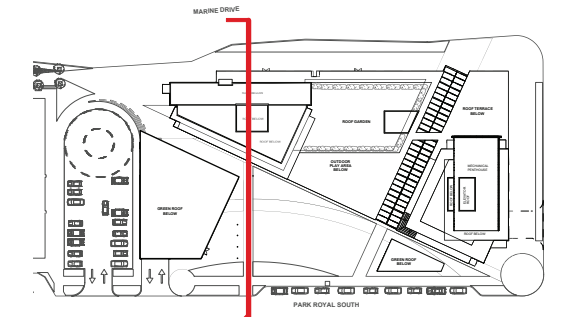
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SCALE: NTS









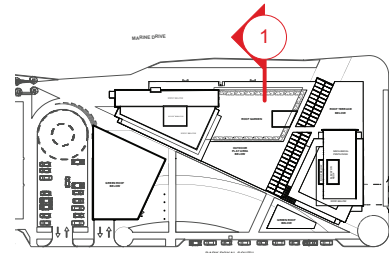
**KEY PLAN**

SCALE: NTS

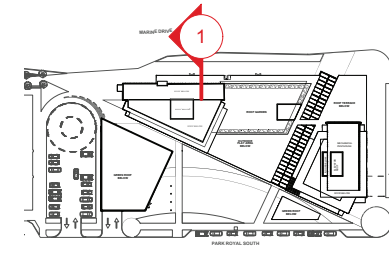


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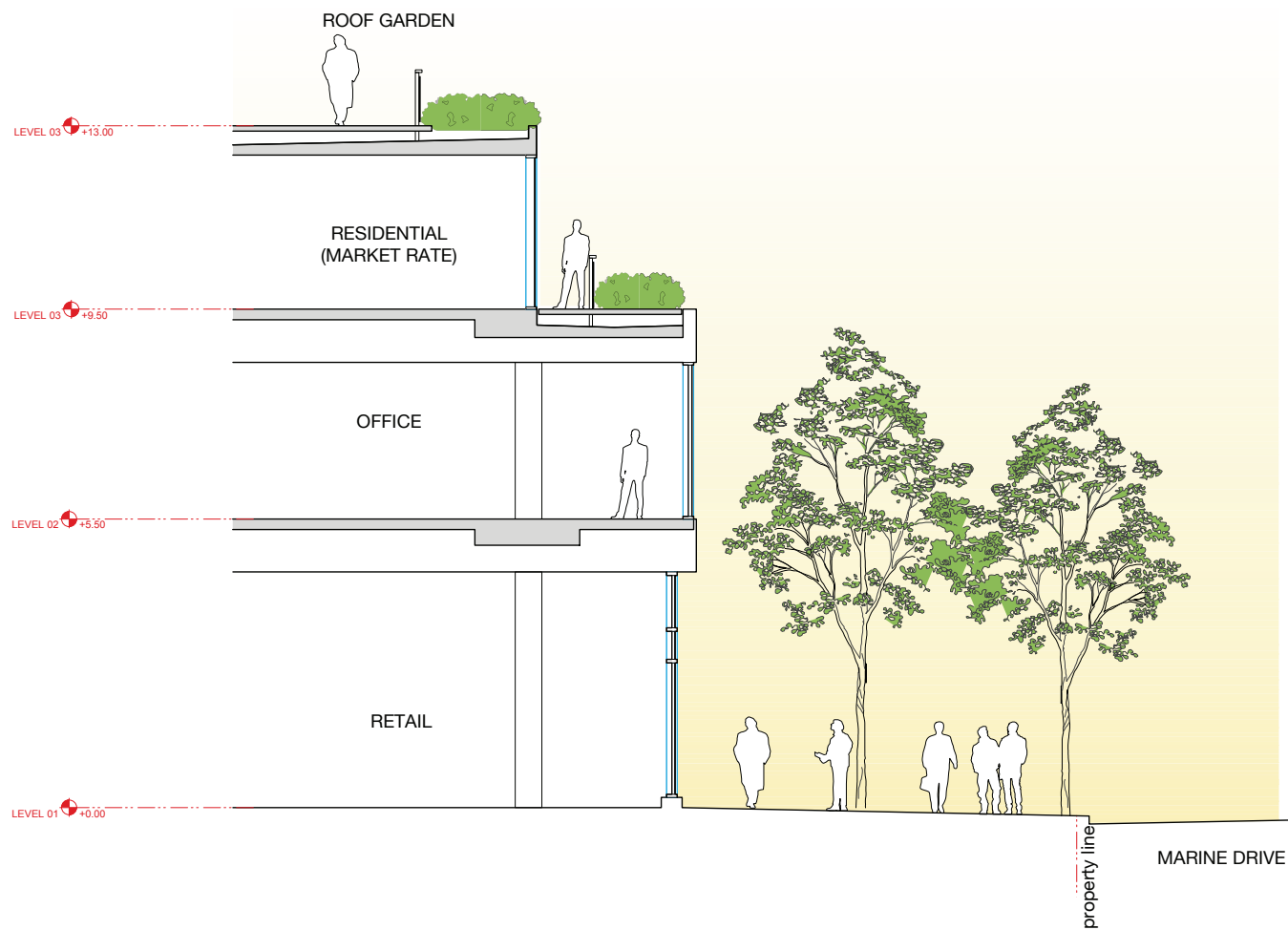




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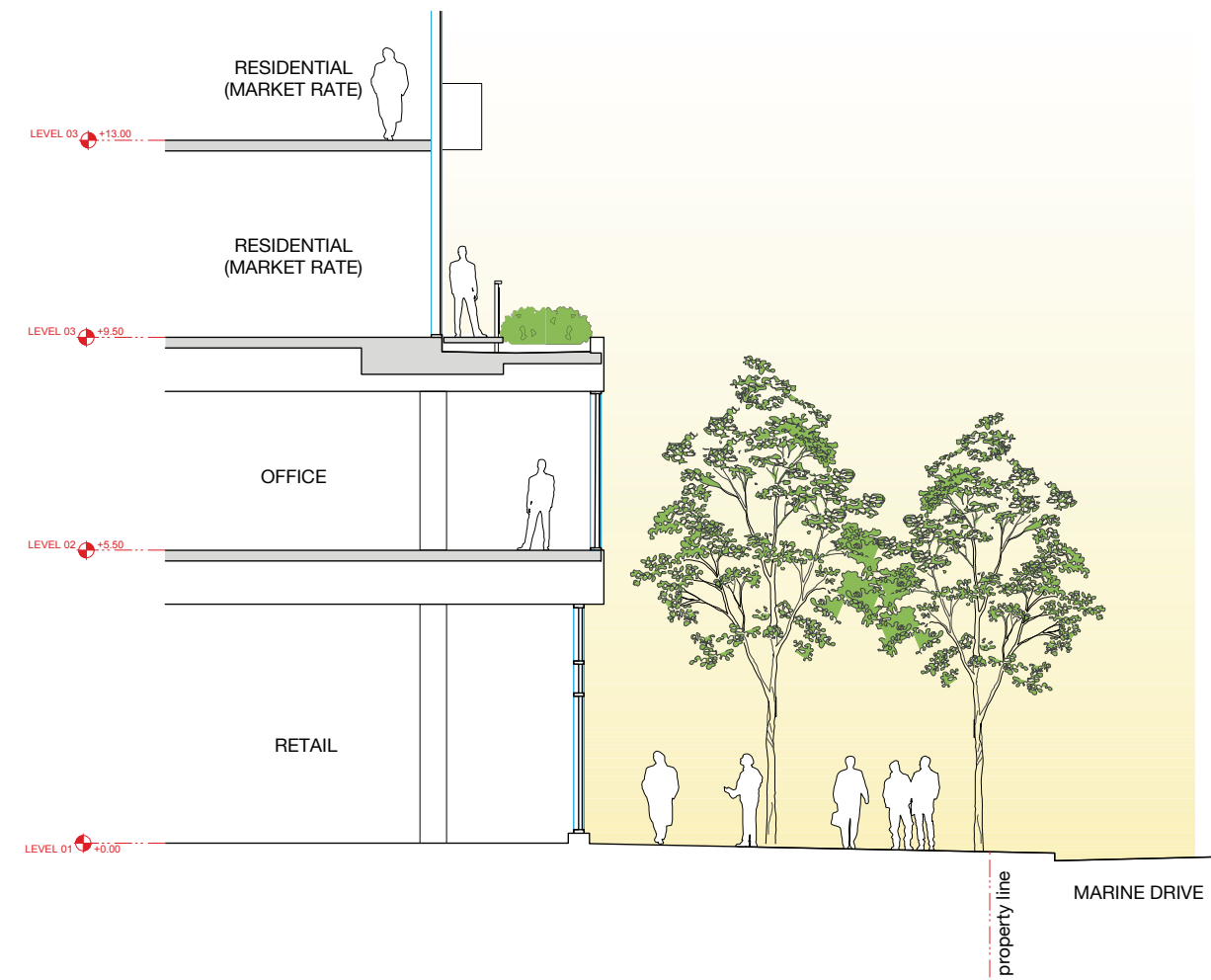


**KEY PLAN**  
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**SECTION 3 AT MARINE DRIVE (ROOF GARDEN)**  
SCALE: 1:100

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**SECTION 2 AT MARINE DRIVE (WEST TOWER)**  
SCALE: 1:100

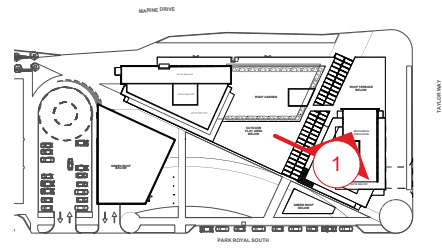
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SECTION 03

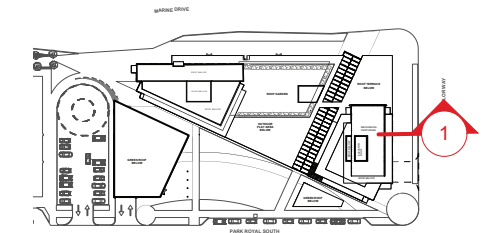
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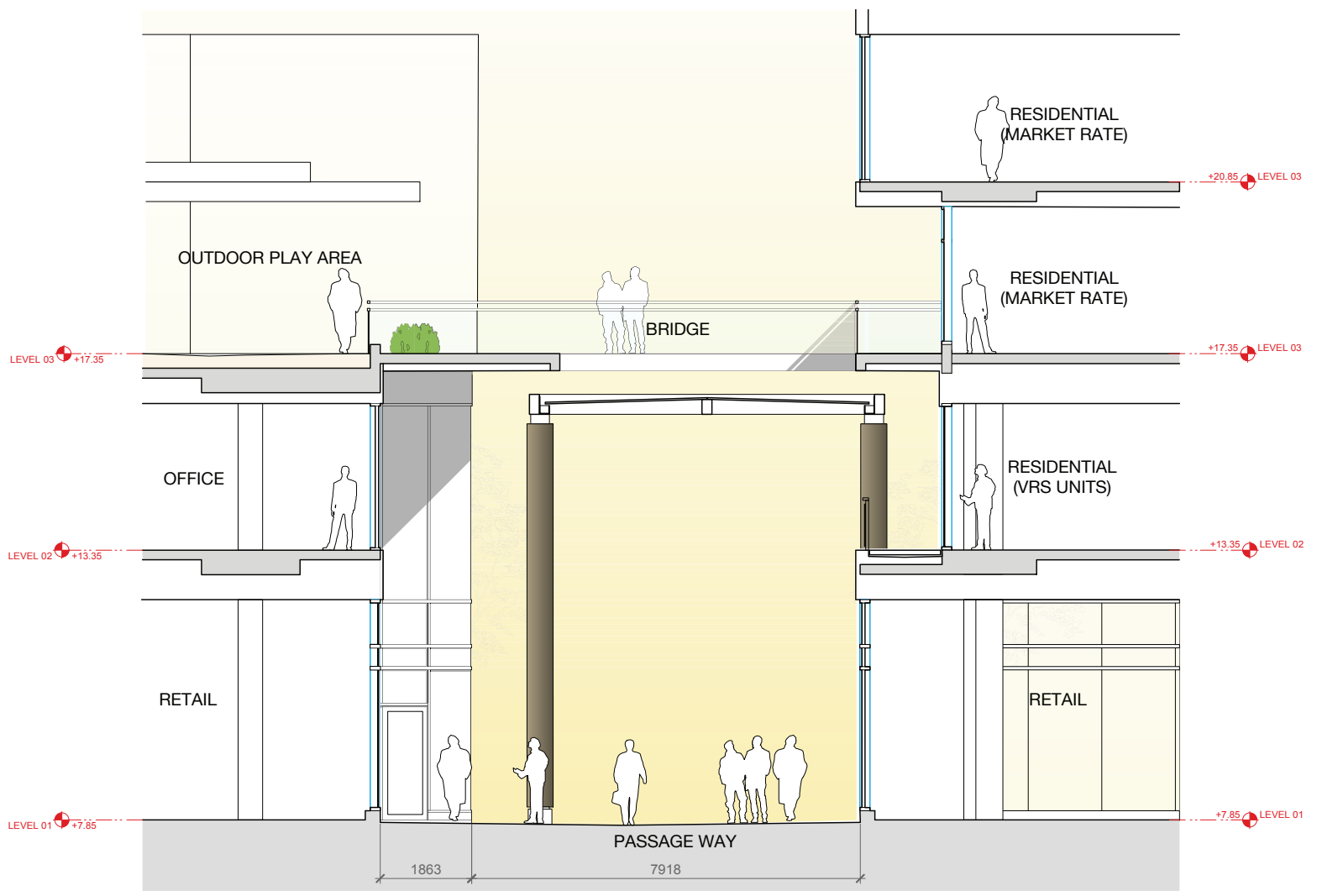




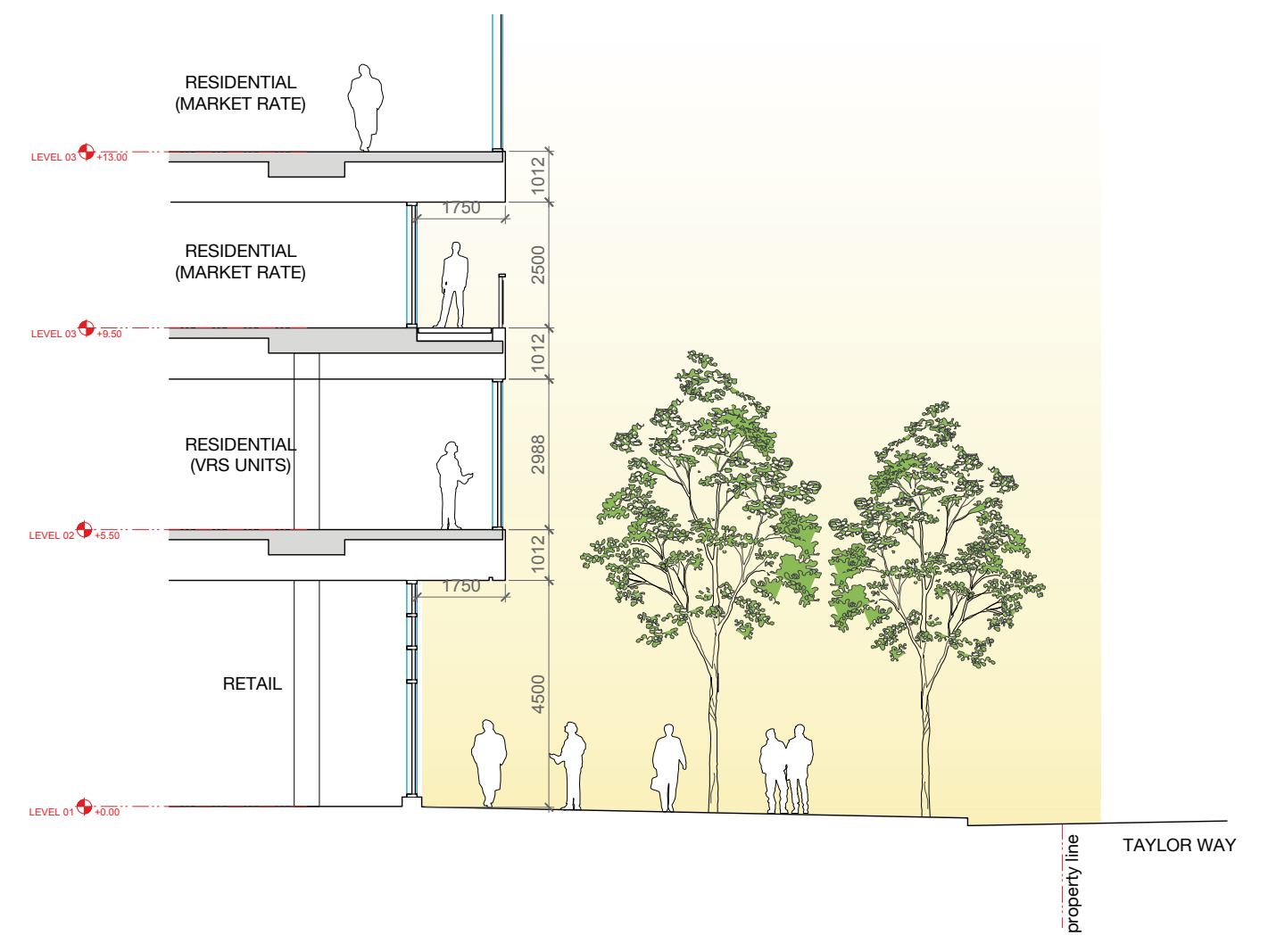
**KEY PLAN**  
SCALE: NTS



**KEY PLAN**  
SCALE: NTS



**SECTION 8 AT PASSAGE WAY**  
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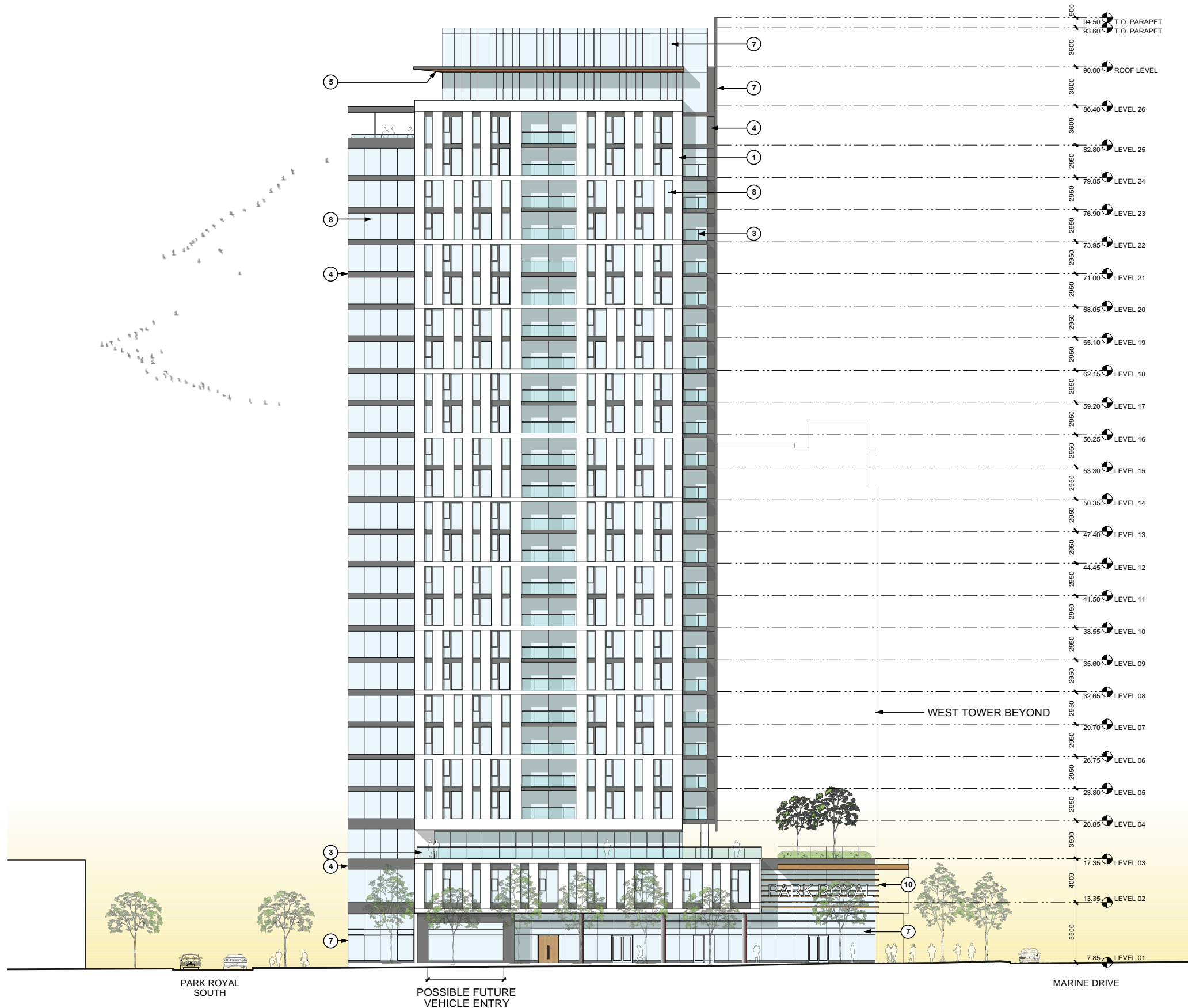
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SECTION 08

SECTION 06

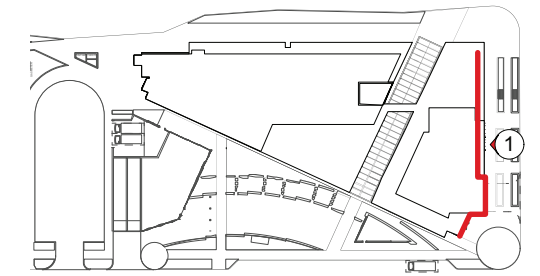






**EAST ELEVATION**

**KEY PLAN**

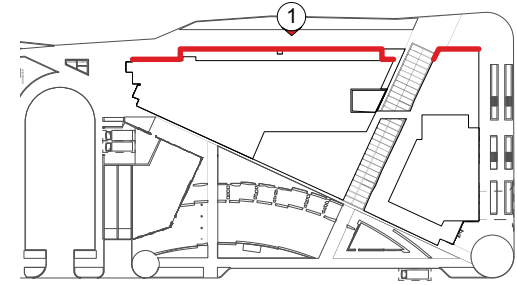


**MATERIAL LEGEND**

- ① PRECAST CONCRETE PANELS
- ② PAINTED MTL. LOUVRES
- ③ GLASS AND ALUM. GUARDRAIL
- ④ METAL PANEL CLADDING
- ⑤ WOOD PATTERNED METAL PANEL
- ⑥ WOOD AND GLASS CANOPY
- ⑦ GLASS / ALUM. CURTAIN WALL
- ⑧ ALUM. GLAZING SYSTEM
- ⑨ STONE MASONRY VENEER
- ⑩ HEAVY TIMBER LOUVRES
- ⑪ CONCRETE, PTD.
- ⑫ MTL. PANEL / GLASS BALCONY

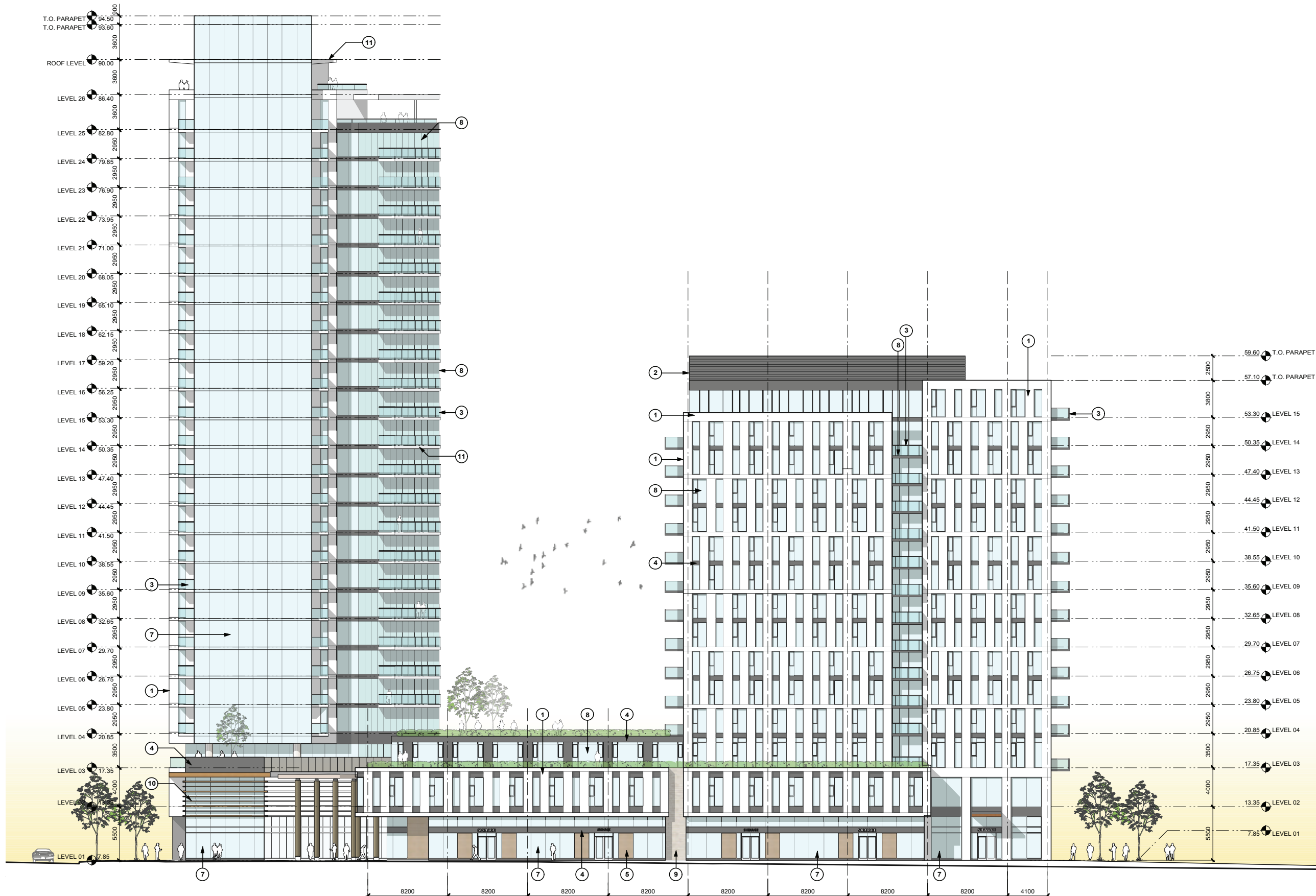


KEY PLAN



MATERIAL LEGEND

- ① PRECAST CONCRETE PANELS
- ② PAINTED MTL. LOUVRES
- ③ GLASS AND ALUM. GUARDRAIL
- ④ METAL PANEL CLADDING
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- ⑩ HEAVY TIMBER LOUVRES
- ⑪ CONCRETE, PTD.
- ⑫ MTL. PANEL / GLASS BALCONY

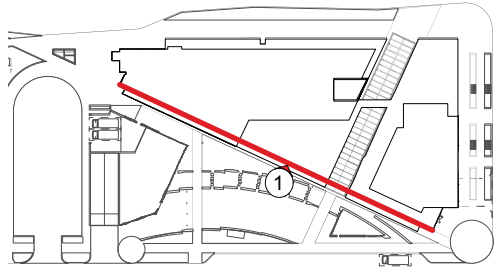


NORTH ELEVATION



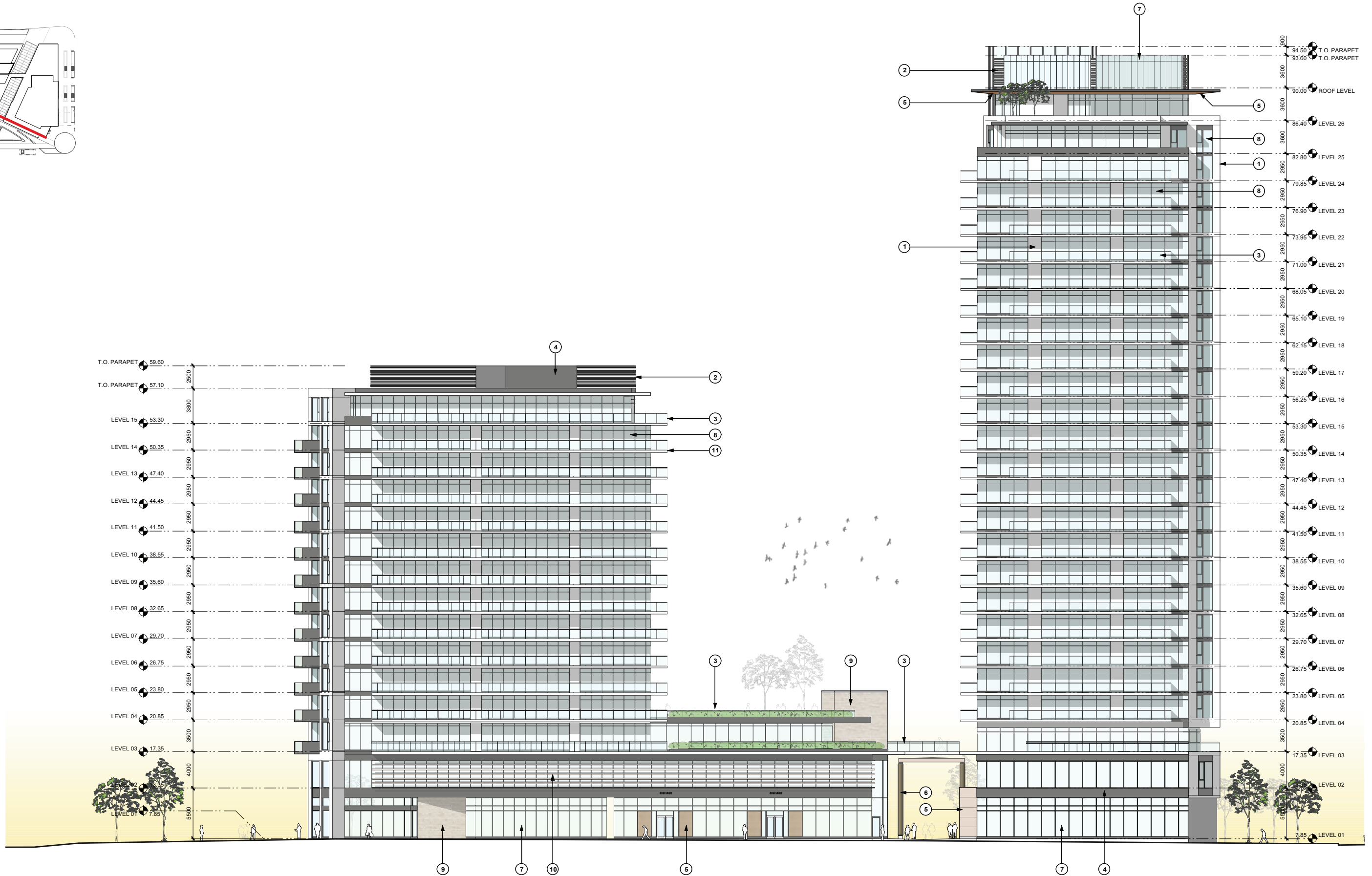


**KEY PLAN**



**MATERIAL LEGEND**

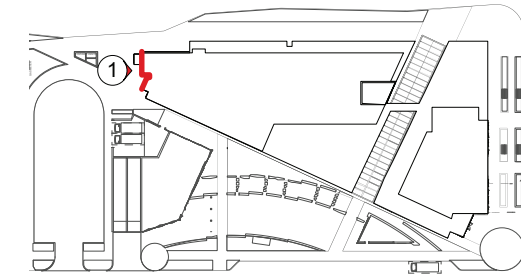
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- ③ GLASS AND ALUM. GUARDRAIL
- ④ METAL PANEL CLADDING
- ⑤ WOOD PATTERNED METAL PANEL
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- ⑪ CONCRETE, PTD.
- ⑫ MTL. PANEL / GLASS BALCONY





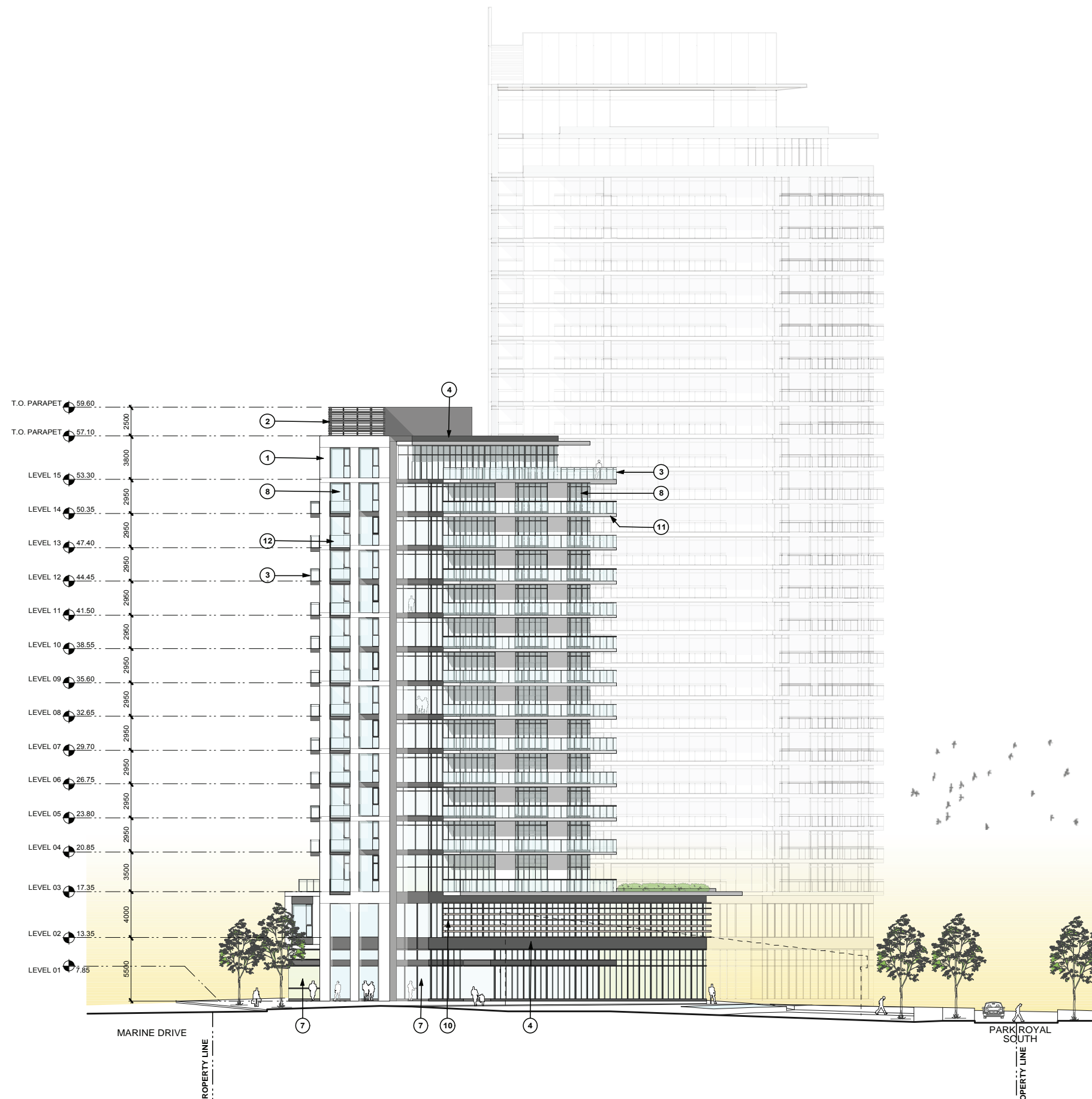


**KEY PLAN**



**MATERIAL LEGEND**

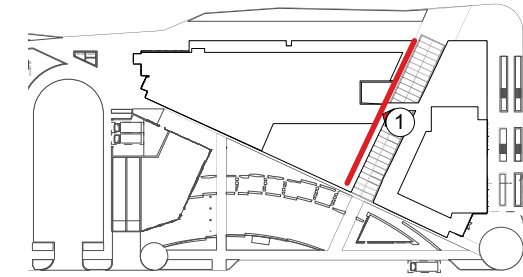
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- ⑫ MTL. PANEL / GLASS BALCONY



**WEST ELEVATION**

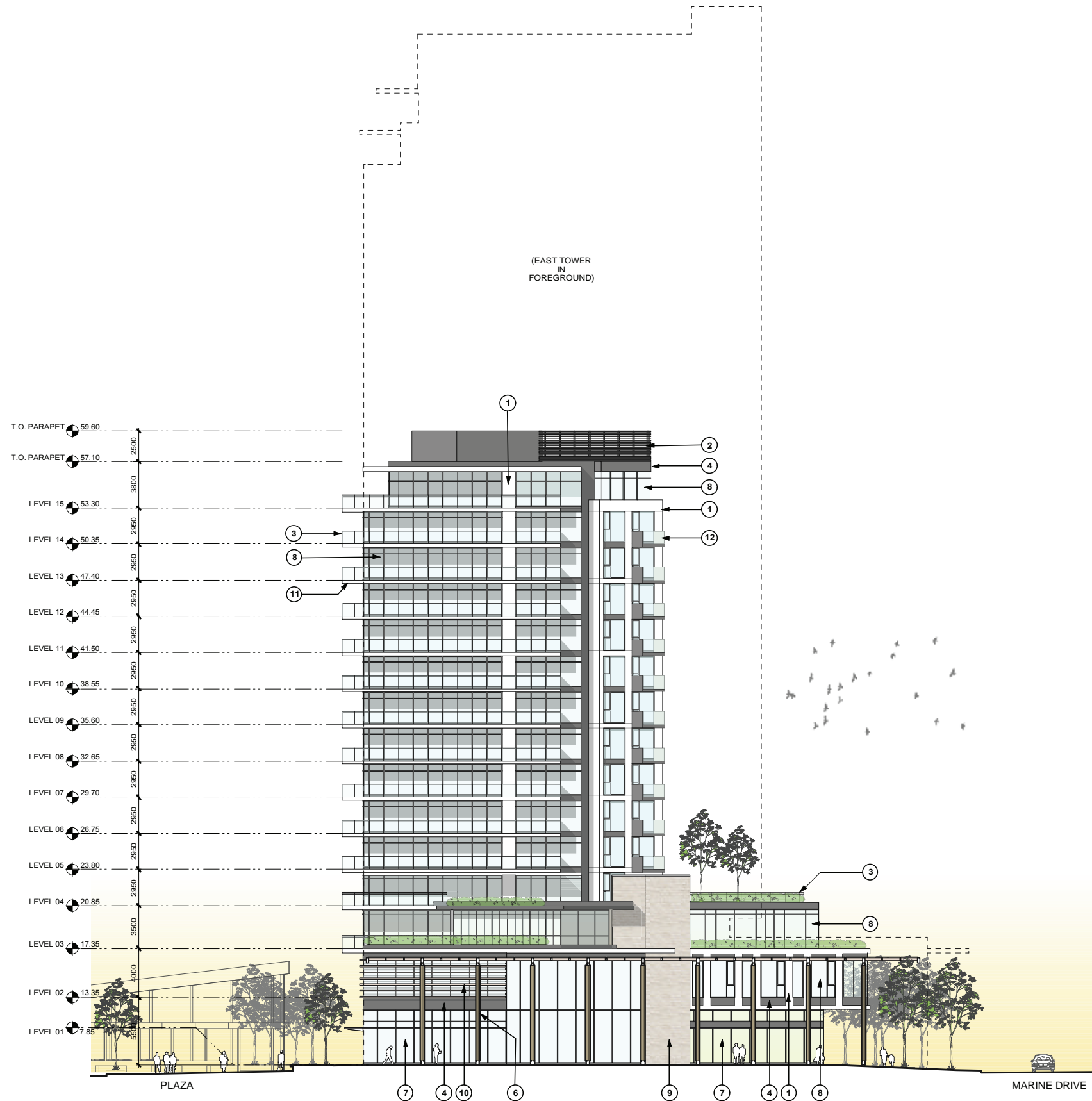


**KEY PLAN**



**MATERIAL LEGEND**

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- ② PAINTED MTL. LOUVRES
- ③ GLASS AND ALUM. GUARDRAIL
- ④ METAL PANEL CLADDING
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- ⑩ HEAVY TIMBER LOUVRES
- ⑪ CONCRETE, PTD.
- ⑫ MTL. PANEL / GLASS BALCONY



**EAST ELEVATION**











# MATERIALS

METAL PANEL CLADDING  
(DARK GREY)



WOOD PATTERNED METAL PANEL



HEAVY TIMBER TRELLIS AND LOUVRES



PRECAST CONCRETE PANEL



ALUMINIUM MULLION  
(DARK GREY)



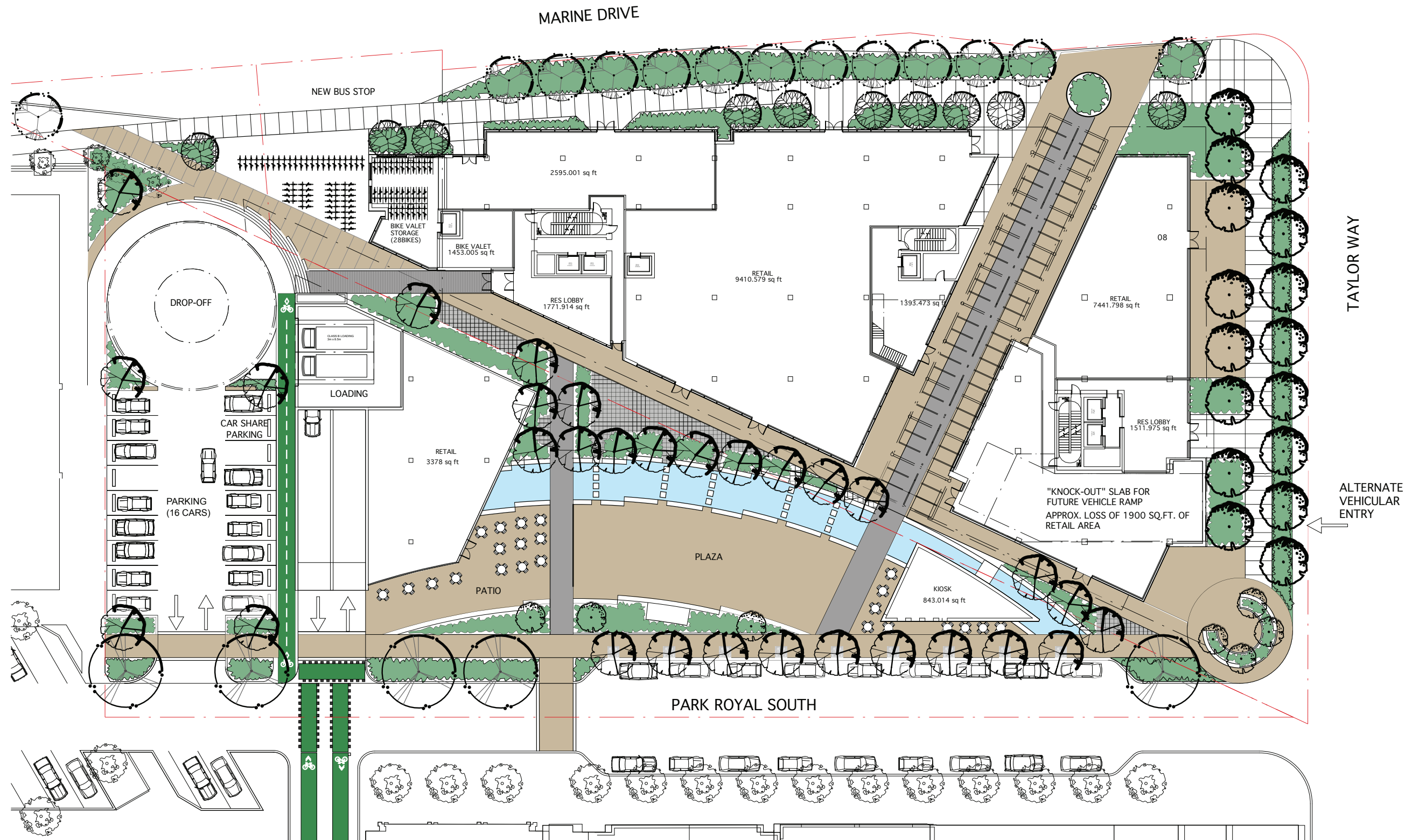
INSULATED GLAZING UNIT



**VITRUM**  
GLASS GROUP  
GLASS FABRICATION AT ITS FINEST  
www.vitrum.co.uk | 0203 391 1199  
6mm Solarban 80 Annealed #2  
1/2" Warm Edge Black Spacer  
4mm Clear Annealed



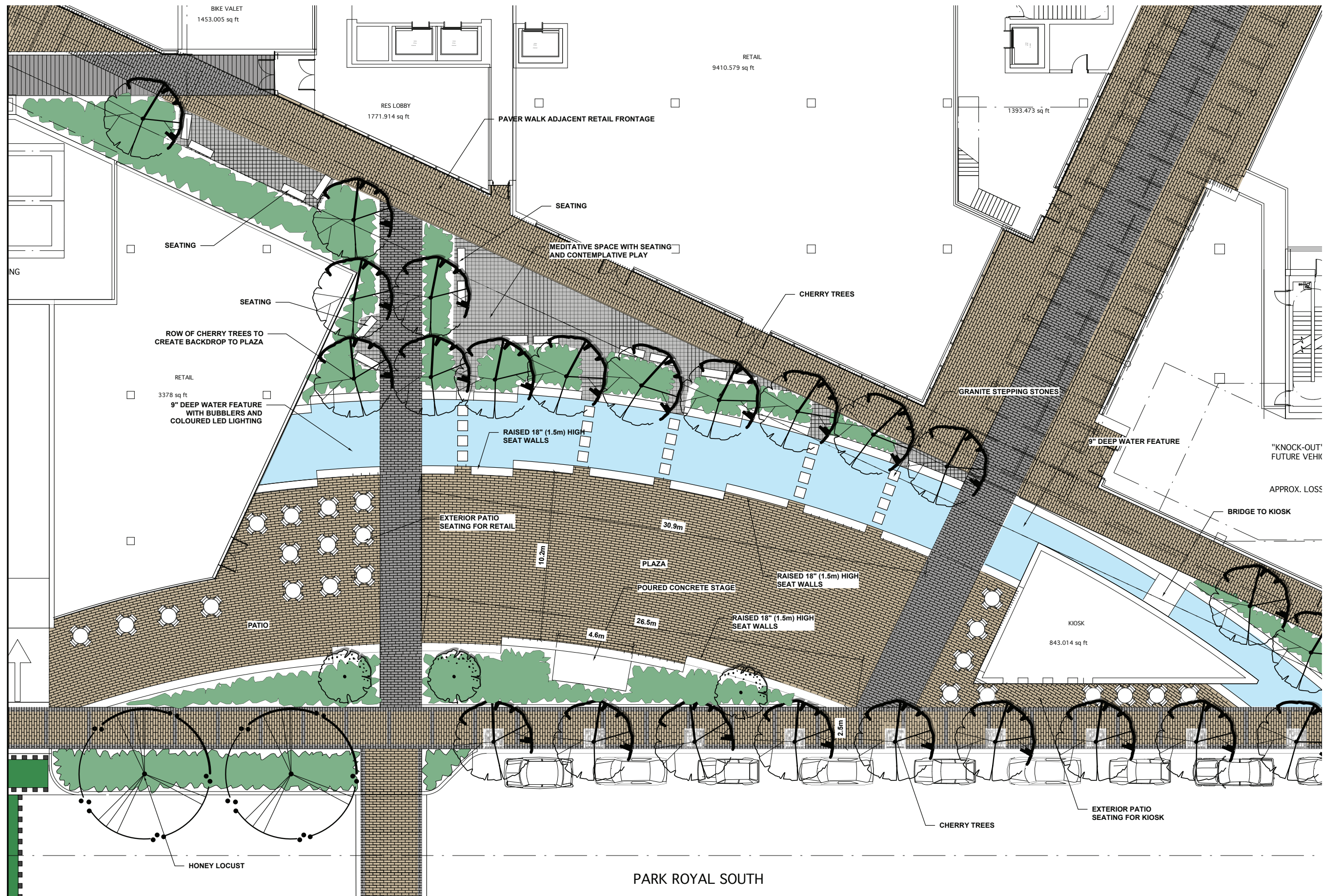
# 6.0 LANDSCAPE DESIGN



LEVEL ONE PLAN





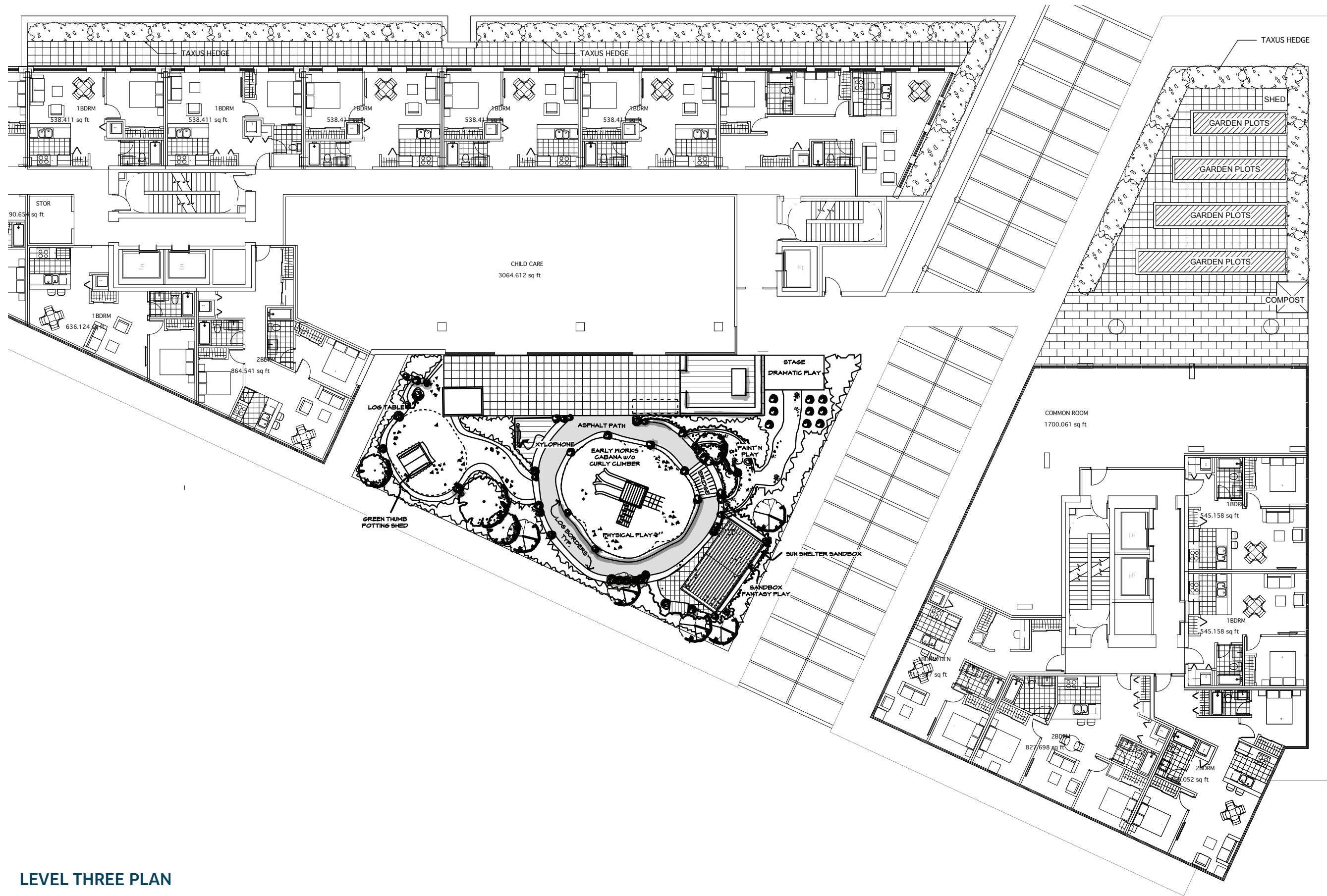


LEVEL TWO PLAN

PARK ROYAL SOUTH





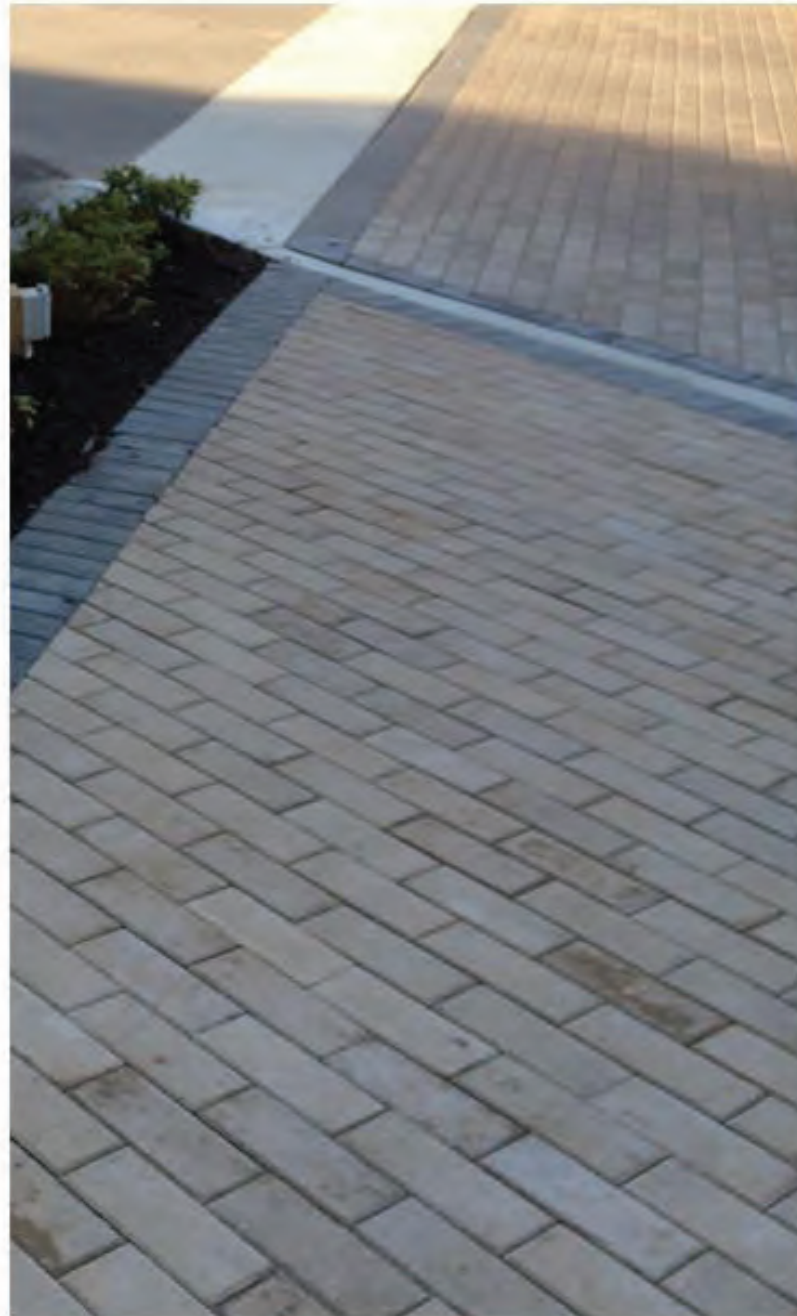


LEVEL THREE PLAN





# MATERIALS



PLAZA  
PAVING



LIGHT FIXTURE



SEATING



TRASH  
RECEPTICAL



# 7.0 TECHNICAL STUDIES

This section of the application contains four technical studies in support of the development application:

The studies include and form part of this submission:

7.1 Sustainability

7.2 View Study

7.3 Shadow Study

7.4 Project Data



## 7.1 SUSTAINABILITY

The vision for sustainability at the 752 Marine Drive site has several components. Our approach is two-fold: 1) to encourage sustainable behaviours and choices throughout the site and 2) to incorporate key technical sustainability-related features into building and site design. Park Royal is committed to a high standard of sustainability in the project, such as achieving LEED or Built Green certification.

**Education** - the site is located at a nexus of activity and will draw in residents, shoppers, and pedestrians. The use of key design features such as urban agriculture, green roofs, and stormwater management techniques not only contribute to the site's efficiency, but also act as teaching tools for those who use the site.

**Energy Efficiency**- Occupancy sensors will be installed through out common areas and commercial office spaces to turn lights off when rooms are unoccupied. Furthermore, efficient HVAC systems, efficient lighting design and the use of Energy Star appliances will further reduce energy usage.

High efficient radiant heating and cooling systems are being considered in place of the traditional forced air systems. These systems offer a better distribution of heat and cleaner indoor air. The project team is also exploring the feasibility of a geo-thermal system and future connections to alternative energy sources. Indoor comfort will be further enhanced by the use of operable windows throughout the project to supply fresh outdoor air.

**Stormwater management** - several stormwater management techniques will be used on site, such as infiltration, permeable paving, and underground cisterns. The goal of these techniques is to minimize the amount of runoff and help return valuable nutrients to the soil.

**Green roofs** - there will be a total of 3 green roofs in this mixed-use development. The roofs will contribute to a reduced heat island effect, less extreme temperature changes in the buildings (which contribute to lower energy loads), and create social spaces on rooftops.

**Urban agriculture** - the urban agriculture plot located as part of one of the green roofs will contribute to food security on site, while at the same time teaching residents about local food production. It can also encourage social interaction and a strong sense of community ownership.

**Transportation demand management strategies** - these strategies will be used on site and in conjunction with existing transit patterns. The goal is to encourage more sustainable forms of transportation, such as walking, cycling, or public transit.

**Water efficiency** - a variety of water management strategies will be used both within and surrounding the building. These include: water efficient systems and devices as well as landscaping materials that require little to no water.



Urban Agriculture - an opportunity for interaction



Green roof



Urban Agriculture - an opportunity for learning



Permeable paving helps with stormwater management



## 7.2 VIEW STUDY

A view study has been completed for the project to assess the impact of the new high-rise development in its context. Selected viewpoints include Lions Gate Bridge, Marine Drive, Esquimalt Avenue, Keith Road, and Sentinel Hill.

Please see image to the right and studies on subsequent pages for further detail.

1. Lionsgate Bridge @ North Tower
2. Park Royal Office Tower
3. Marine Drive @ 600 Block
4. Taylor Way @ Duchess Avenue
5. 850 Esquimalt Avenue
6. Taylor Way @ Keith Road
7. Marine Drive @ Bus Stop
8. Evelyn by Onni Phase One
9. Marine Drive @ Overpass
10. Park Royal Towers @ 19th Floor





## 7.2 VIEW STUDY

### 1. Lionsgate Bridge @ North Tower





## 7.2 VIEW STUDY

### 2. Park Royal Office Tower





## 7.2 VIEW STUDY

### 3. Marine Drive @ 600 Block





## 7.2 VIEW STUDY

### 4. Taylor Way @ Duchess Avenue





## 7.2 VIEW STUDY

5. 850 Esquimalt Avenue





## 7.2 VIEW STUDY

### 6. Taylor Way @ Keith Road





## 7.2 VIEW STUDY

### 7. Marine Drive @ Bus Stop





## 7.2 VIEW STUDY

### 8. Evelyn by Onni Phase One





## 7.2 VIEW STUDY

### 9. Marine Drive @ Overpass





**7.2 VIEW STUDY**

**10. Park Royal Towers @ 19th Floor**





### 7.3 SHADOW STUDY



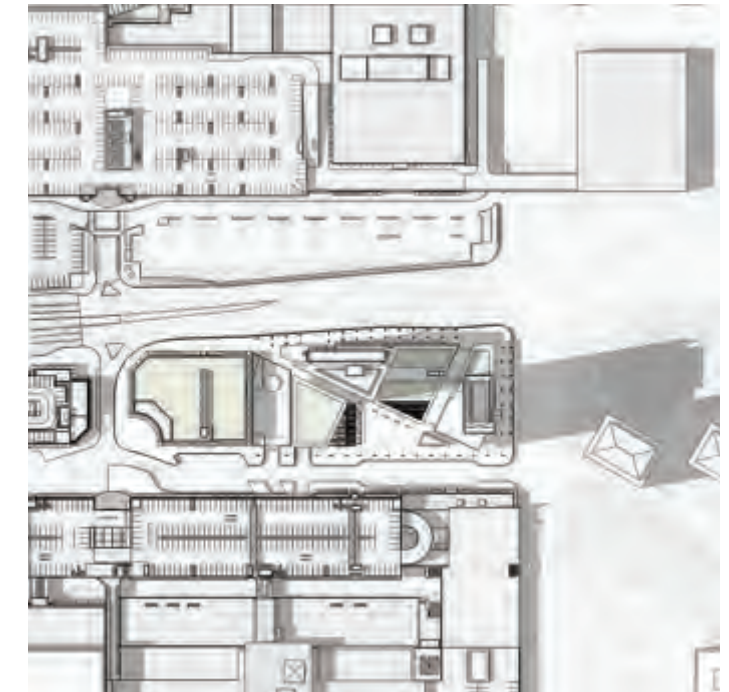
June 21st - 10:00 am



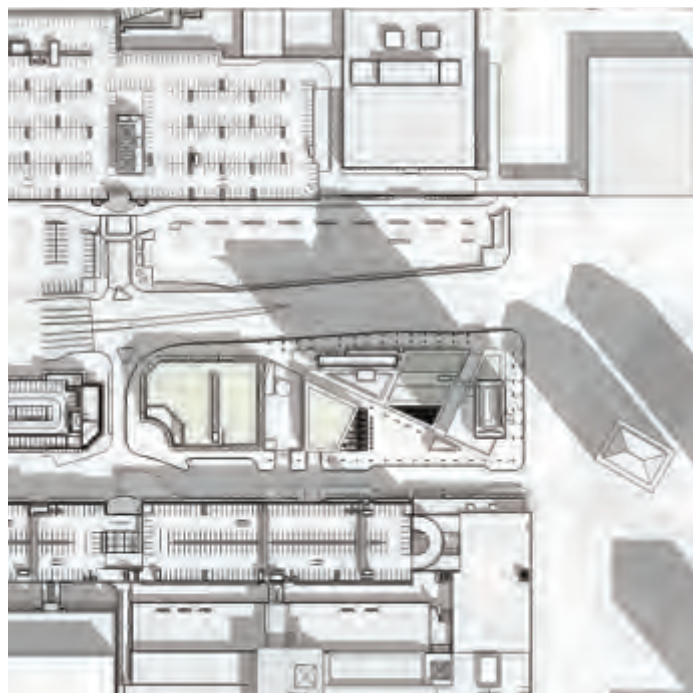
June 21st - 12:00 noon



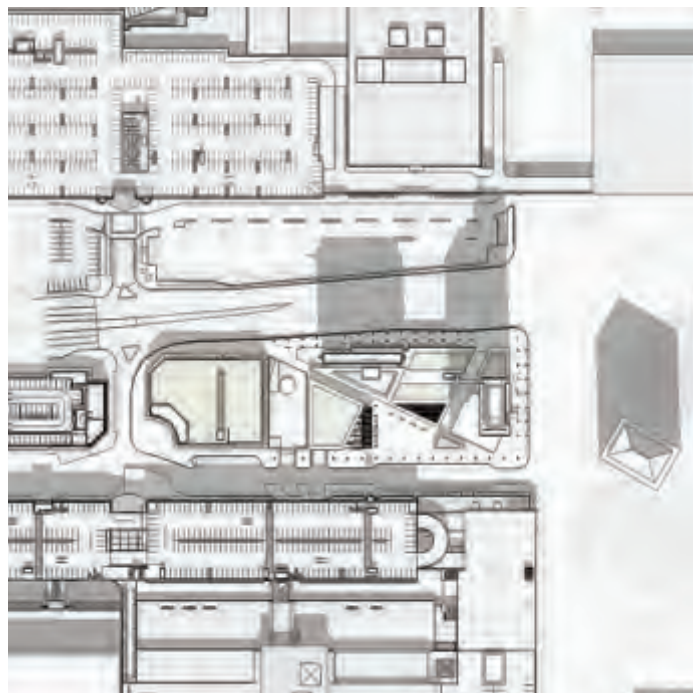
June 21st - 2:00 pm



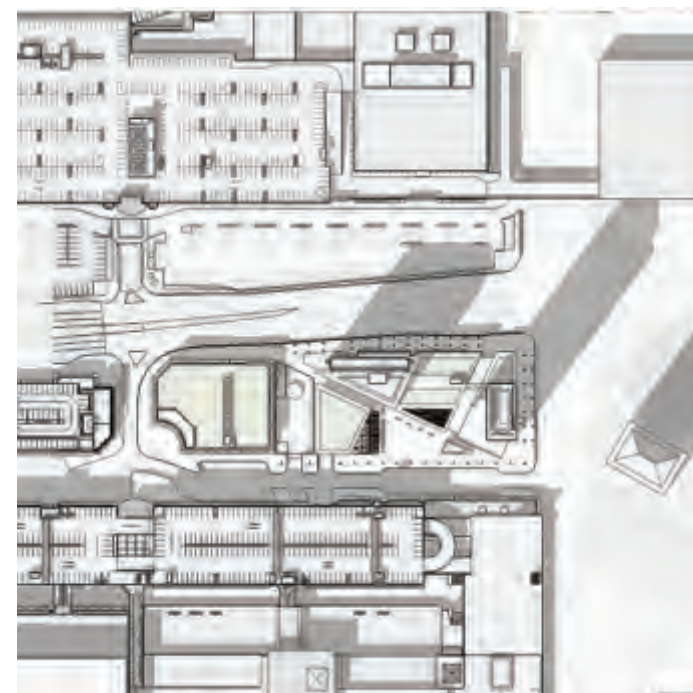
June 21st - 4:00 pm



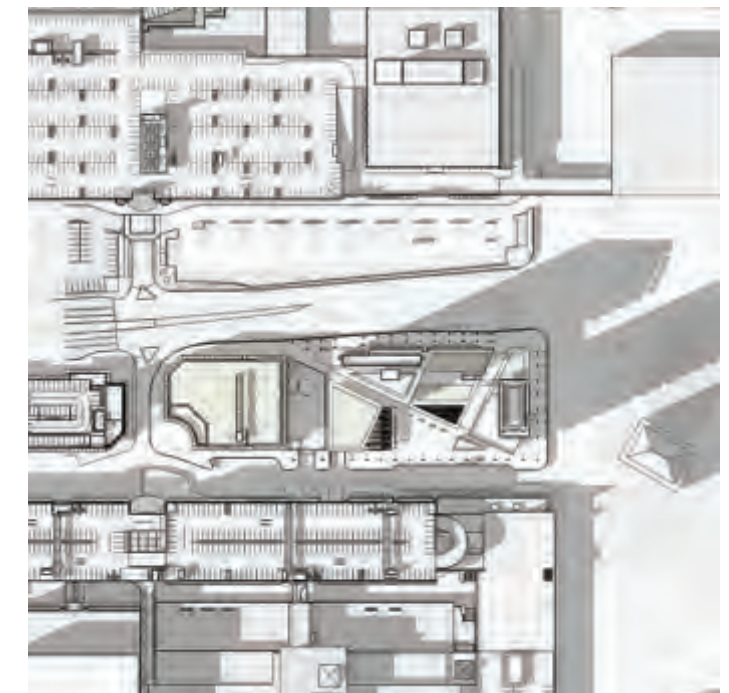
Sept 21st - 10:00 am



Sept 21st - 12:00 noon



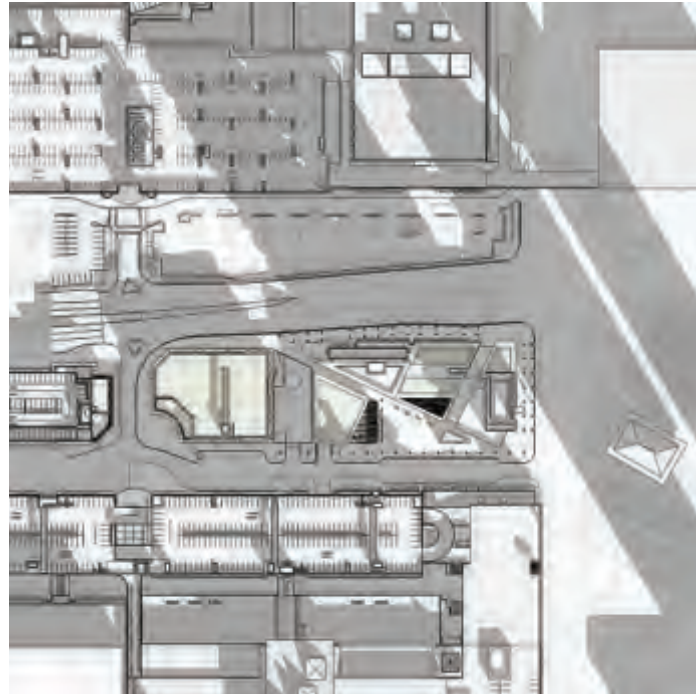
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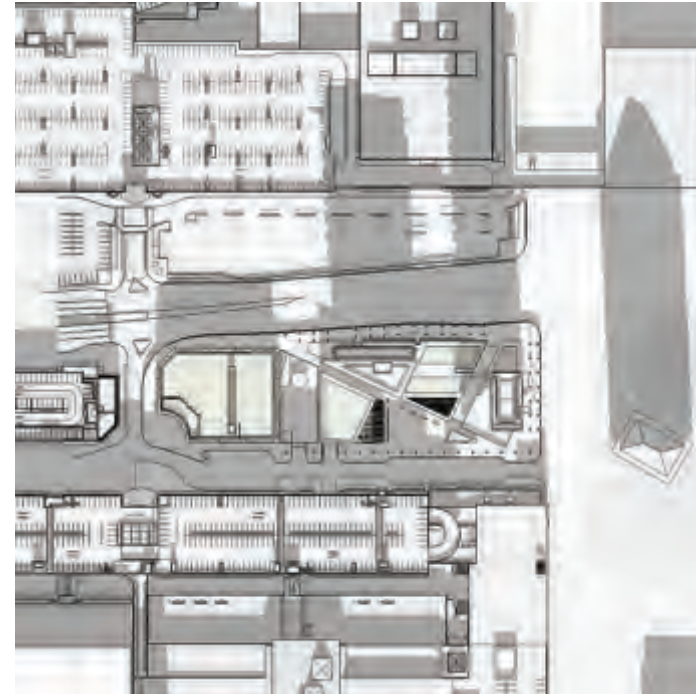
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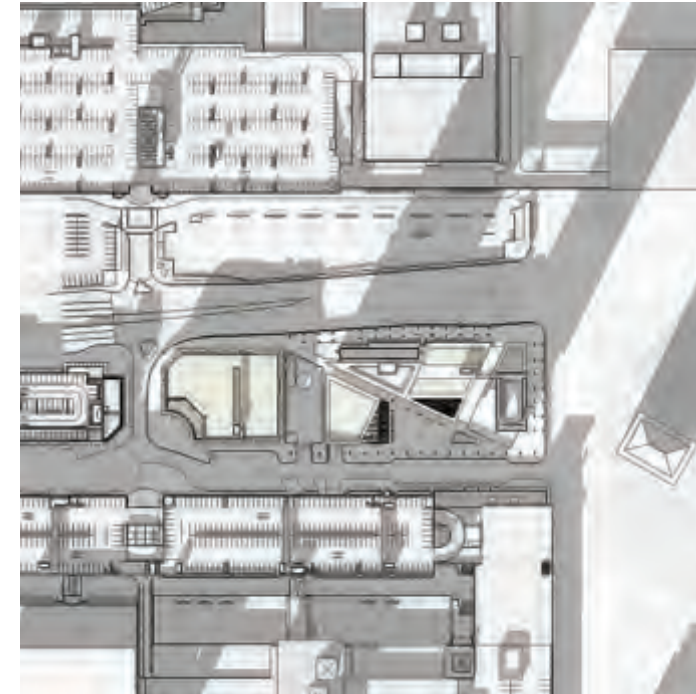
### 7.3 SHADOW STUDY



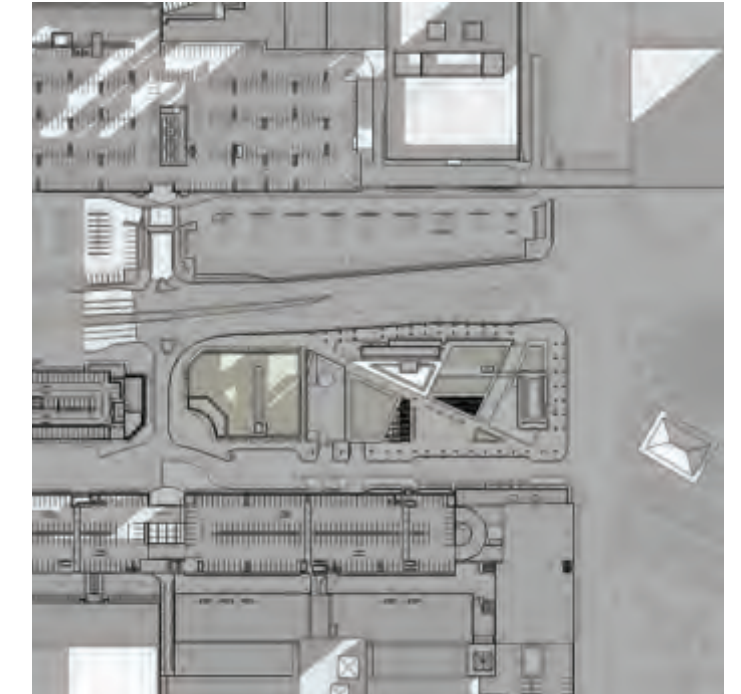
Dec 21st - 10:00 am



Dec 21st - 12:00 noon



Dec 21st - 2:00 pm



Dec 21st - 4:00 pm



# 7.4 PROJECT DATA

## Area Calculations

\*Note: Exterior balconies are not included in area calculations

East Block	Residential	Retail	Support	VRS	Office	Childcare	Res. Amenity	Mech
Level 1	1,605	7,351						
# of Units/Floor0								
Level 2 (VRS)	455			7,449				
# of Units/Floor10								
Level 3	4,394						1,700	
# of Units/Floor5								
Level 4 thru 24 (area per floor)	6,872							
# of Units/Floor7								
Level 25	5,287							
# of Units/Floor2								
Level 26	3,472							
# of Units/Floor1								
Level 27 - Mech Penthouse								1,900

West Block	Residential	Retail	Support	VRS	Office	Childcare	Res. Amenity	Mech
Level 1	1,772	13,519			1,336			
# of Units/Floor0								
Level 2	461				16,425			
# of Units/Floor0								
Level 3 (incl. Childcare)	8,874					2,651		
10								
Level 4	5,753						828	
6								
Level 5 thru 14 (area per floor)	6,581							
7								
Level 15	5,848							
# of Units/Floor2								
Level 15 - Mech Penthouse								1,900

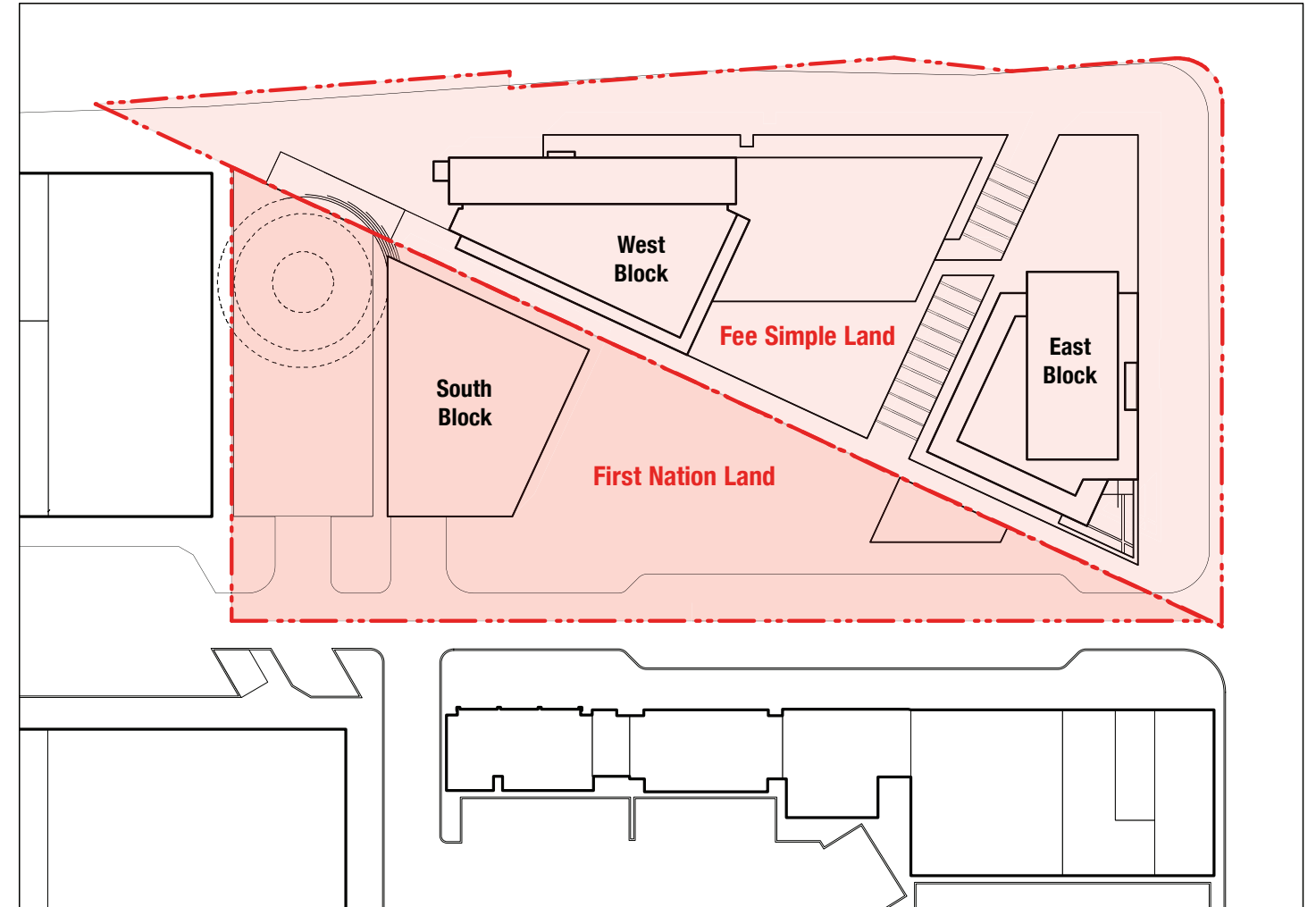
South Block	Residential	Retail	Support	VRS	Office	Childcare	Res. Amenity	Mech
Level 1		4,500						
<b>Sub Totals</b>	248,043	25,370	0	7,449	17,761	2,651	2,528	3,800

	Combined Sites	Fee Simple Only	Total No. Units	
<b>Total GFA</b>	307,602	302,846	<b>254</b>	
<b>FAR Exclusions</b>			1 BDRM	106
Residential Lobbies	1,725	1,800	2 BDRM	133
Amenity Space	2,528	3,800	VRS Units	10
<b>Total FAR Area</b>	303,349	297,246	PH Units	5
<b>Total Site Area</b>	101,613	60,460		
<b>FAR</b>	2.99	4.92		
<b>East Tower Height</b>	86.65m			
	26 Floors + Mech			
<b>West Tower Height</b>	51.75m			
	15 Floors + Mech			

Vehicle parking		
Office	22	1/800SF
Residential	274	1/Residential Unit
Residential Visitor	25	.1/Residential Unit
<b>Total</b>	321	

Secure Bike Parking		
Bike Valet Service	80	
Office/Retail	18	1/2500SF
Residential	382	1.5/Residential Unit
<b>Total</b>	480	

Loading	
Class B	2
<b>Total</b>	2





## 7.5 UPDATED TRIP GENERATION

November 12, 2014  
4111-48

Rick Amantea, Vice President Community Partnerships & Development  
Park Royal  
By email

Dear Rick:

**Re: 752 Marine Drive Rezoning Transportation Impact Assessment  
Site Trip Generation Update**

This letter has been prepared as a supplement to Bunt & Associates' Transportation Impact Assessment Report for the rezoning of 752 Marine Drive in West Vancouver, BC. The proposed site redevelopment would replace the 6,500 sq.ft GFA White Spot Restaurant with a mixed residential, commercial, retail and community uses development.

Bunt submitted a Draft TIA Report to the District of West Vancouver in regard to this site on January 3, 2013 which was subsequently reviewed by both District staff and a third party transportation consultant. Bunt's report was then updated and re-issued to District staff on March 4, 2013. The March 4, 2013 TIA report was based on land uses comprised of 289 apartment units, 4,500 sqft. GFA of retail and 15,800 sq.ft. GFA of undefined community uses

In Bunt's March 4, 2013 TIA report the total site traffic generation for the busiest Weekday PM Peak Hour period was forecast to be about 140 vph, of which about 15 vph were estimated to be pass-by retail trips already present on the road network. Therefore, about 125 net new trips were estimated to be added to the adjacent road network due to the redevelopment of the site. Subtracting the existing 85 vph generated by the White Spot restaurant (while it was in operation) resulted in an estimate of additional traffic generated by the 752 Marine Drive site of about 40 vph during the Weekday PM Peak Hour of traffic.

Since March, 2013 the site plan has undergone refinements and changes to the proposed land uses as requested by the District of West Vancouver; specifically, the number of residential units was reduced from 289 units to 254 units, the commercial was increased from 4,500 sq.ft. GFA to 25,439 sq.ft GFA, the community uses were decreased from 15,800 sq.ft. GFA to 2,651 sq.ft. GFA (and designated as Child Care) and office use of 17,761 sq.ft. GFA was added to the site plan. These land use changes will result in a different trip generation forecast, which is summarized in **Table 1** below.

**Bunt & Associates Engineering (BC) Ltd.**

Suite 1550 – 1050 West Pender Street, Vancouver, BC V6E 3S7 Tel 604 685 6427 Fax 604 685 6579

Vancouver Victoria Calgary Edmonton [www.bunteng.com](http://www.bunteng.com)

**Table 1: Updated Weekday PM Peak Hour Trip Generation**

Use	Size	Units	Trip Rate	Trips	Pass-by	Net Trips
Residential	254	units	0.30	77	0	77
Office	17,761	sq.ft.	0.97	18	0	18
Retail	25,439	sq.ft.	2.61	67	21	46
Child Care	2,651	sq.ft.	12.34	33	0	33
<b>All Uses</b>				<b>195</b>	<b>21</b>	<b>174</b>

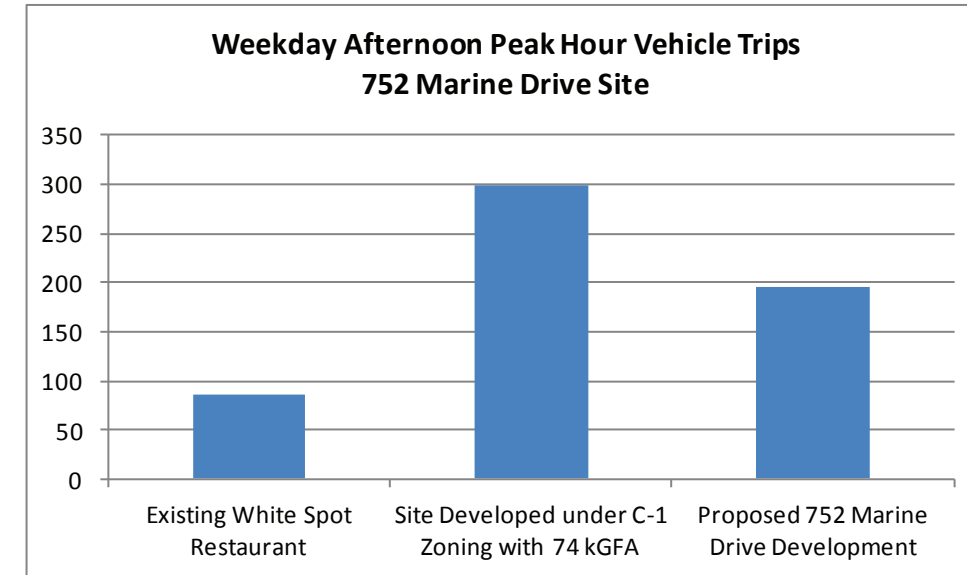
It can be seen that the updated land uses result in a Weekday PM Peak Hour site trip generation of approximately 195 vph, of which about 21 vph are expected to be retail pass-by and 174 vph are expected to be net new trips. Subtracting the White Spot restaurant Weekday PM Peak Hour trip generation, it is forecast that the site redevelopment will result in a total of 89 vph of additional traffic generated by the 752 Marine Drive site.

It is noted that retail and office uses generate considerably more traffic on an area basis than apartment uses; also, child cares have a significant pick-up/drop-off component which results in a much higher trip rate than other types of community uses. While the updated land uses result in an additional site traffic generation which is about 49 vph higher than the March 4, 2013 land uses, it is noted that if the site were redeveloped according to the existing Park Royal C-1 Zoning, the site trip generation would be considerably higher as summarized in Table 2.

**Table 2: Weekday PM Peak Hour Trip Generation with C-1 Zoning & Assumed Allowable Land Uses on 752 Marine Drive Site**

Use	Size	Units	Trip Rate	Trips	Pass-by	Net Trips
Restaurants	15,000	sq.ft.	13.00	195	59	137
Retail	29,000		2.61	76	23	53
Office	30,000	sq.ft.	0.97	29	0	29
<b>All Uses</b>				<b>300</b>	<b>81</b>	<b>219</b>

The graphic below illustrates the Weekday PM Peak Hour trip generation of the site under various land uses scenarios.



We trust this information assists with your Development Permit application to the District of West Vancouver.

Yours truly,  
Bunt & Associates

Jane Farquharson, P.Eng., PTOE  
Principal





