



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with “A” grade by NAAC | 12B Status by UGC | Approved by AICTE

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119

www.sathyabama.ac.in

SCHOOL OF BUILDING AND ENVIRONMENT
DEPARTMENT OF ARCHITECTURE
PRACTICAL TRAINING PORTFOLIO (SAR4063)
DEC 2022

Name of the Student : **R. ANUSHREE**

Batch : **2019 - 2024**

Reg No. : **39210006**

Semester : **VII**



RSP
FORUM
Sanitary Computation

Handwritten notes and diagrams on a piece of paper, including the text "VAPOR" and "CONDENSATION".

ARCH-FOLIO



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SCHOOL OF BUILDING AND ENVIRONMENT
DEPARTMENT OF ARCHITECTURE
VIVA-VOCE EXAMINATION

This is to certify that the practical training SAR 4063 is the work of **R.ANUSHREE** who had undergone training in **RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD, SINGAPORE** has been monitored by the continuous assessment during **JUNE 2022 to NOVEMBER 2022**.

A handwritten signature in green ink, reading "Devyani Gangopadhyay".

Dr. Devyani Gangopadhyay
DEAN

Submitted for Viva voce Examination held on 13.12.2022

A handwritten signature in blue ink, reading "Internal Examiner".

Internal Examiner

A handwritten signature in blue ink, reading "External Examiner".

External Examiner





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SCHOOL OF BUILDING AND ENVIRONMENT
DEPARTMENT OF ARCHITECTURE
VIVA-VOCE EXAMINATION

DECLARATION

I, **R.ANUSHREE** hereby declare that the Training Report **JUNE 2022 to NOVEMBER 2022** done by me under the guidance of **Ar. SONNY CHIONH** is submitted in partial fulfilment of the requirements for the completion of practical training session.

DATE : 13.12.2022 .

PLACE : CHENNAI

A handwritten signature in black ink, appearing to be 'R. Anushree', written in a cursive style.

SIGNATURE OF CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to **Board of Management of SATHYABAMA** for their kind encouragement in doing this practical training and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. Devyani Gangopadhyay**, Dean, School of Building and Environment and **Ar.Sarath Chandra Kanth**, Design Chair, Department of Architecture for having been a constant source of support and encouragement.

I wish to express my thanks to all Teaching and Non-teaching staff members of the Department of who were helpful in many ways for the completion of the project.

I also wish to thank **Ar. Sonny Chionh** and **Ar. Pham Anh Quoc Bao**, for the experience of interning at their firm, **RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD, 1 Kallang Junction #03-01 Singapore 339263.**



RSP Architects Planners & Engineers (Pte) Ltd
1-KaFang Junction #05-01
Singapore 330055
Reg. No. 196300065W
T +65 6737 7544
F +65 6291 7809
info@rsp.sg
www.rsp.sg

22 April 2022

Private & Confidential

Anushree Ramanathan
Blk 469B Admiralty Drive
#04-69
Singapore 752469

Dear Anushree,

INTERSHIP

We are pleased to offer you an internship opportunity with RSP, subject to the following terms & conditions:

1. INTERSHIP DURATION

The internship will commence on 1 June 2022 and end on 15 November 2022.

2. INTERSHIP ALLOWANCE

Your allowance shall be S\$1,200.00 per month. This will be subject to prevailing CPF contribution rates (if applicable).

2. OFFICIAL WORKING HOURS

Official working hours are Mondays to Fridays from 8.30 am to 5.30 pm. You are expected to be responsive to calls of duty beyond official working hours when necessary.

3. ANNUAL LEAVE

You are entitled to 5 working days of paid leave, pro-rated to your duration of service in the calendar year.

4. MEDICAL LEAVE & BENEFITS

All sick leaves must be supported by medical certificates and you should inform the office of your absence as soon as possible.

You will be reimbursed for normal medical expenses charged by General Practitioners up to \$50 per consultation and capped at \$500 per annum, pro-rated to your duration of service in each calendar year. You will not be covered for specialists and dental consultations, X-rays, blood/laboratory/special tests and injections.



5. TERMINATION

Termination of service, either party may give to the other a one-week's written notice.

We look forward to having you on-board and trust that you will have an enriching and fruitful intern experience with the Company.

Yours faithfully

Ng Meng Hui
Deputy Managing Director

ACCEPTANCE

I confirm my acceptance of the internship subject to the terms and conditions as mentioned above.

Name Anushree Ramanathan

Date:

26.04.2022



RSP Architects Planners
& Engineers (Pte) Ltd
1 Kallang Junction #03-01
Singapore 339202

T +65 6737 7544
F +65 6291 7909
rsp@rsp.sg
www.rsp.sg

2 June 2022

Private & Confidential

To Whom It May Concern

Dear Sir/Madam,

CERTIFICATION OF INTERNSHIP

This is to certify that Miss Anushree Ramanathan of NRIC T0171670G is currently under our employment as an Intern, the internship period will be from 1 June 2022 to 15 November 2022.

For further clarifications, please contact us at people@rsp.sg

Yours faithfully,



Sandra Chua
Human Resources Manager

DEPARTMENT OF ARCHITECTURE

PROFESSIONAL PRACTICAL TRAINING REPORT 2022

(Continuous progress report of the trainee architect for the period of One month in the office to be submitted to HOD by the Trainee in Charge of the Organization)

- Name of the office / organization :** RSP Architects Planners & Engineer (Pte) Ltd.
- Address & Contact Number :** 1 Kallang Junction #03-01, Singapore 339263
Contact : (65) 67377544
- Name of the student :** Anushree Ramanathan
- Duration :** From 01.06.2022 To 30.06.2022
- Total No. of days :** 22 days

- Evaluation of Performance criteria shall be on**
* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month which will be converted to the allotted 90 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture		✓			
Participation in the office	✓				
Reading of drawings		✓			
Presentation Techniques		✓			
Model making works					✓
Understanding of construction details		✓			
Drafting Skills (Manual / Computer)		✓			
Site Supervision / Discussion with clients					✓
Adherence to Time schedule	✓				
Other computer skills		✓			
File and Office Maintenance					✓
Coordination with other consultants					✓
Overall Grading*	A				

(A-90, B-80, C-70, D-60, E-50)

DEPARTMENT OF ARCHITECTURE

PROFESSIONAL PRACTICAL TRAINING REPORT 2022

(Continuous progress report of the trainee architect for the period of One month in the office to be submitted to HOD by the Trainee in Charge of the Organization)

- Name of the office / organization :** RSP Architects Planners & Engineer (Pte) Ltd.
- Address & Contact Number :** 1 Kallang Junction #03-01, Singapore 339263
Contact : (65) 67377544
- Name of the student :** Anushree Ramanathan
- Duration :** From 01.07.2022 To 31.07.2022
- Total No. of days :** 20 days

- Evaluation of Performance criteria shall be on**
* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month which will be converted to the allotted 90 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture		✓			
Participation in the office	✓				
Reading of drawings		✓			
Presentation Techniques			✓		
Model making works					✓
Understanding of construction details			✓		
Drafting Skills (Manual / Computer)		✓			
Site Supervision / Discussion with clients					✓
Adherence to Time schedule	✓				
Other computer skills		✓			
File and Office Maintenance					✓
Coordination with other consultants					✓
Overall Grading*	B				

(A-90, B-80, C-70, D-60, E-50)

DEPARTMENT OF ARCHITECTURE

PROFESSIONAL PRACTICAL TRAINING REPORT 2022

(Continuous progress report of the trainee architect for the period of One month in the office to be submitted to HOD by the Trainee in Charge of the Organization)

- Name of the office / organization :** RSP Architects Planners & Engineer (Pte) Ltd.
- Address & Contact Number :** 1 Kallang Junction #03-01, Singapore 339263
Contact : (65) 67377544
- Name of the student :** Anushree Ramanathan
- Duration :** From 01.08.2022 To 31.08.2022
- Total No. of days :** 22 days

- Evaluation of Performance criteria shall be on**
* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month which will be converted to the allotted 90 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture		✓			
Participation in the office	✓				
Reading of drawings		✓			
Presentation Techniques			✓		
Model making works					✓
Understanding of construction details		✓			
Drafting Skills (Manual / Computer)		✓			
Site Supervision / Discussion with clients					✓
Adherence to Time schedule	✓				
Other computer skills		✓			
File and Office Maintenance					✓
Coordination with other consultants					✓
Overall Grading*	B				

(A-90, B-80, C-70, D-60, E-50)

- Any other Remarks :** Anushree contributes well in internal discussions and has good hand sketches. She has good speed and makes sure she can deliver on time. She can do better in ensuring accuracy in her work.

B. Signature of the:
Head of the Office
/ Organization
(With Seal)


Sonny Chionh
Executive Director



- Any other Remarks :** She can do better.

B. Signature of the:
Head of the Office
/ Organization
(With Seal)


Pham Anh Quoc Bao


Sonny Chionh



- Any other Remarks :** Should spend on thinking before taking action. She can do better.

B. Signature of the:
Head of the Office
/ Organization
(With Seal)


Pham Anh Quoc Bao
30 Aug 22


Sonny Chionh
5 Sep 2022



DEPARTMENT OF ARCHITECTURE

PROFESSIONAL PRACTICAL TRAINING REPORT 2022

(Continuous progress report of the trainee architect for the period of One month in the office to submitted to HOD by the Trainee in Charge of the Organization)

- Name of the office / organization :** RSP Architects Planners & Engineer (Pte) Ltd.
- Address & Contact Number :** 1 Kallang Junction #03-01, Singapore 339263
Contact : (65) 67377544
- Name of the student :** Anushree Ramanathan
- Duration :** From 01.09.2022 To 30.09.2022
- Total No. of days :** 22 days
- Evaluation of Performance criteria shall be on**

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month which will be converted to the allotted 90 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture	✓				
Participation in the office	✓				
Reading of drawings		✓			
Presentation Techniques		✓			
Model making works					✓
Understanding of construction details		✓			
Drafting Skills (Manual / Computer)		✓			
Site Supervision / Discussion with clients		✓			
Adherence to Time schedule	✓				
Other computer skills		✓			
File and Office Maintenance	✓				
Coordination with other consultants	✓				
Overall Grading*	A				

(A-90, B-80, C-70, D-60, E-50)

DEPARTMENT OF ARCHITECTURE

PROFESSIONAL PRACTICAL TRAINING REPORT 2022

(Continuous progress report of the trainee architect for the period of One month in the office to submitted to HOD by the Trainee in Charge of the Organization)

- Name of the office / organization :** RSP Architects Planners & Engineer (Pte) Ltd.
- Address & Contact Number :** 1 Kallang Junction #03-01, Singapore 339263
Contact : (65) 67377544
- Name of the student :** Anushree Ramanathan
- Duration :** From 01.10.2022 To 31.10.2022
- Total No. of days :** 20 days
- Evaluation of Performance criteria shall be on**

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month which will be converted to the allotted 90 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture		✓			
Participation in the office	✓				
Reading of drawings		✓			
Presentation Techniques			✓		
Model making works					✓
Understanding of construction details		✓			
Drafting Skills (Manual / Computer)		✓			
Site Supervision / Discussion with clients		✓			
Adherence to Time schedule	✓				
Other computer skills		✓			
File and Office Maintenance		✓			
Coordination with other consultants		✓			
Overall Grading*	A				

(A-90, B-80, C-70, D-60, E-50)

DEPARTMENT OF ARCHITECTURE

PROFESSIONAL PRACTICAL TRAINING REPORT 2022

(Continuous progress report of the trainee architect for the period of One month in the office to submitted to HOD by the Trainee in Charge of the Organization)

- Name of the office / organization :** RSP Architects Planners & Engineer (Pte) Ltd.
- Address & Contact Number :** 1 Kallang Junction #03-01, Singapore 339263
Contact : (65) 67377544
- Name of the student :** Anushree Ramanathan
- Duration :** From 01.11.2022 To 15.11.2022
- Total No. of days :** 11 days
- Evaluation of Performance criteria shall be on**

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month which will be converted to the allotted 90 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture	✓				
Participation in the office	✓				
Reading of drawings		✓			
Presentation Techniques	✓				
Model making works					✓
Understanding of construction details		✓			
Drafting Skills (Manual / Computer)		✓			
Site Supervision / Discussion with clients	✓				
Adherence to Time schedule	✓				
Other computer skills		✓			
File and Office Maintenance	✓				
Coordination with other consultants	✓				
Overall Grading*	A				

(A-90, B-80, C-70, D-60, E-50)

7. Any other Remarks : Anu can be depended on for delivering the task. She can continue to improve on her understanding and appreciation of the tasks given to her.

8. Signature of the:
Head of the Office / Organization
(With Seal)

Sonny Chiorh

7. Any other Remarks : Anu has contributed well in the projects that she worked on. We are also pleased with her speed. We hope that she has taken away good experiences from her time here.

8. Signature of the:
Head of the Office / Organization
(With Seal)

Sonny Chiorh

7. Any other Remarks : Anu contributes well in discussion with clients and contractors. She has improved her accuracy in her work and delivers on time.

8. Signature of the:
Head of the Office / Organization
(With Seal)

Sonny Chiorh

S.NO	WORKING DAYS	PROJECT NAME	DESCRIPTION OF THE WORK
1	DAY 1 - 10	RESORTS WORLD SENTOSA - FORUM	Discussion on fire safety standards and escape routes ; DRA addition = GFA addition proposal for the forum ; Fire standards calculation for the no.of staircase required considering 100% F&B and 100% RETAIL; Client meeting - mall benchmark presented.
		RESORTS WORLD SENTOSA - CENTRAL ZONE	Study and analysis of the A&A work allotted ; to find the area discrepancy in the central zone of the given existing RWS1.0 BASE NET plan; Tabulation of the calculated GFA of separate zones such as WATERFRONT , BASEMENT CZ, FORUM ,ETC
2	DAY 10 - 20	RESORTS WORLD SENTOSA - FORUM	Client meeting - benoy's presentation on heights , ideology, landscape , detailed model with landscape and discussion about the height restrictions and M&E; RWS 2.0 sanitary computation requirements study and presentation; Cross checking the Sanitary provision of the BALLROOM to analyse the possibilities of using the available extras for the FORUM
3	DAY 20 - 30	RESORTS WORLD SENTOSA - FORUM	Area verging of the ballroom ; calculating the occupany load for the accessible area of the ballroom
		RESORTS WORLD SENTOSA - CENTRAL ZONE	Area verging of the WEST ZONE and excel tabulation
4	DAY 30 - 40	RESORTS WORLD SENTOSA - FORUM	Working on the LONO submission - the cover letter , drawings , Forum B1 overall GFA and addition proposals ; done and mailed to SDC
		RESORTS WORLD SENTOSA - CENTRAL ZONE	Overall Register list - for the CENTRAL ZONE -- documented & submitted ; area verging for WEST ZONE - WATER THEME PARK ; west zone area verging presentation
		CAPITASPRING	Preparing ERI and RVO letter for the contractors and issuing AD letter.
5	DAY 40 - 50	RESORTS WORLD SENTOSA - FORUM	GFA tabulation error change for the LONO submission
		WILMAR INTERNATIONAL	Meeting with the contractors on the defect issues , as-built drawings, OMM; Signing off the defect list ; uploaded the files on the server; Issuing AD (Architect's Direction) for the metal hook of the safety barrier ; saving files into the server
		CAPITASPRING	Checking out the NEA , LTA , PUB , Nparks submissions and records copy ; presentation about Capita spring façade and technology
6	DAY 50 - 60	RESORTS WORLD SENTOSA - FORUM	Presentation on high level study on fire safety and standards ; cross-checking on the revised and base CAD drawing for addition or elimination of service cores ; sanitary computation final draft on the phase 2 confirmed GFA
		WILMAR INTERNATIONAL	Defects list sign-off and mailing
		CAPITASPRING	Analysis and study on the traingular riser and possibilities of an FR door proposal ; discussion with Qin on the same ; presentation and proposals documented
7	DAY 60 - 70	RESORTS WORLD SENTOSA - FORUM	Amendment of the exit capacity , occupation load with respect to the comment given by CHINWIN in the meeting and determining the staircase count ; GFA tabulation ; sanitary computation
		WILMAR INTERNATIONAL	Meeting with the contractors on the As built, OMM, defects and budget
		CAPITASPRING	Capita Spring -- presentation about the façade for INDONESIA MEETING and Draft 2 presentation discussion with Nina and Darren

CHIEF ARCHITECT'S SIGNATURE



S.NO	WORKING DAYS	PROJECT NAME	DESCRIPTION OF THE WORK
8	DAY 70 - 80	RESORTS WORLD SENTOSA - FORUM	Checking the LONO CAD plans for Sanitary, staircase exit capacity and lift core , FEA proposal on extg condition and transportation HUB proposal and changes; Fire code compliance study ; lift core overlapping study; sanitary computation explanation meeting with BNY Nutcha
		WILMAR INTERNATIONAL	Wilmar defect list site check ; sign-off and mailing
		WESTMALL	Demarcation of the Fire extg., horse reel, etc on the plans; Discussion with Chin Qin and Siqi on the HCP fire saefy provision, exit staircase dimension etc
		ROBIN - DD	Technical due diligence report discussion meeting with client and consultants
8	DAY 80 - 90	RESORTS WORLD SENTOSA - FORUM	Transportation hub - turning radii proposal and plotting Acad ; Fea stages - Acad presentation and plotting ; P3 conusltants meeting at RSP regarding the micro programme, M&E CSC PSG structural and BNY designs; Sanitary provision study comment and meeting BNY ;Performance based study for SCDF; sanitary check of the extg condition and dimension layout
		WILMAR INTERNATIONAL	Wilmar defect list site check ; sign-off and mailing
		WESTMALL	Tender layouts and fire fighting provision check of the existing structure.
		ROBIN - DD	Technical due diligence report draft preparation
9	DAY 90 - 100	RESORTS WORLD SENTOSA - FORUM	Final scdf perfomance based presentation., acad area verging and submission ; clear ceiling plan markout for the new plan, door layout for the PP submission
		WILMAR INTERNATIONAL	Defects list sign-off and status check with Jo
		26 VICTORIA PARK	Site observation and design proposal
10	DAY 100 - 110	RESORTS WORLD SENTOSA - FORUM	P3 technical coordination meeting , drafting 500 series ceiling plans, URA submission door markups
		WILMAR INTERNATIONAL	Defects list sign-off and status check with Jo; As-built drawings sign-off check
		26 VICTORIA PARK	Construction drawing of the proposed gym ; Materials check with contractors
11	DAY 110 - 120	RESORTS WORLD SENTOSA - FORUM	URA submission door markups for rest of the levels ; SCDF code compliance base detailed study ; Occupancy Load detailed split-up; 500 series clear ceiling layout update and mailing to T1 ; Handovers
		WILMAR INTERNATIONAL	Defects list sign-off and status check with Jo; As-built drawings sign-off check and handovers
		26 VICTORIA PARK	Handing over the construction drawings and getting architect's approval

CHIEF ARCHITECT'S SIGNATURE





RSP Architects Planners
& Engineers (Pte) Ltd
1 Kallang Junction #03-01
Singapore 339263

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F +65 6757 7500
rsp@rsp.sg
www.rsp.sg

15 November 2022

Private and Confidential

To Whom It May Concern

Dear Sir/Madam,

CERTIFICATION OF INTERNSHIP

We confirm the below-mentioned has completed her internship in RSP:

Employee ID : T268
Name: Anushree Ramanathan
NRIC/FIN: T0171670G
Designation: Intern
Internship Period: 1 June 2022 to 15 November 2022
Last Salary Drawn: Basic Salary of S\$1,200.00 per month

Anushree was also involved in the following projects during her internship:

No.	Title	Job No.	Project Description
1	Resort World - Forum	190088-P3	Resorts World 2.0 Enhancement & Expansion Works
2	CapitaSpring	150015	Proposed 51-Storey Commercial Development with A Basement and Comprising Shopping/ Hawker Centre (Air Space Lot) / Serviced Apartments / Office/ Multi-Storey Carpark and Ancillary Facilities on Lots 00505n & 00660x-Pt, Ts 01 At Market Street / Chulia Street / Church Street
3	Wilmar International	170149	Proposed New Erection of Business Park Development Comprising 1 Block Of 7-Storey with Two Basements on Lot 05440x Mk03 At Biopolis Road (Queenstown Planning Area)
4	61 Robinson (Proj Robin)	220075	Architectural, Civil & Structural and Mechanical & Electrical Engineering for Technical Due Diligence for Project Robin, 61 Robinson Road
5	West Mall	210087	Proposed Addition and Alterations to Existing 5-Storey Shopping Complex with 3 Basement and a New Single Storey Extension on Lot 03071V MK at 1 Bukit Batok Central Link
6	Victoria Park - Gym	BZ21054	Proposed Addition and Alterations to 2-Storey Detached Dwelling House with a Basement a Attic (New Pavilion) on Lot 99005C MK 2 At 26 Victoria Park Road

For further clarifications, please contact us at people@rsp.sg

Yours faithfully,

Sandra Chua
Human Resources Manager



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01

— *RSP Architects Planners & Engineers Pte Ltd* —

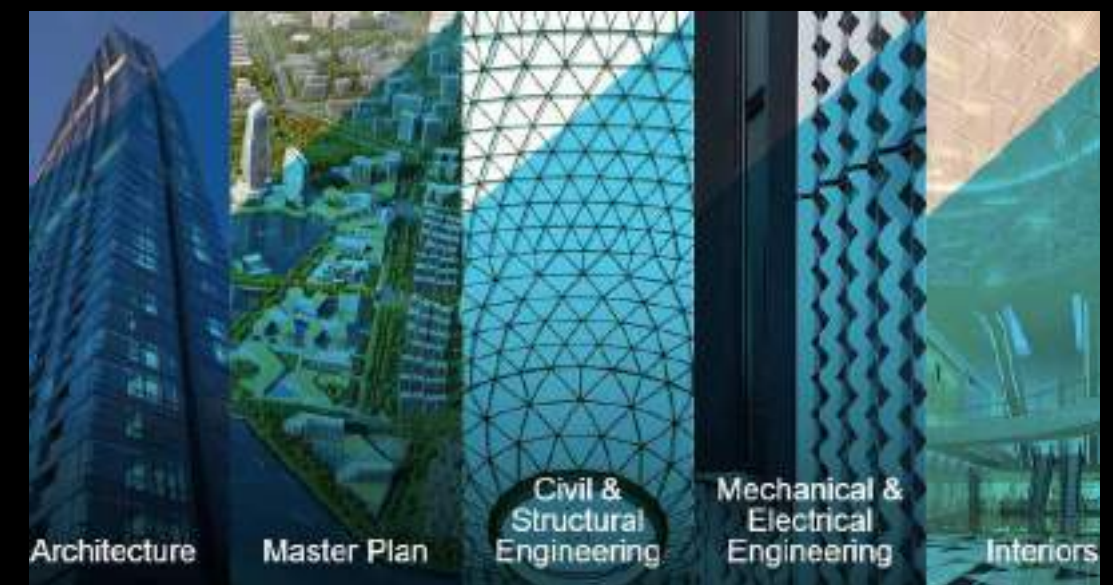
About the Firm, Awards and Projects



ABOUT THE FIRM

RSP is a worldwide, multidisciplinary architectural and engineering design firm with its global headquarters in Singapore.

For 65 years, they have concentrated on making ideas that are imaginative and unique in concept but more importantly, that improve and enhance people's lives.



RSP's global network of 1200 specialists and professionals working across 15 studios in 6 countries enables them to combine their strong technical skills with their futuristic perspective on purpose and design.

Their portfolio includes more than 2500 international projects and includes sectors such as Master planning, Mixed use,, Retail, Office, Education, Residential, Civic Hospitality, Industrial, Transport and Healthcare.

PROJECTS BY RSP



AWARDS



Resorts World Sentosa – Forum

To comprehend design approaches and produce a Code Compliance Analysis for the Resorts World Sentosa addition and alternation work. Additionally, to suggest modifications to the Fire Engine Access Route and Transportation Hub.

SITE LOCATION – SENTOSA & BRANI MASTERPLAN

SENTOSA MASTERPLAN

The Sentosa-Brani master plan is one of the tourism development project to position Singapore as a leading destination for the next few decades.

A 30,000 sqm multi-sensory walkway will be the first milestone project of the Sentosa-Brani masterplan which is to be implemented in phases.

Sentosa Sensoryscape, which will connect Resorts World Sentosa (RWS) in the north to Sentosa's southern beaches complements the expansion of Resorts World Sentosa and subsequent infrastructure enhancements on Sentosa and Pulau Brani.

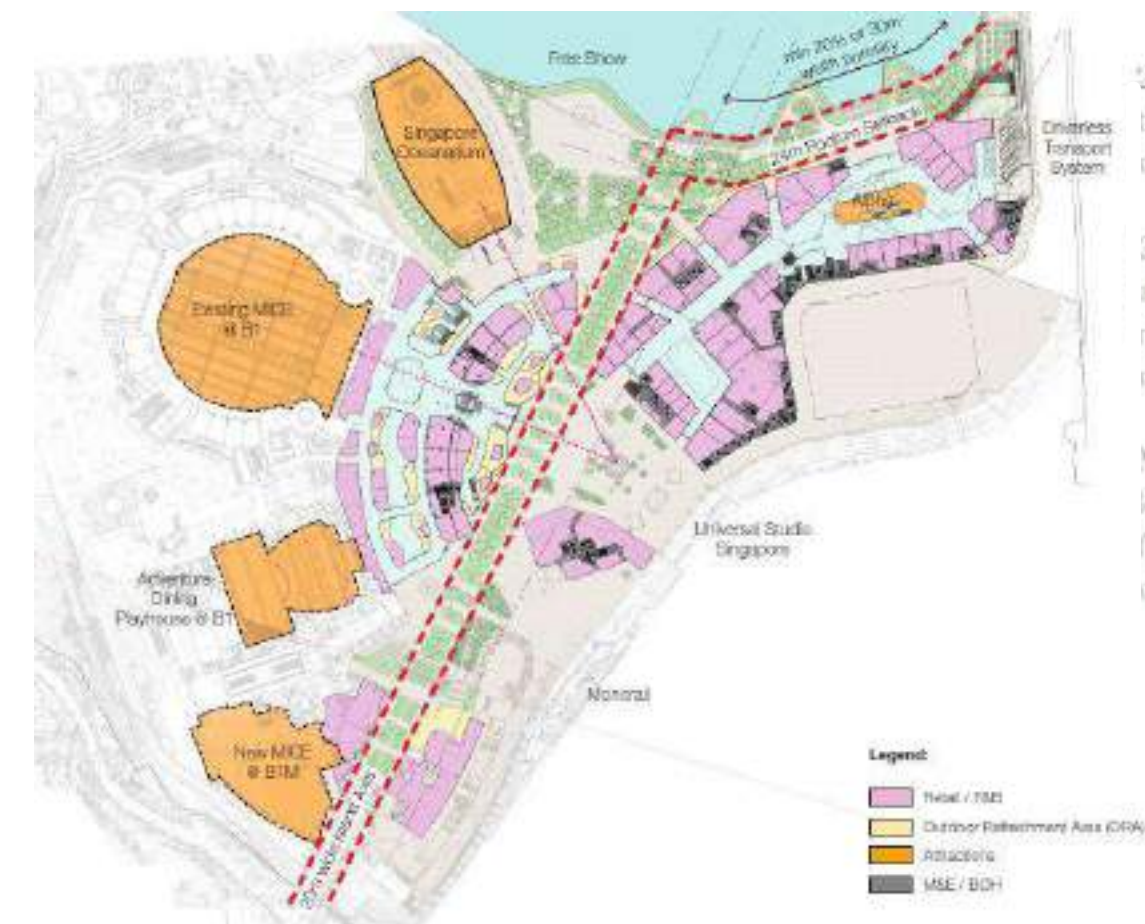
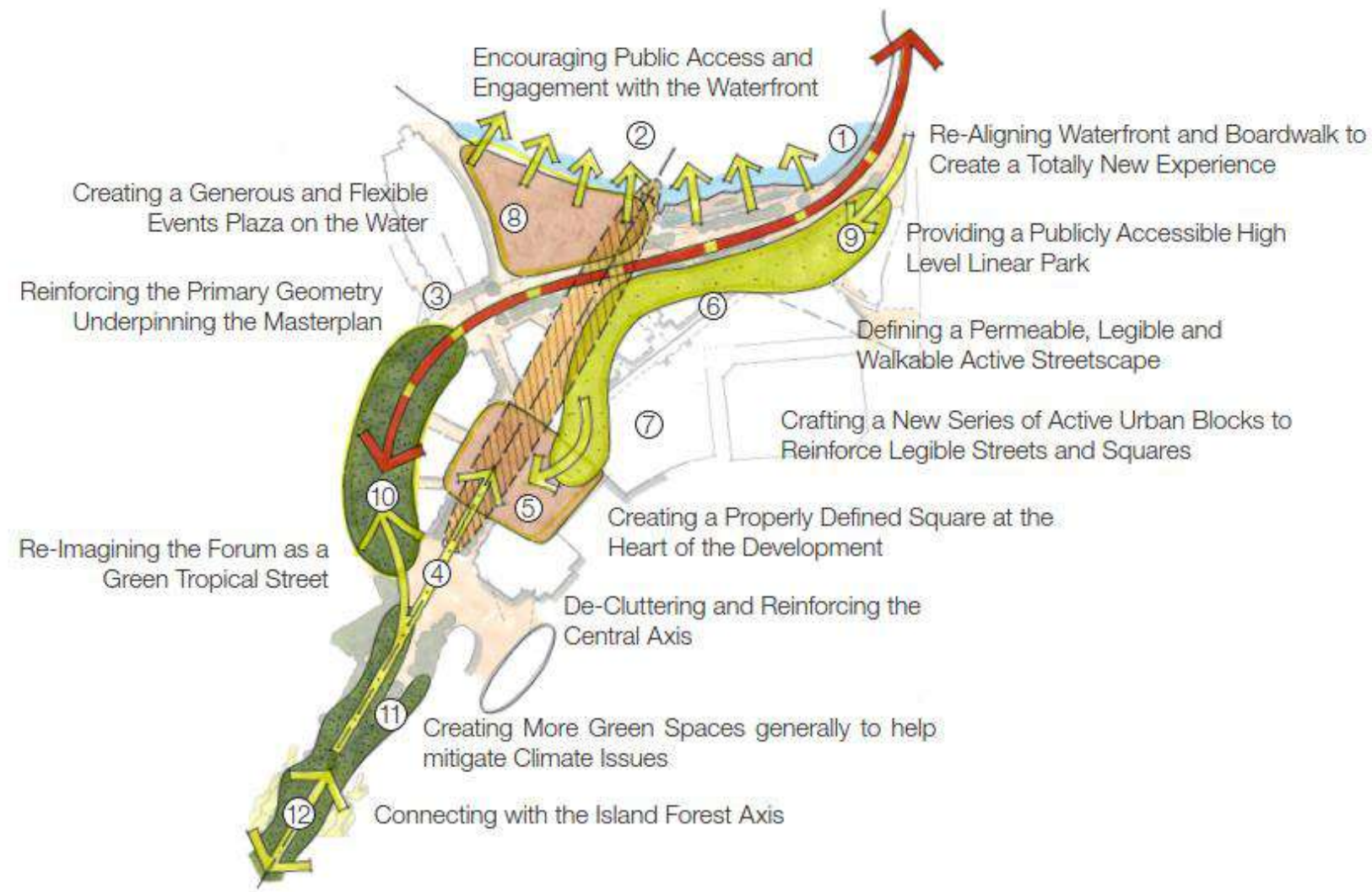
The Sensoryscape will have features that stimulates the five senses such as textured surfaces and plants that respond to touch, a water feature with the sound of cascading water and visually striking giant flower stalks framing the sides of the thoroughfare.

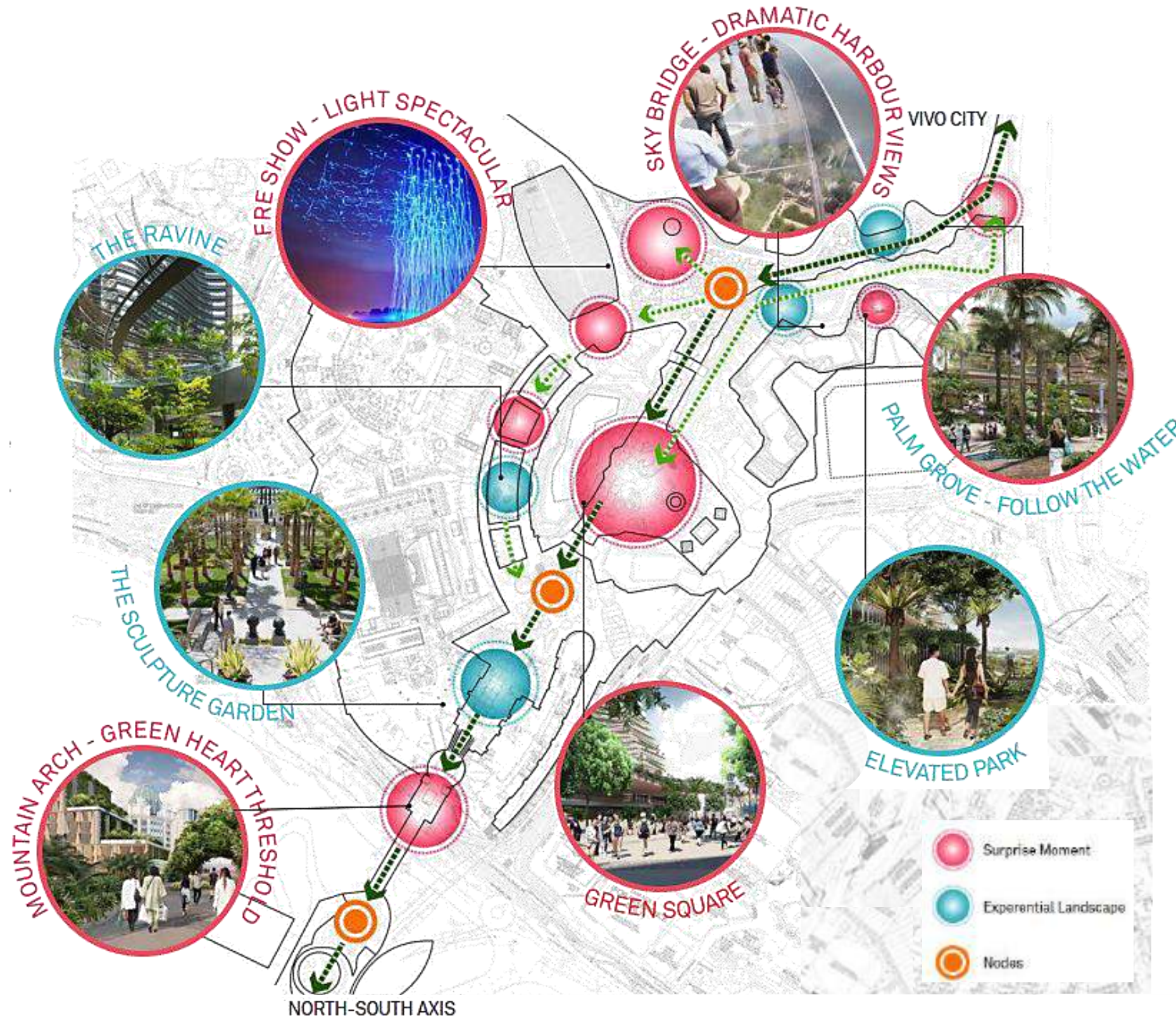
This thoroughfare linking RWS with Sentosa's beaches will make the island more accessible for all guests and offer an enhanced and varied experience that begins at VivoCity all the way to the southern beaches.



SENTOSA MASTERPLAN

DESIGN STRATEGIES AND PLANNING





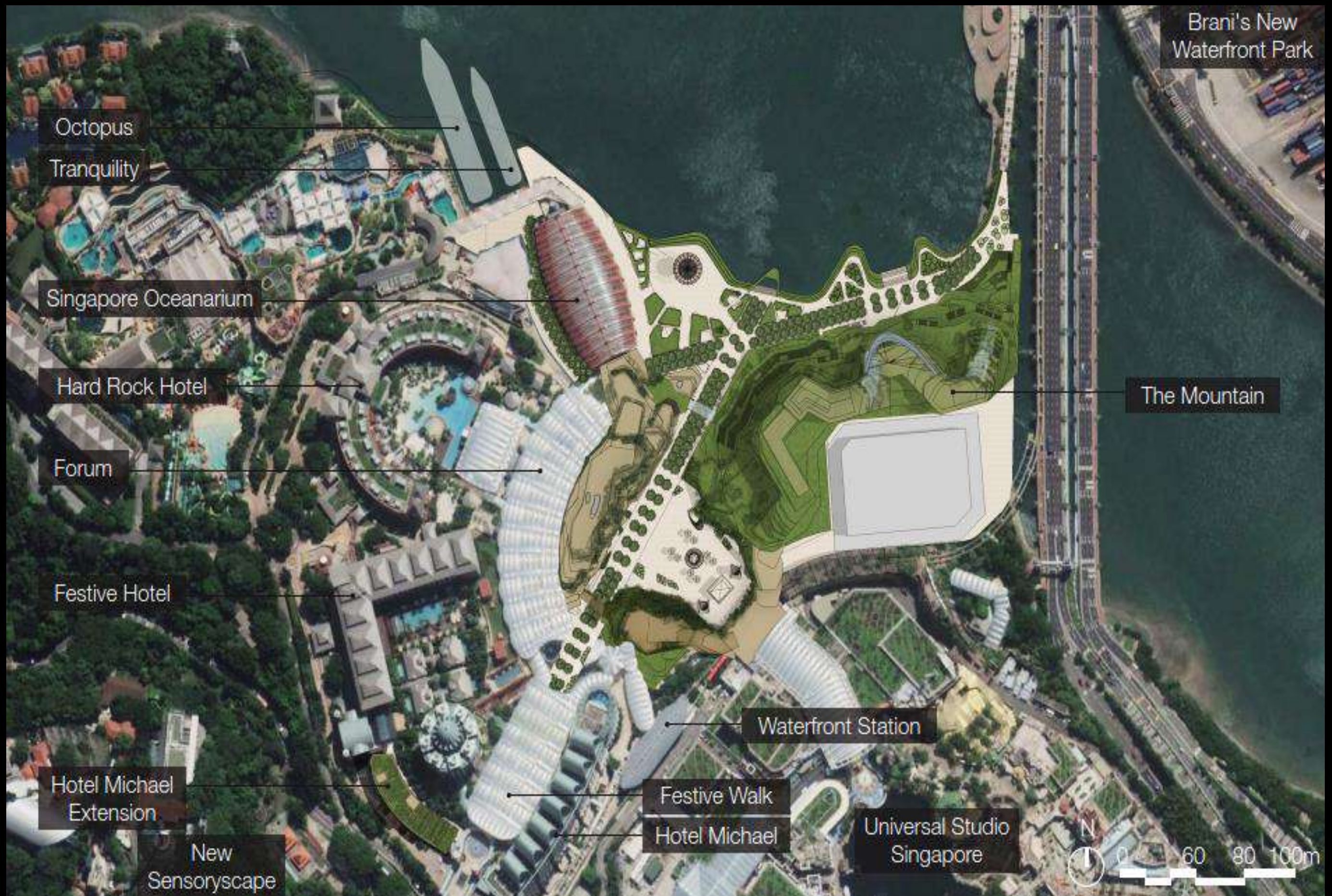
LANDSCAPE OVERVIEW

The Landscape design will help to curate the proposed series of spaces, working together with existing and new architecture.

It will act as a device to integrate and shape the rhythm of many different guest experiences.

Landscape helps to provide the variety of cinematic moments and will provide areas to retreat and enjoy the surrounding nature but will also include dramatic moments of surprise and delight.

SITE PLAN



FORUM - DESIGN INTENT

CONCEPT : Immersive Biophilia - The Grove

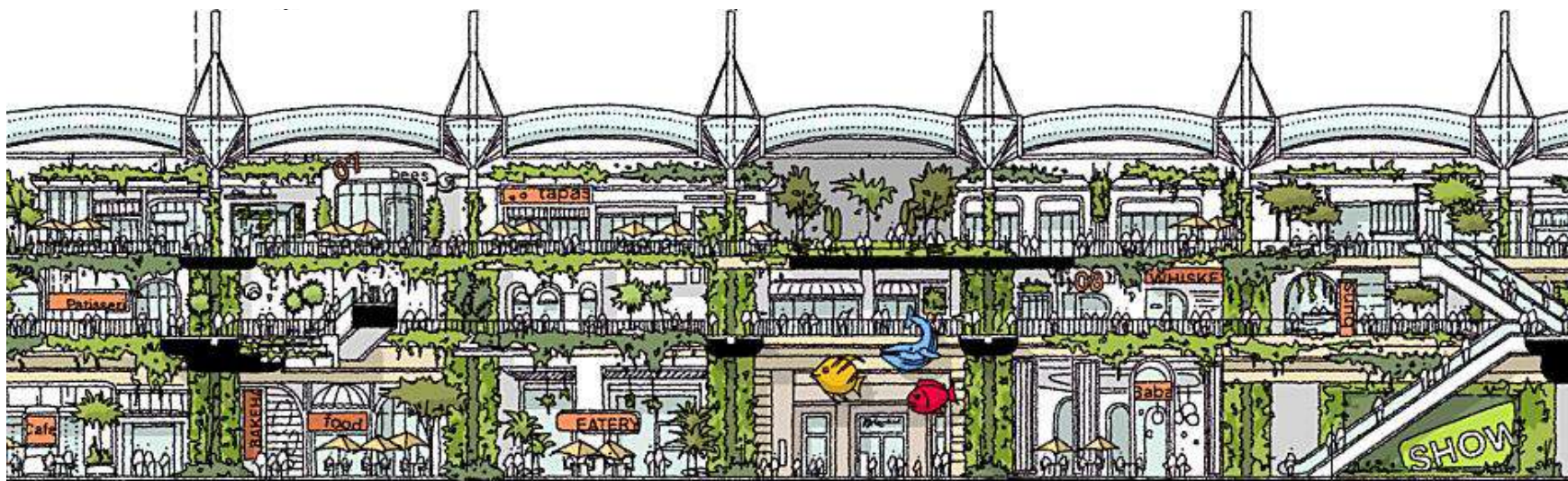
Existing site conditions



Proposed site conditions



FORUM - CONCEPTUAL DRAWINGS



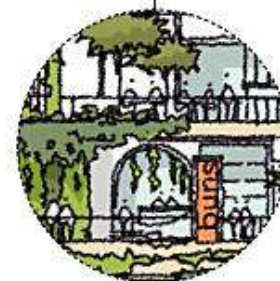
Tenant A



Tenant B



Tenant C



Tenant D

IDEOLOGIES :

- Immersive Biophilia
- No Regular Forms
- Dining and Retail Experience
- Integration of Events and Kiosk
- A Lifestyle Village Experience
- Textured layering – Hardscape

FORUM - FINALISED LAYOUTS

FLOOR PLANS



Basement 1



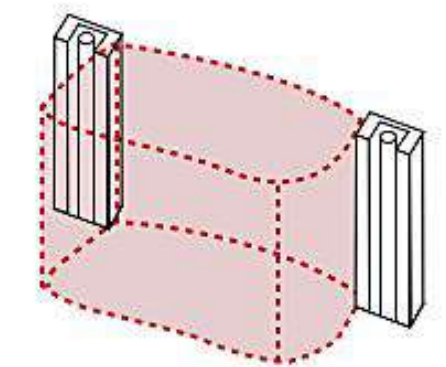
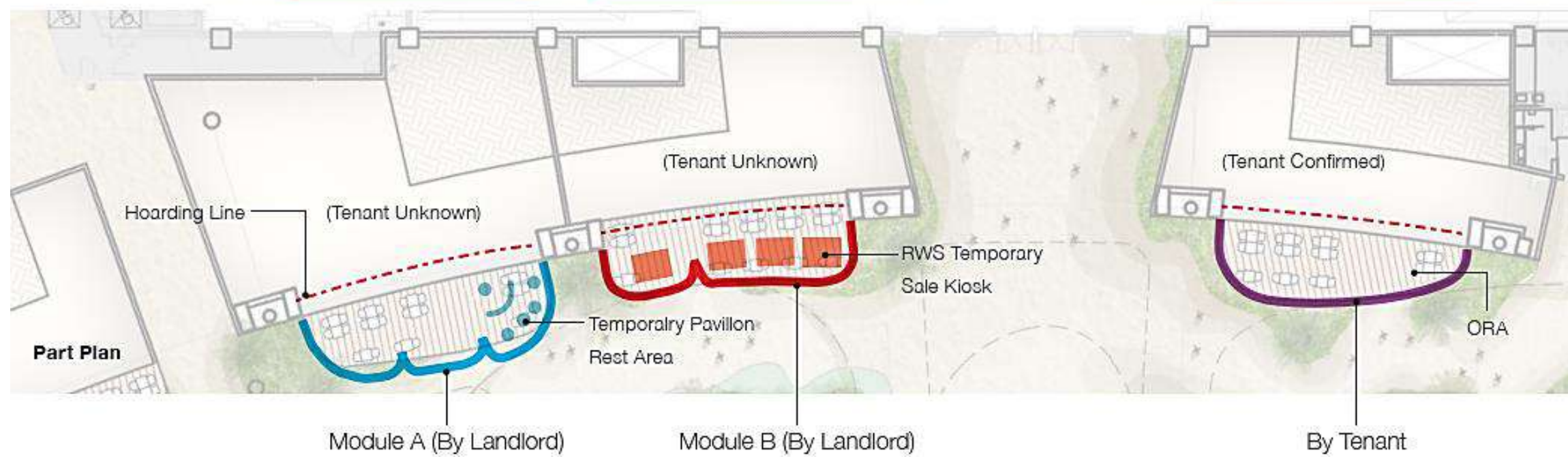
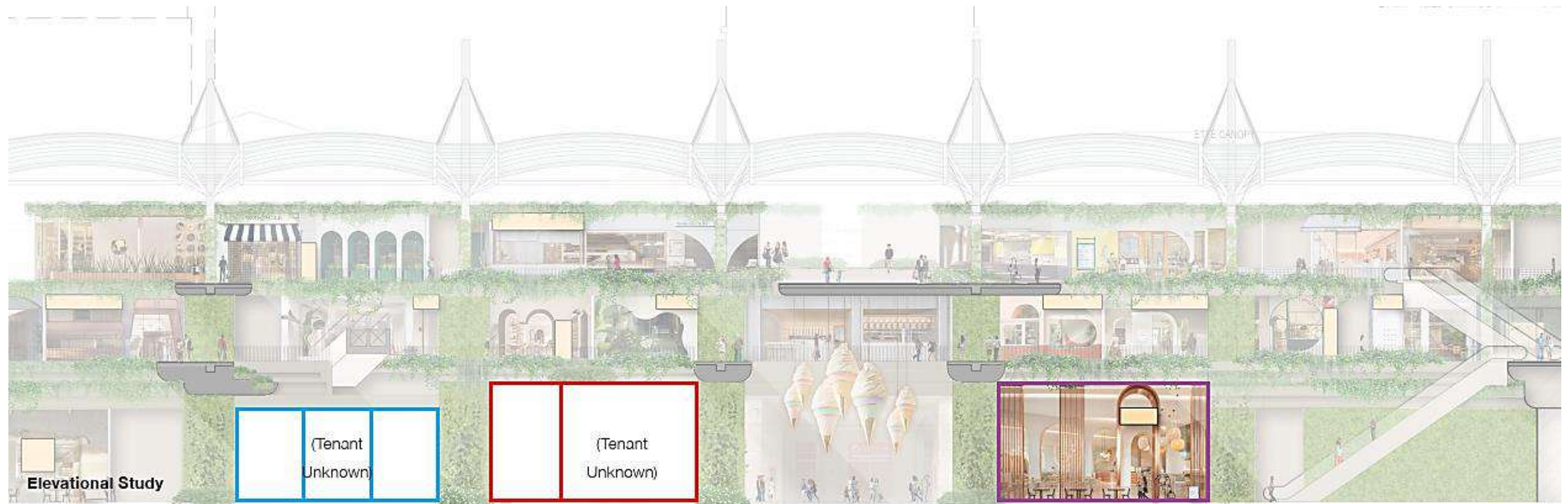
Level 1



Level 2

FORUM - FINALISED LAYOUTS

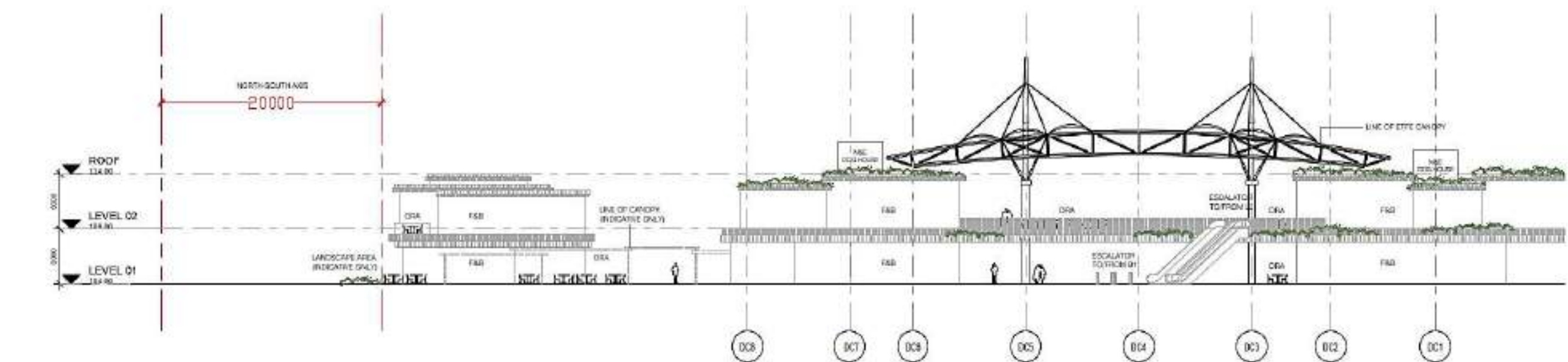
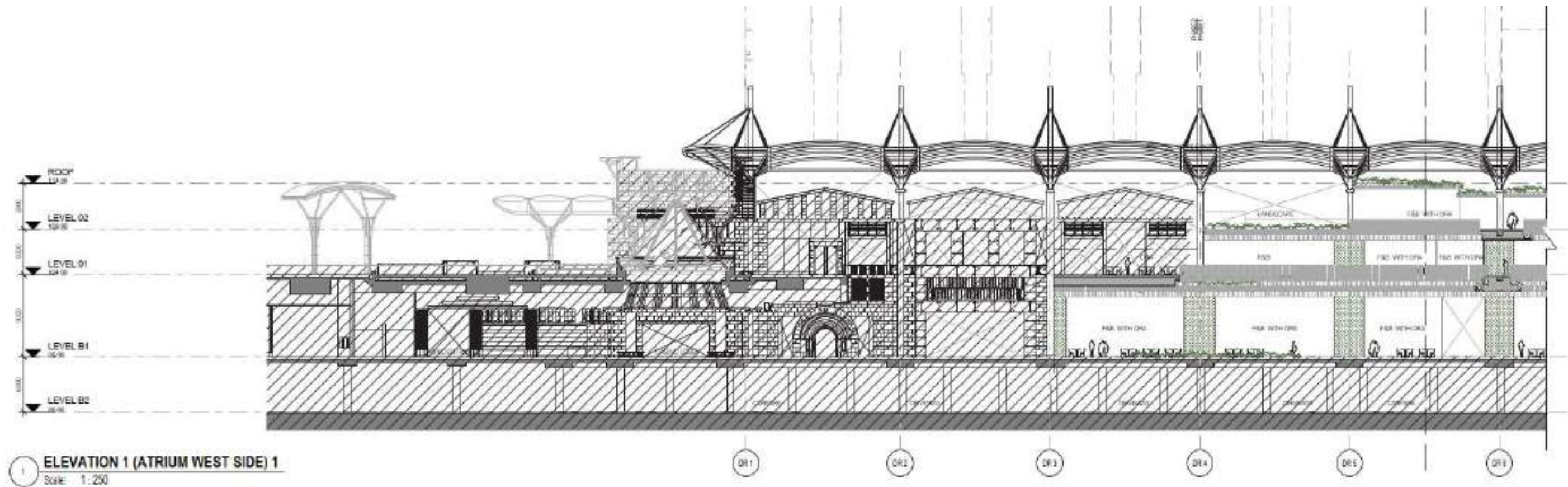
ELEVATIONAL STUDY



3D Division Line

FORUM - FINALISED LAYOUTS

ELEVATIONAL STUDY



ELEVATION 2 (SGO SIDE)
Scale: 1:250





SANITARY CODE COMPLIANCE STUDY (NEA & BCA)

ASSEMENT CONDITIONS & REFERENCES

1. NEA Submission drawing received from the client dated 19 Feb 2020 (Project ref.no A1273 00006 2008; drawing submission based on title block dated Sept 2012) to identify the existing toilet blocks serving the Forum area (refer Appendix A).
2. RWS 2.0 - Architectural concept design proposed by BENOY dated 16 September 2022.
3. NEA COPEH 2021 and Accessibility in the Built Environment 2019 for the requirement of Sanitary provision.
4. Site visit date - 23 June 2022, for confirmation of existing sanitary provision, which will take precedence over the previous Authority approval.
5. Sanitary provisions requirements will base on the assumption of 100% area is retail (shopping mall).
6. Relevant codes and requirement (NEA + BCA) in Appendix B.
7. Detail of the sanitary calculation and comparison please refer to the following slides.

SANITARY CODE COMPLIANCE STUDY (NEA & BCA)

SANITARY PROVISION - FORUM BASEMENT 1

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (EXISTING)	GROSS FLOOR AREA (BNY 16 Sept 22)									
B1	FORUM	RETAIL & F&B	2786.04	6144.98									

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (EXISTING)	Extg. provision for NEA req.					Extg. provision for BCA Req.			
				FEMALE		MALE			AM	UGB	HCP	FR (LR)
				WC	WHB	WC	UR	WHB				
B1	FORUM	RETAIL	2786.04	*18	*6	*8	*13	8	4	2	2	2

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (BNY 16 Sept 22)	NEA requirements (2021)					BCA requirements (2019)						
				FEMALE		MALE			AM	UGB	HCP	FAMILY FRIENDLY FACILITIES			
				WC	WHB	WC	UR	WHB				LR	WC (C)	UR (C)	WHB (C)
B1	FORUM	RETAIL	6144.98	15	8	4	5	5	4	2	2	1	4	2	4

RESULT				3	-2	4	8	3	0	0	0	+1	-4	-2	-4
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The result shows the Extg. provisions does not comply the requirements as red number.

1.Female : Additional 2 WHB

2.Family friendly - Lactation room

The Extg. FR to modified to accommodate the requirement (refer to appendix B).

3. Family Friendly - Children Sanitary	Addition		Modification	
WC (C)	4	0	4	
UR (C)	2	0	2	
WHB (C)	4	2	2	

Note : The Extg. provisions can be modified to Child-friendly sanitary facilities to comply the requirements.

LEGEND :	
WC	- Water Closet
WC (C)	- Water Closet for children
WHB	- Wash Hand Basin
WHB (C)	- Wash Hand Basin for children
UR	- Urinal
UR (C)	- Urinal for children
AM	- Water Closet for the Ambulant disabled
UGB	- Urinal for the Ambulant disabled
HCP	- Handicapped toilet (Accessible toilet)
FF	- Family Friendly room
LR	- Lactation Room
FR	- Family Room

SANITARY CODE COMPLIANCE STUDY (NEA & BCA)

SANITARY PROVISION - FORUM LEVEL 1

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (EXISTING)	GROSS FLOOR AREA (BNY 16 Sept 22)									
L1	FORUM	RETAIL & F&B	4781.22	7951.11									

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (EXISTING)	Extg. provision for NEA req.					Extg. provision for BCA Req.			
				FEMALE		MALE			AM	UGB	HCP	FR (LR)
				WC	WHB	WC	UR	WHB				
L1	FORUM	RETAIL	4781.22	16	*7	8	10	*5	4	2	2	2

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (BNY 16 Sept 22)	NEA requirements (2021)					BCA requirements (2019)						
				FEMALE		MALE			AM	UGB	HCP	FAMILY FRIENDLY FACILITIES			
				WC	WHB	WC	UR	WHB				LR	WC (C)	UR (C)	WHB (C)
L1	FORUM	RETAIL	7951.11	18	10	5	6	6	4	2	2	1	4	2	4

RESULT				-2	-3	3	4	-1	0	0	0	+1	-4	-2	-4
--------	--	--	--	----	----	---	---	----	---	---	---	----	----	----	----

The result shows the Extg. provisions does not comply the requirements as red number.

1. Female : Additional 2 WC & 3 WHB
2. Male : Additional 1 WC
3. Family friendly - Lactation room
4. Family Friendly - Children Sanitary

		Addition	Modification
WC (C)	4	2	2
UR (C)	2	0	2
WHB (C)	4	4	0

Note : The Extg. provisions can be modified to Child-friendly sanitary facilities to comply the requirements.

LEGEND :	
WC	- Water Closet
WC (C)	- Water Closet for children
WHB	- Wash Hand Basin
WHB (C)	- Wash Hand Basin for children
UR	- Urinal
UR (C)	- Urinal for children
AM	- Water Closet for the Ambulant disabled
UGB	- Urinal for the Ambulant disabled
HCP	- Handicapped toilet (Accessible toilet)
FF	- Family Friendly room
LR	- Lactation Room
FR	- Family Room

SANITARY CODE COMPLIANCE STUDY (NEA & BCA)

SANITARY PROVISION – FORUM LEVEL 2

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (EXISTING)	GROSS FLOOR AREA (BNY 16 Sept 22)											
L2	FORUM	RETAIL & F&B	-	5797.47											

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (EXISTING)	Extg. provision for NEA req.					Extg. provision for BCA Req.			
				FEMALE		MALE			AM	UGB	HCP	FR (LR)
				WC	WHB	WC	UR	WHB				
L2	FORUM	RETAIL	5797.47	-	-	-	-	-	-	-	-	-

LEVELS	USAGES	CATEGORIES	GROSS FLOOR AREA (BNY 16 Sept 22)	NEA requirements (2021)					BCA requirements (2019)						
				FEMALE		MALE			AM	UGB	HCP	FAMILY FRIENDLY FACILITIES			
				WC	WHB	WC	UR	WHB				LR	WC (C)	UR (C)	WHB (C)
L2	FORUM	RETAIL	5797.47	15	8	4	5	5	*	**	***	***	*	**	*

RESULT				-15	-8	-4	-5	-5	*	**	***	***	*	**	*
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The result shows the Extg. provisions does not comply the requirements as red number.

The result shows New Provisions are required as the red number as this is a new storey.

- *

- To be provided with 1 no for both male and female of each toilet cluster.
- **

- To be provided with 1 no for each toilet cluster.
- ***

- Should provide 1 no for each toilet cluster.

- LEGEND :
- WC

- Water Closet
- WC (C)

- Water Closet for children
- WHB

- Wash Hand Basin
- WHB (C)

- Wash Hand Basin for children
- UR

- Urinal
- UR (C)

- Urinal for children
- AM

- Water Closet for the Ambulant disabled
- UGB

- Urinal for the Ambulant disabled
- HCP

- Handicapped toilet
(Accessible toilet)
- FF

- Family Friendly room
- LR

- Lactation Room
- FR

- Family Room

Note : The Extg. provisions can be modified to Child-friendly sanitary facilities to comply the requirements.

SANITARY CODE COMPLIANCE STUDY (NEA & BCA)

APPENDIX A

NEA Submission drawing received from the client dated 19 Feb 2020 (Project ref.no A1273 00006 2008; drawing submission based on title block dated Sept 2012) to identify the existing toilet blocks serving the Forum area (refer appendix A)

TOILET BLOCKS IN FORUM - BASEMENT 1

SANITARY FACILITIES - FestiveWalk & Forum / Carparks

Level	Usages	Categories	Gross Floor Area	Requirement					Provision					HCP		Remark
				Female Toilet		Male Toilet			Female Provision		Male Provision					
				WC	WHB	WC	UR	WHB	WC	WHB	WC	UR	WHB	WC	WHB	
Basement 2	Carparks	Carparks	2040.77	No Requirement					4	3	4	5	4	1	1	Toilet Block 12
									0	0	0	0	0	2	2	Toilet Block 13
									4	3	4	5	4	3	3	TOTAL PROVISION IN B2 - Carparks
Basement 1	Festivewalk & Forum	Retail	895	3	2	1	2	1	12	6	5	7	5	1	1	Toilet Block 47
		F&B	1891.04	8	4	3	5	4	3	2	2	4	3	1	1	Toilet Block 48
		TOTAL	2786.04	11	6	4	7	5	15	8	7	11	8	2	2	TOTAL PROVISION IN B1 - Forum & Festivewalk
	Carparks	Carparks	1350.93	No Requirement					5	7	5	8	6	2	2	Toilet Block 49
									3	4	4	5	4	0	0	Toilet Block 50
									1	1	*1	0	*1	0	0	Toilet Block 53 (*-Unisex Toilet - Coach Driver's Lounge)
									9	12	10	13	11	2	2	TOTAL PROVISION IN B1 - Carpark

TOILET BLOCKS IN FORUM - LEVEL 1

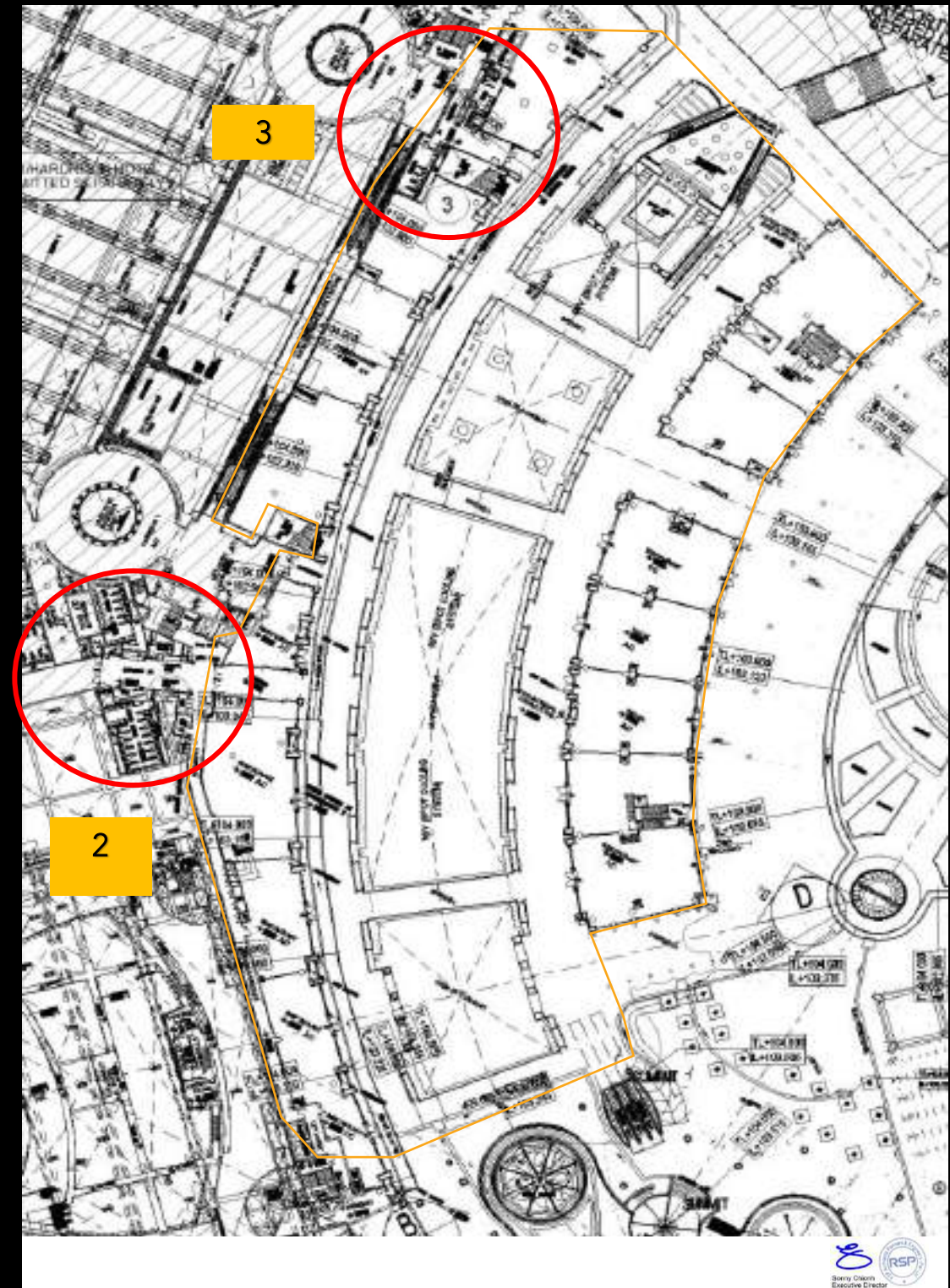
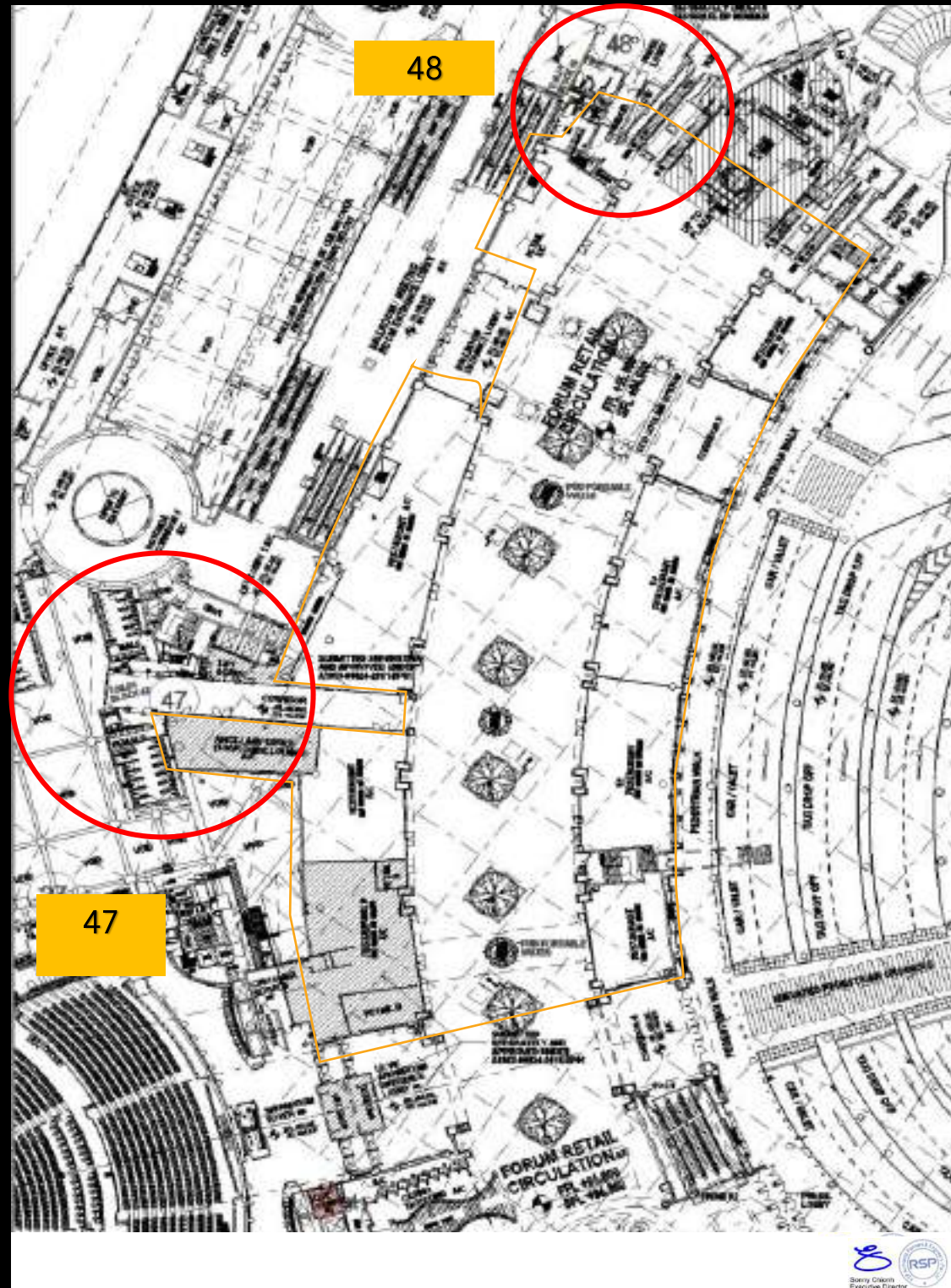
SANITARY FACILITIES - FORUM/FESTIVE WALK

Level	Usages	Categories	Gross Floor Area	Requirement					Provision					HCP		Remark
				Female Toilet		Male Toilet			Female Provision		Male Provision					
				WC	WHB	WC	UR	WHB	WC	WHB	WC	UR	WHB	WC	WHB	
1st Storey	Mark Burnett Studios	THEME PARK FACILITIES	366.73	No Requirement					-	-	-	-	-	-	-	Provision to be provided under tenancy works
	USS Operation Office	OFFICE	920.06	No Requirement					-	-	-	-	-	-	-	Provision to be provided under tenancy works
	Visitor's Centre	OFFICE	780.20	No Requirement					-	-	-	-	-	-	-	Provision to be provided under tenancy works
	Waterfront	F&B	1280.67	To be provided under tenancy works												
	Forum	F&B	4781.22	11	6	4	7	5	12	6	5	7	5	1	1	Toilet Block 2
									4	3	3	3	3	1	1	Toilet Block 3
	Showplace	F&B	1023.10	6	4	3	5	4	8	5	4	8	6	1	1	Toilet Block 6
	Showplace Retail	RETAIL	2443.84	7	4	3	4	4	8	4	3	4	4	1	1	Toilet Block 5
	USS Retail	RETAIL	220.97						6	6	3	4	4	1	1	Toilet Block 4
	Bulling Retail	RETAIL	1307.25													
														6	6	3
		RETAIL SUB TOTAL	3978.06													
	TOTAL	TOTAL	14219.03	26	14	10	16	13	38	24	18	26	22	5	5	Total Provision in 1st Storey Forum

SANITARY CODE COMPLIANCE STUDY (NEA & BCA)

APPENDIX A

NEA Submission drawing received from the client dated 19 Feb 2020 (Project ref.no A1273 00006 2008; drawing submission based on title block dated Sept 2012) to identify the existing toilet blocks serving the Forum area (refer appendix A)



APPENDIX B

BCA requirements			
Family-friendly facilities requirements:		Child-friendly Sanitary facilities requirements:	
5.1.9	Where a building is required to provide family-friendly facilities in compliance with clause 6.9.1, there must be child-friendly sanitary facilities provided in accordance with clause 6.9.4.	Child-friendly sanitary facilities	
6.9.1.2	Where a building is required to provide family-friendly facilities in compliance with clause 6.9.1.1, the following facilities must be provided:		
(a)	at least one lactation room for nursing women at an appropriate location;		
(b)	at every level where toilets are provided:		
(i)	at least one diaper-changing station in accordance with clause 6.9.2;		
(ii)	at least one child protection seat in accordance with clause 6.9.3;		
(iii)	child-friendly sanitary facilities in accordance with clause 6.9.4.		
6.9.2	Diaper-changing stations must be located either in:	Diaper-changing stations	
(a)	both male and female toilet clusters; or		
(b)	individual family washrooms.		
6.9.3	Child protection seats must be located either in:	Child protection seats	
(a)	one of the toilet cluster compartments in both the male and female toilet clusters; or		
(b)	individual family washrooms.		
6.9.4	Child-friendly Sanitary Facilities	Child-friendly sanitary facilities	
6.9.4.1	Child-friendly sanitary facilities must comply with the following requirements:		
(a)	consist of at least one male toilet and one ward-based toilet where provided in:		
(i)	one of the toilet cluster compartments in both the male and female toilet clusters; or		
(ii)	individual family washrooms; or		
(b)	provide at least one private toilet suitable for young children in the male toilet or ward-based children's toilet at a toilet cluster.		
Notes:	Provision of child-friendly facilities is generally a minimum performance standard to be provided to all BCs to ensure compliance with the requirements of the Act and the Regulations.		

BCA requirements			
Child-friendly Sanitary facilities design considerations :		Child-friendly Sanitary facilities design considerations :	
A.2	DESIGN CONSIDERATIONS	A.3.1.2.2	For existing buildings in exceptional circumstances where it is not possible to install a child-sized water closet, a seat adaptor with a small seat cover should be provided on a standard-sized water closet for use by young children. The hanger holding the seat cover should be mounted at a level that is easily accessible to young children. A portable and stable stool should also be provided as a stepper for young children who may not be able to reach the water closet.
A.3.1	Child-friendly Sanitary Facilities	A.3.1.2.3	The water closet compartment should be provided with a bath liquid dispenser and a flexible hose with a water spray head so some parents or guardians may need to clean their child.
A.3.1.1	Sanitary facilities for children should be provided according to the age group that they serve and take into account the size, stature and reach in the range of children. The specifications described in this appendix are suitable for young children aged 3 to 8 years with a height range of 900mm to 1200mm. The following sanitary facilities should be provided in the toilets for use by young children:	A.3.1.3	Urinal
	(a) at least one water closet complying with clause A.3.1.2;	A.3.1.3.1	At least one urinal mounted at a height of not more than 400 mm from the finished floor level, as illustrated in Figure A2, should be provided in the male toilets for young children.
	(b) at least one urinal complying with clause A.3.1.3; and		
	(c) at least one wash basin complying with clause A.3.1.4		
A.3.1.2	Water closet		
A.3.1.2.1	At least one child-sized water closet, as illustrated in Figure A1, should be provided in each of the male and female toilets for young children. The recommended height of the water closet seat to the finished floor level is between 200 mm and 300 mm.		

SANITARY CODE COMPLIANCE STUDY (NEA & BCA)

SITE PICTURES



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

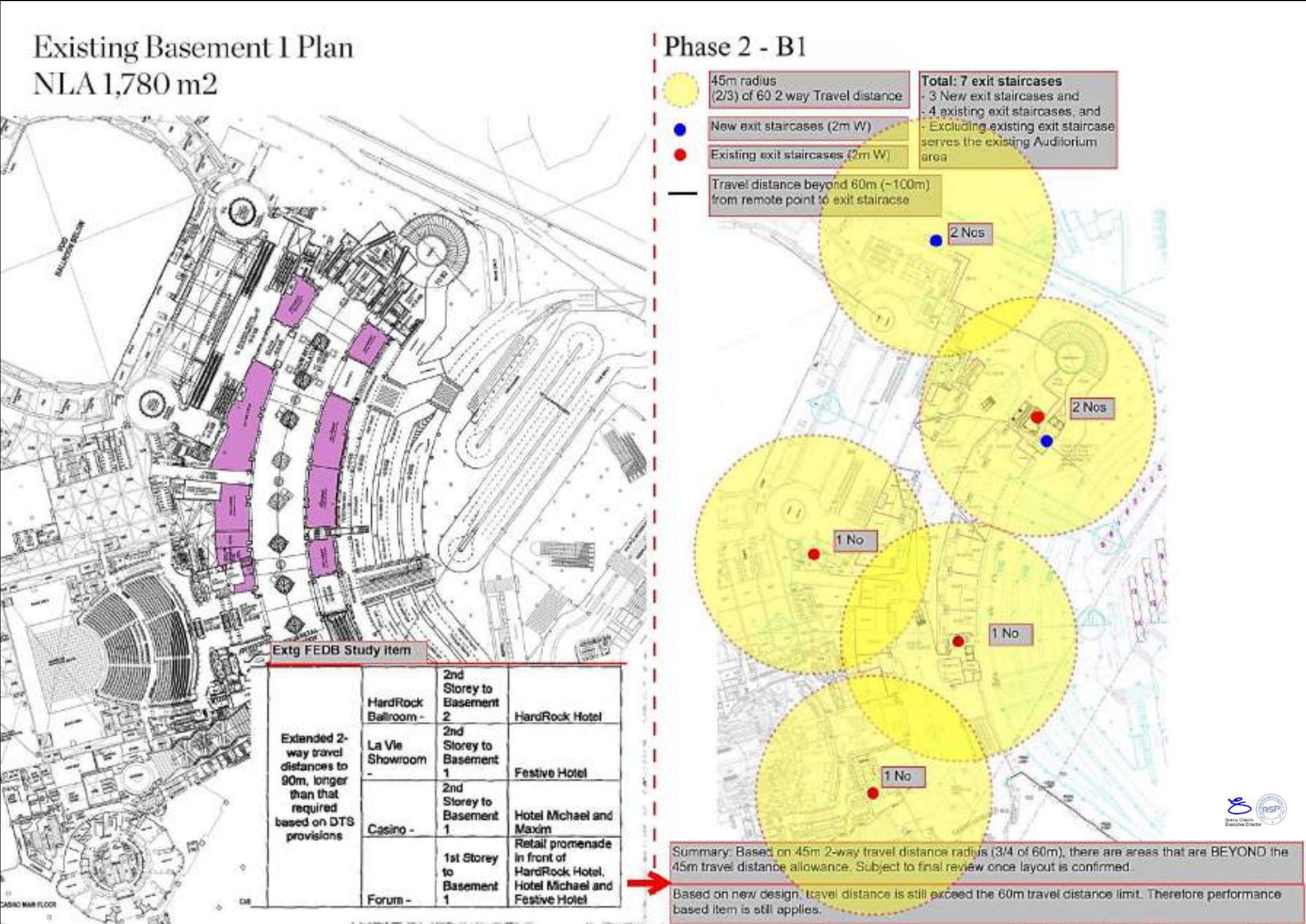
FORUM - SUMMARY OF DEVIATIONS SIMILAR TO EXISTING FEDB (FIRE SAFETY DESIGN BRIEF FOR PERFORMANCE BASED DESIGN)

	Extg RWS1.0 PERFORMANCE BASED FEDB ITEMS (ref IGNESIS 10 Dec 2007)	Affected areas and floors		NEW PROPOSED PERFORMANCE BASED FEDB ITEMS	Affected areas and floors	Reason
1.	Extended 2-way travel distance to 90m, longer than the required based on DTS provisions.	Forum L1		Extended 2-way travel distance to 80-130m, longer than the required based on DTS provisions.	Forum B1,L1 & L2	Existing ETFE is retained, but some are demolished and with additional microclimatic canopy design added with commercial activities underneath.
	Relevant clause : 2.2.6, table 2.2A, 2.3.3(c)(2)(c)					
2.	Reduction in the number of staircases to fewer than required based on DTS provision	Forum B1 & L1		Reduction in the number of staircases to fewer than required based on DTS provision	Forum B1 & L2	Due to the increase in the GFA , resulting in high occupant load.
	Relevant clause : 2.2.5					
3.	Extended discharge distances beyond 10m, longer than required based on DTS provision	Forum L1		Extended discharge distances beyond 10m, longer than required based on DTS provision	Forum L1	Based on the new design , the discharge from L1 naturally ventilated forum to outside via ETFE leaf canopies – Approx. extended distance is 23m which exceeds the 10m limit
	Relevant clause : 2.3.3(c)					
4.	Extended smoke reservoir area, larger than required according to DTS provision	Forum L1		Extended smoke reservoir area, larger than required according to DTS provision	Forum L1	Based on new design, the smoke reservoir area is still larger than the requirement of 60m.
	Relevant clause : 7.6.7					
5.	Means of Escape Deviation	Forum B1,L1 & L2		Means of Escape Deviation	Forum B1,L1 & L2	In accordance to the DTS provision of fire code 2007, Ballroom, Le Vie showroom, Casino and Forum are fore separated from one another.
	Relevant clause : 3.2.1 & 3.2.3 (refer page 58)					

SCDF CODE COMPLIANCE STUDY(SINGAPORE CIVIL DEFENCE FORCE)

TWO WAY TRAVEL DISTANCE PERFORMANCE BASED

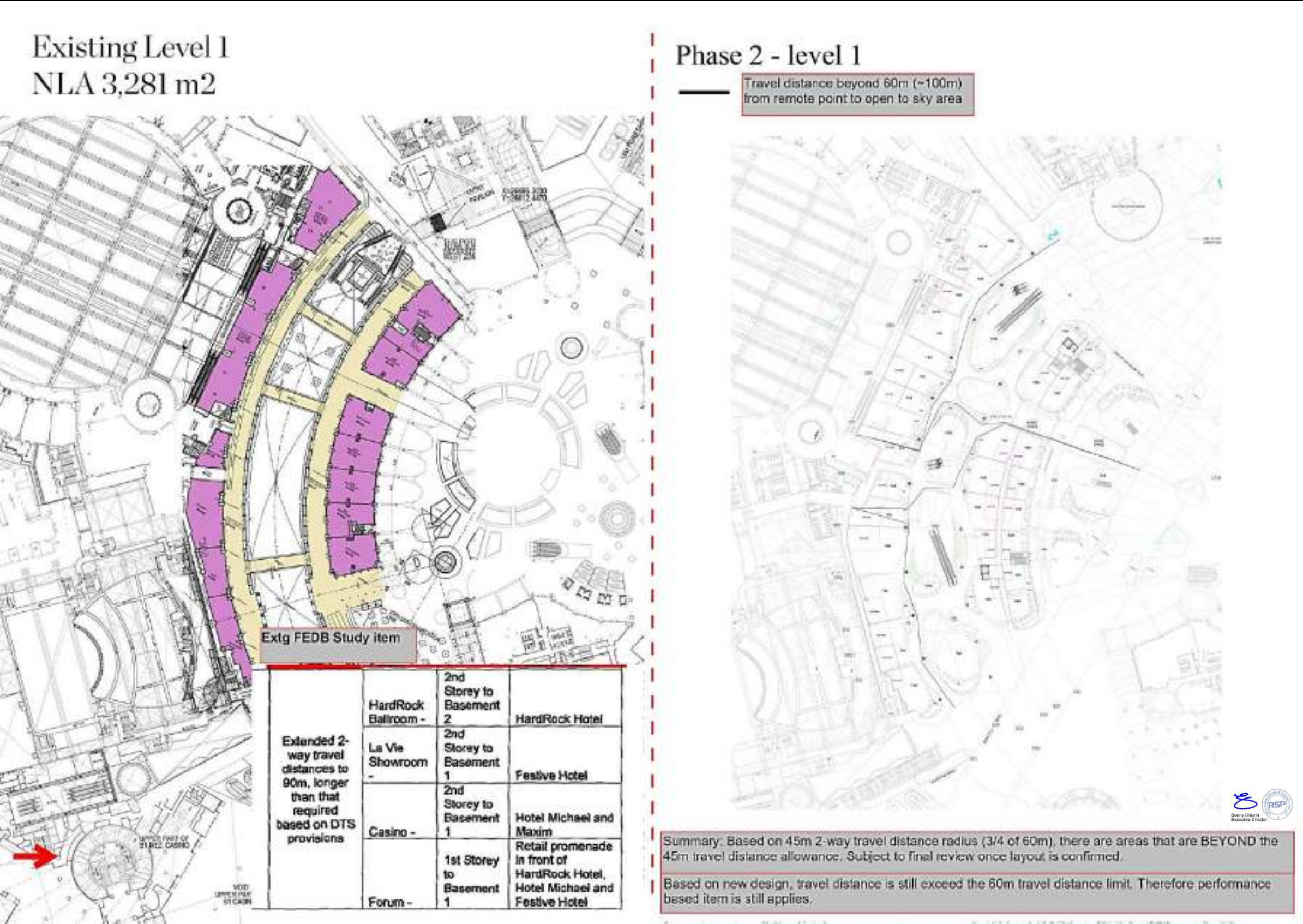
CL:2.2.6 (Determination of Travel Distance), 1.4.41 (Definition of Exit) & 1.4.105 (Definition of Travel distance)



SCDF CODE COMPLIANCE STUDY(SINGAPORE CIVIL DEFENCE FORCE)

TWO WAY TRAVEL DISTANCE PERFORMANCE BASED

CL:2.2.6 (Determination of Travel Distance), 1.4.41 (Definition of Exit) & 1.4.105 (Definition of Travel distance)

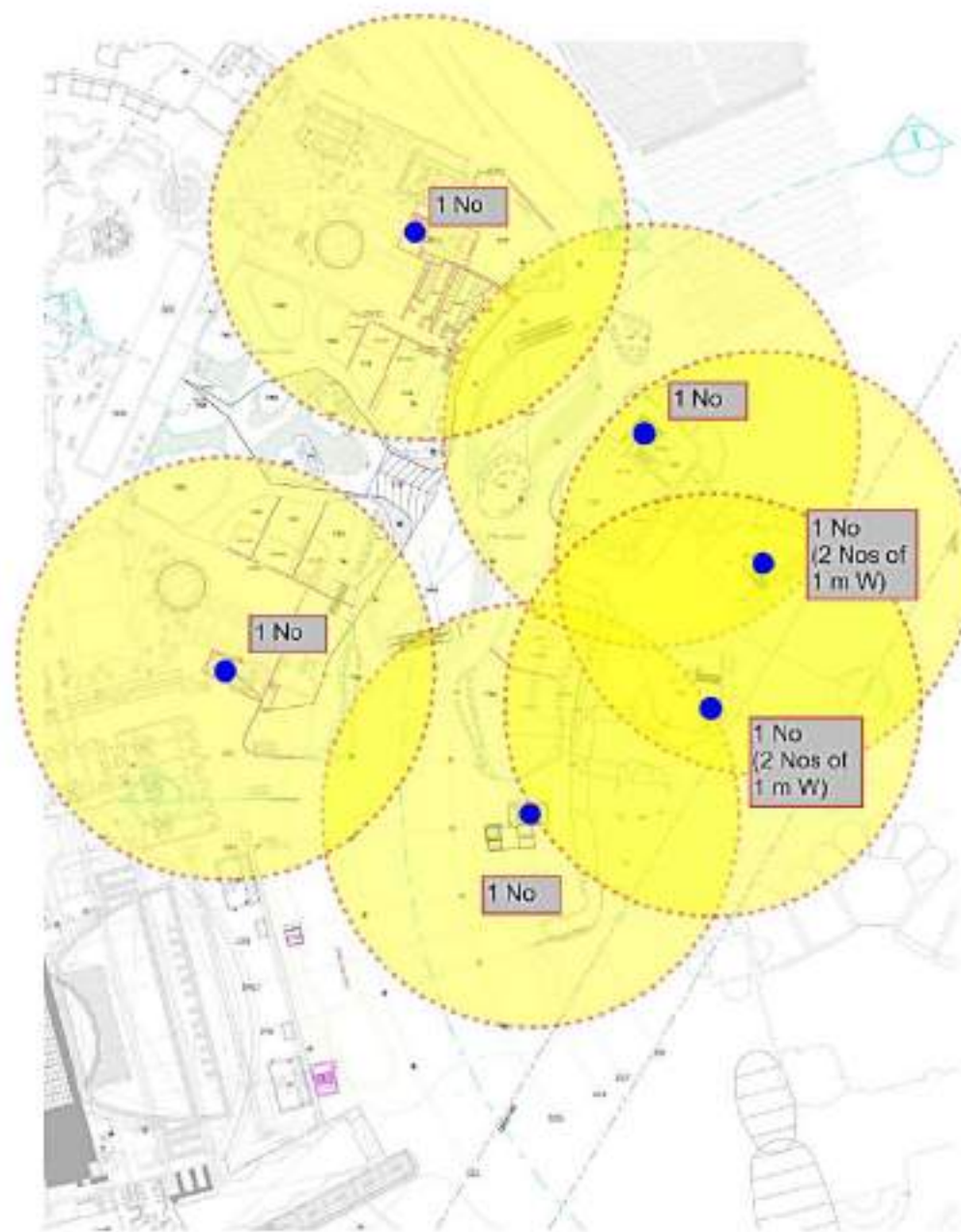


SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

TWO WAY TRAVEL DISTANCE PERFORMANCE BASED

CL:2.2.6 (Determination of Travel Distance), 1.4.41 (Definition of Exit) & 1.4.105 (Definition of Travel distance)

Phase 2 - Level 2



- 45m radius
(2/3) of 60 2 way Travel distance
- New exit staircases (2m W)
- Total: 6 exit staircases
4 New exit staircases and
2 Existing exit staircases. But
need further study to confirm
100% can serve forum area.
- Travel distance beyond 60m (~100m)
from remote point to exit staircase

Summary: Based on 45m 2-way travel distance radius (3/4 of 60m), there are areas that are BEYOND the 45m travel distance allowance. Subject to final review once layout is confirmed.

Based on new design, travel distance is still exceed the 60m travel distance limit. Therefore performance based item is still applies.

SCDF CODE COMPLIANCE STUDY(SINGAPORE CIVIL DEFENCE FORCE)

EXIT STAIRCASE BASED ON EXIT CAPACITY

Table E.1 : Schedule of Departures from DTS (Deemed to Satisfy) Provision, SCDF Code Table 1.4B : Occupant Load Factors & table 3.3A

BASEMENT 1

TENANCY	NLA (sqm) A	SEATING AREA (70%) B= (A*70%)	KICTHEN (30%) C = (A*30%)	ORA (100%) D	DISPLAY WINDOW E	TOTAL TENANCY AREA A+D+E
F&B 1	239	167.3	71.7	43	0	282
F&B 2	192	134.4	57.6	43	0	235
F&B 3	108	75.6	32.4	30	0	138
F&B 4	118	82.6	35.4	18	0	136
F&B 5	94	65.8	28.2	17	0	111
F&B 6	143	100.1	42.9	45	0	188
F&B 7	91	63.7	27.3	22	0	113
F&B 8	71	49.7	21.3	11	0	82
F&B 9	317	221.9	95.1	0	0	317
F&B 10	321	224.7	96.3	0	0	321
F&B 11	196	137.2	58.8	47	20	263
F&B 12	167	116.9	50.1	30	20	217
F&B 13	132	92.4	39.6	37	15	184
F&B 14	149	104.3	44.7	28	15	192
F&B 15	87	60.9	26.1	31	10	128
F&B 16	41	28.7	12.3	25	0	66
Money Exchange shop	0	0	0	13	0	13
SUB-TOTAL		1726.2	739.8	440	80	2986
		2466			520	
TOTAL		2986				

SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

EXIT STAIRCASE BASED ON EXIT CAPACITY

Table E.1 : Schedule of Departures from DTS (Deemed to Satisfy) Provision, SCDF Code Table 1.4B : Occupant Load Factors & table 3.3A

OTHER SPACES :

M&E SPACES	AREA
AHU 1	50
AHU 2	35
TOTAL	85

REFERENCE :

OL VALUES	
SEATING AREA	1.5
KITCHEN	10
MECHINCAL PLANT ROOM	30
PROMOTION AREA	1.5

TOTAL OCCUPANT LOAD CALCULATION :

OL CALCULATION								
B	F= B/1.5	C	G= C/10	D+E	H = (D+E)/1.5	OTHERS (M&E SPACES)	I = OTHERS/30	TOTAL OL = F+G+H+I
1726.2	1151	739.8	74	520	347	85	3	1574

SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

EXIT STAIRCASE BASED ON EXIT CAPACITY

Table E.1 : Schedule of Departures from DTS (Deemed to Satisfy) Provision, SCDF Code Table 1.4B : Occupant Load Factors & table 3.3A

LEVEL 2

TENANCY	NLA (sqm) A	SEATING AREA (70%) B= (A*70%)	KICTHEN (30%) C = (A*30%)	ORA (100%) D	TOTALTENANCY AREA A+D
F&B 1	315	220.5	94.5	39	354
F&B 2	55	38.5	16.5	0	55
F&B 3	207	144.9	62.1	117	324
F&B 4	99	69.3	29.7	0	99
F&B 5	93	65.1	27.9	0	93
F&B 6	117	81.9	35.1	0	117
F&B 7	96	67.2	28.8	0	96
F&B 8	131	91.7	39.3	0	131
F&B 9	244	170.8	73.2	0	244
F&B 10	32	22.4	9.6	0	32
F&B 11	45	31.5	13.5	34	79
F&B 12	41	28.7	12.3	33	74
F&B 13	93	65.1	27.9	0	93
F&B 14	139	97.3	41.7	0	139
F&B 15	162	113.4	48.6	87	249
F&B 16	420	294	126	114	534
F&B 17	219	153.3	65.7	48	267
F&B 18	206	144.2	61.8	26	232
F&B 19	193	135.1	57.9	51	244
F&B 20	158	110.6	47.4	46	204
F&B 21	130	91	39	31	161
F&B 22	225	157.5	67.5	0	225
F&B 23	0	0	0	67	67
F&B 24	0	0	0	27	27
F&B 25	0	0	0	111	111
F&B 26	209	146.3	62.7	50	259
F&B 27	202	141.4	60.6	58	260
SUB-TOTAL		2681.7	1149.3	939	4770
		3831		939	
TOTAL		4770			

SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

EXIT STAIRCASE BASED ON EXIT CAPACITY

Table E.1 : Schedule of Departures from DTS (Deemed to Satisfy) Provision, SCDF Code Table 1.4B : Occupant Load Factors & table 3.3A

TOTAL OCCUPANT LOAD CALCULATION :

OL CALCULATION						
B	F= B/1.5	C	G= C/10	D	H = D/1.5	TOTAL OL = F+G+H+I
2681.7	1787.8	1149.3	114.93	939	626	2528.73

SUMMARY :

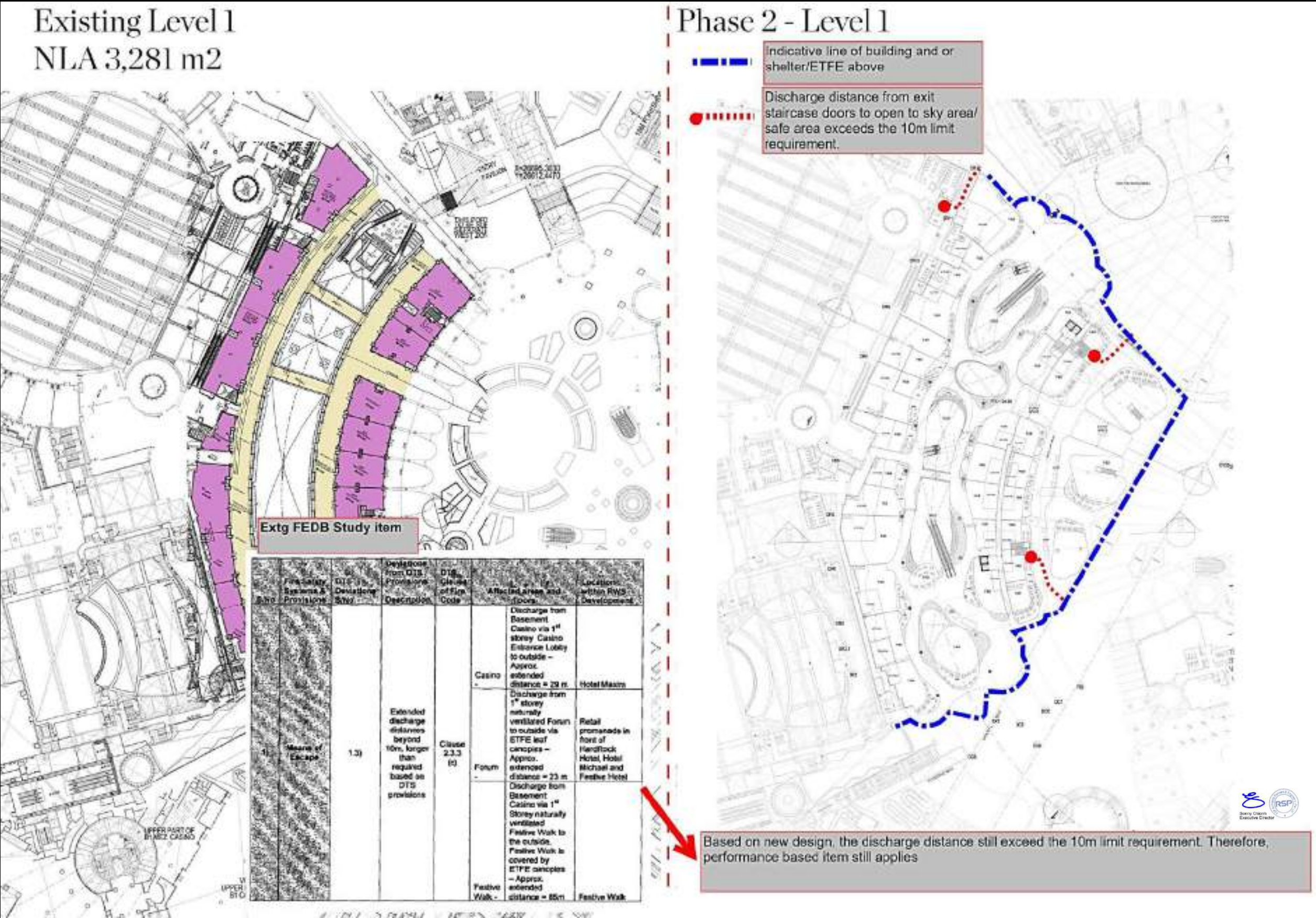
B1			
NLA		2986	
OL BASED ON CURRENT BNY DESIGN :			
Usage	F&B		Retail
Ratio	100%		0%
Occupancy Load	70%	30%	-
Area	1726	740	-
(area/occupancy load. For F&B, 1.5 m2/per , 1.5m2/per, 10 m2/per for Seating, Promotion area and kitchen respectively).	1497	74	-
ORA Area (100%)	440		-
(area/occupany load. For F&B, 1.5 m2/per for Seating).	293		-
Total OL	1571		
Exit staircase required for the calculated OL	7		
SUMMARY :			
Required Exit Staircase	7		
Current provision : Extg + new (2m wide)	6		
Additional Exit Staircase required (2m wide)	1		

L2			
NLA		4770	
OL BASED ON CURRENT BNY DESIGN :			
Usage	F&B		Retail
Ratio	100%		0%
Occupancy Load	70%	30%	-
Area	2682	1149	-
(area/occupancy load. For F&B, 1.5 m2/per & 10 m2/per for Seating and kitchen respectively).	1788	115	-
ORA Area (100%)	939		-
(area/occupany load. For F&B, 1.5 m2/per for Seating).	626		-
Total OL	2529		
Exit staircase required for the calculated OL	11		
SUMMARY :			
Required Exit Staircase	11		
Current provision : Extg + new (2m wide)	6		
Additional Exit Staircase required (2m wide)	5		

SCDF CODE COMPLIANCE STUDY(SINGAPORE CIVIL DEFENCE FORCE)

EXIT STAIRCASE - DISCHARGE AT GROUND LEVEL

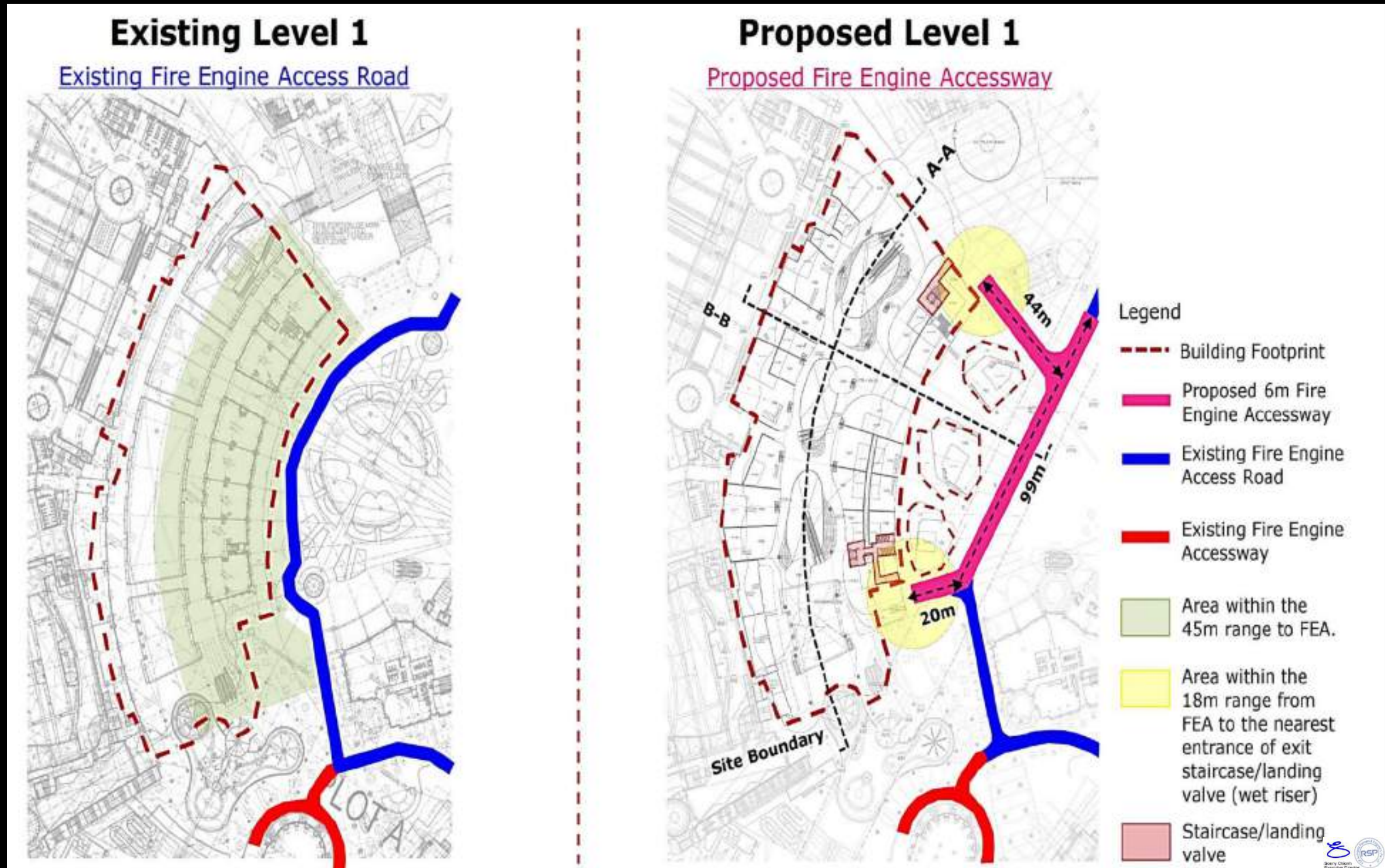
CL: 2.3.3 (a)(c)



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

FIRE ENGINE ACCESS WAY

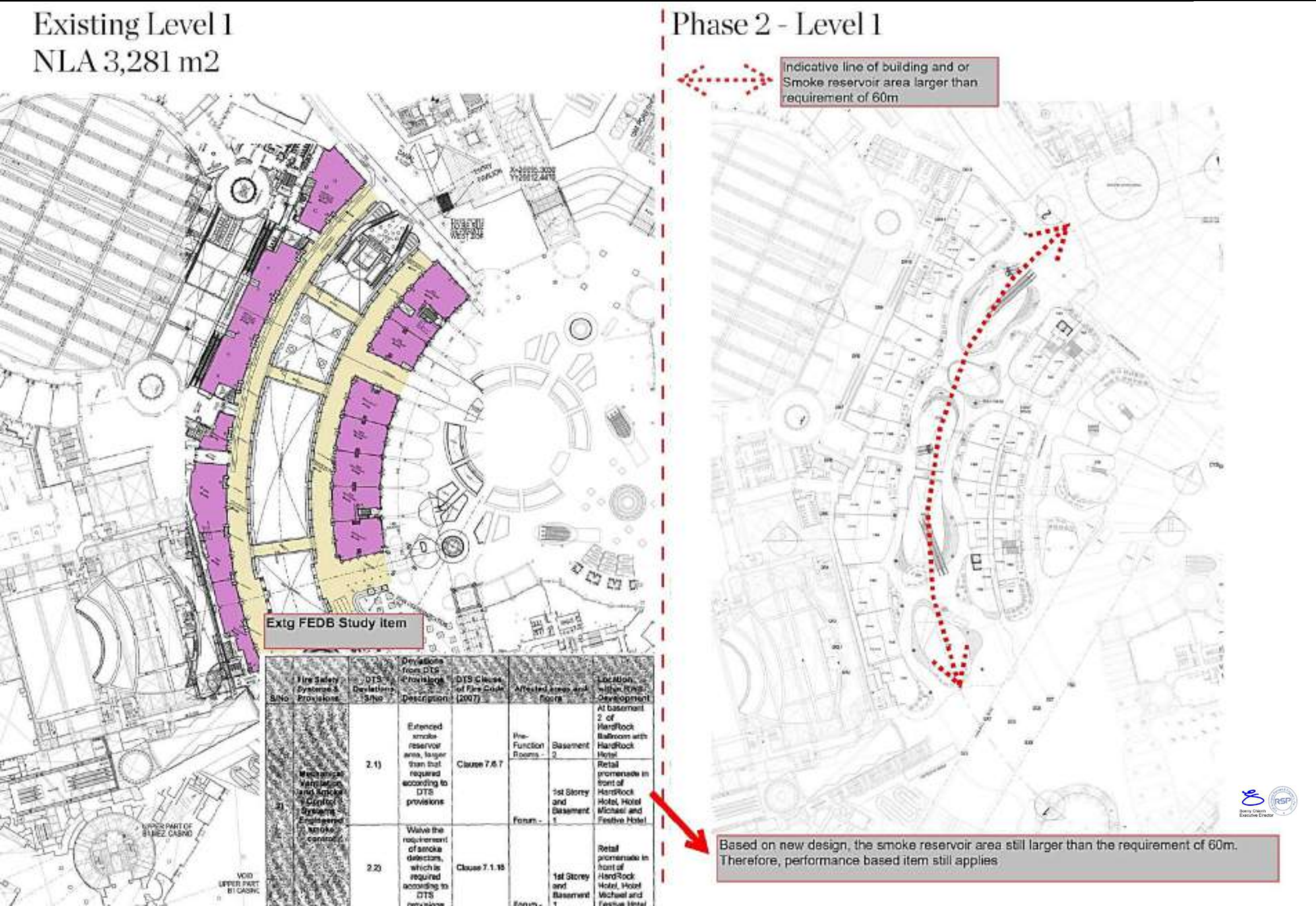
CL: 4.2.2 (a)(4)



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

SMOKE RESERVOIR LENGTH LIMIT

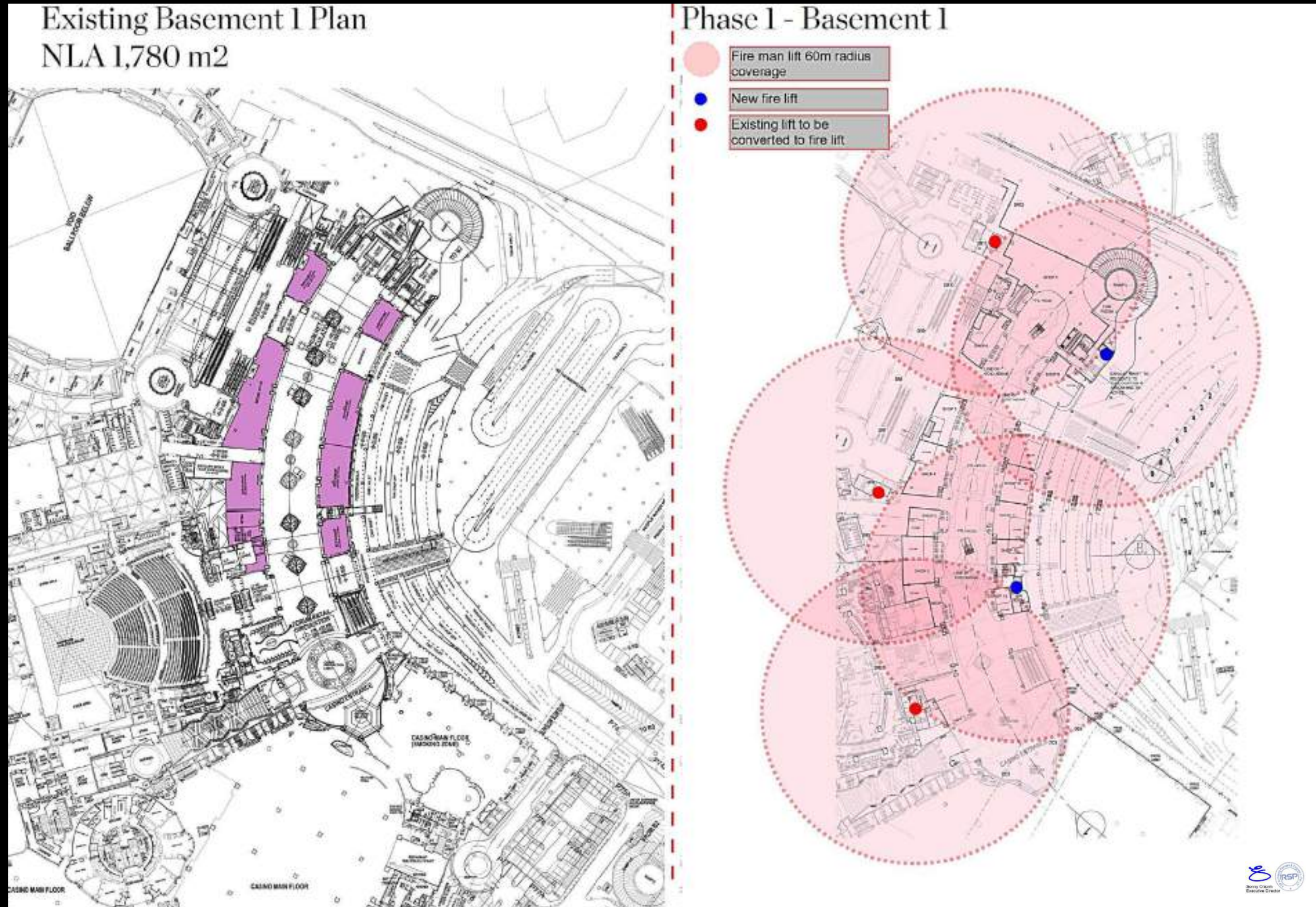
CL: 7.4.5 (f)(4)



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

60 METRE RADIUS FIRE LIFT COVERAGE

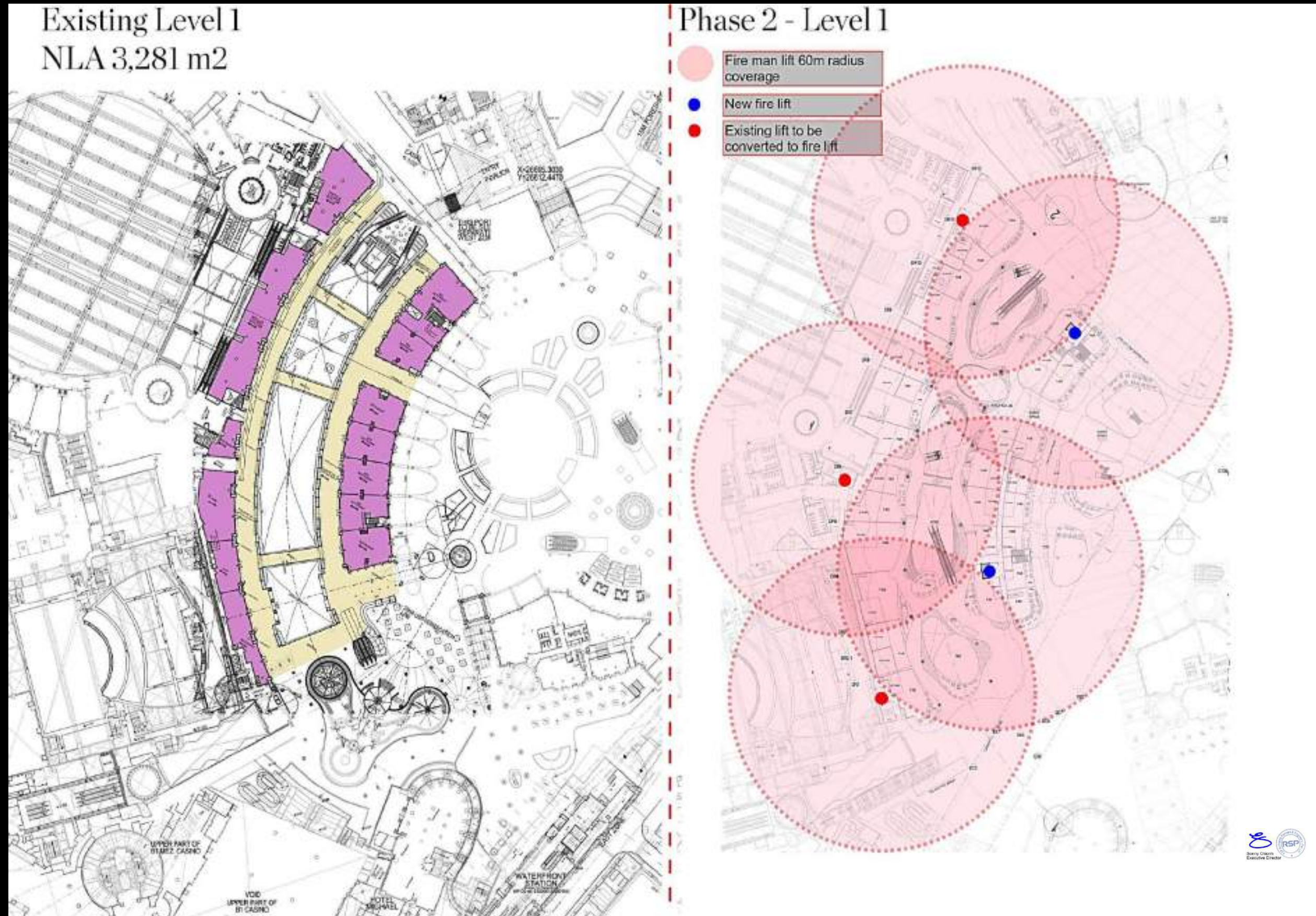
CL: 6.6.4



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

60 METRE RADIUS FIRE LIFT COVERAGE

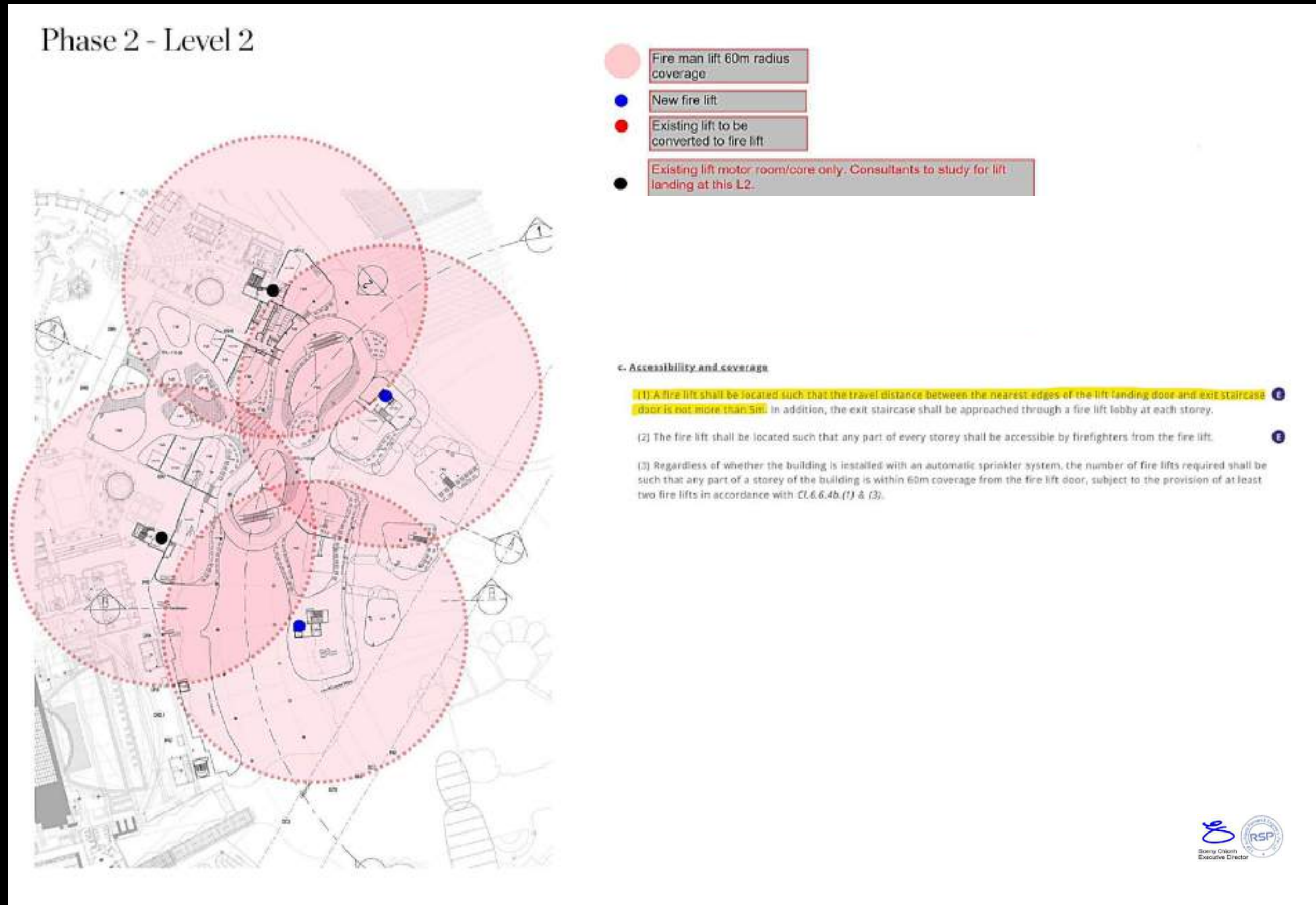
CL: 6.6.4



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

60 METRE RADIUS FIRE LIFT COVERAGE

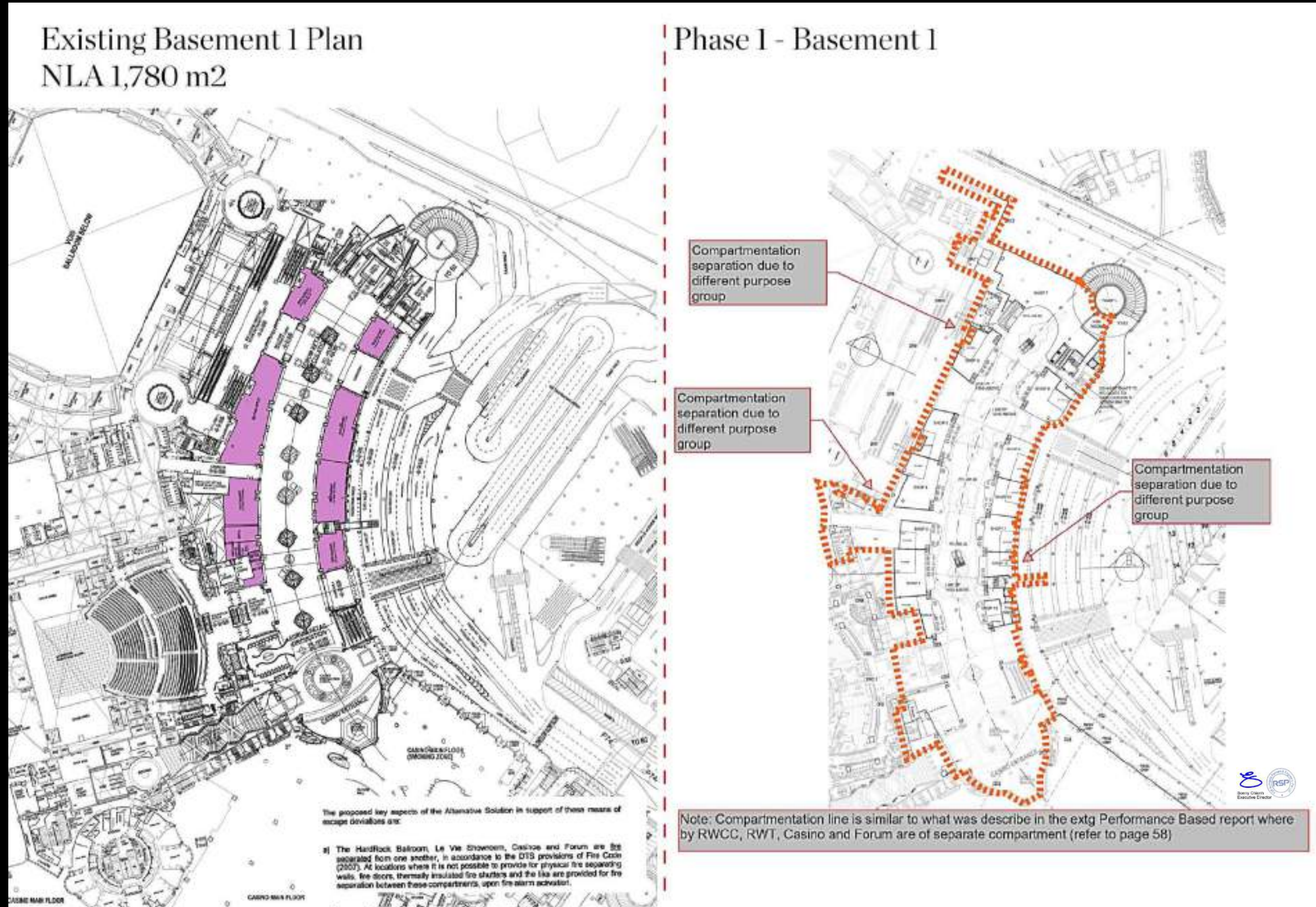
CL: 6.6.4



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

COMPARTMENTATION LIMITATION

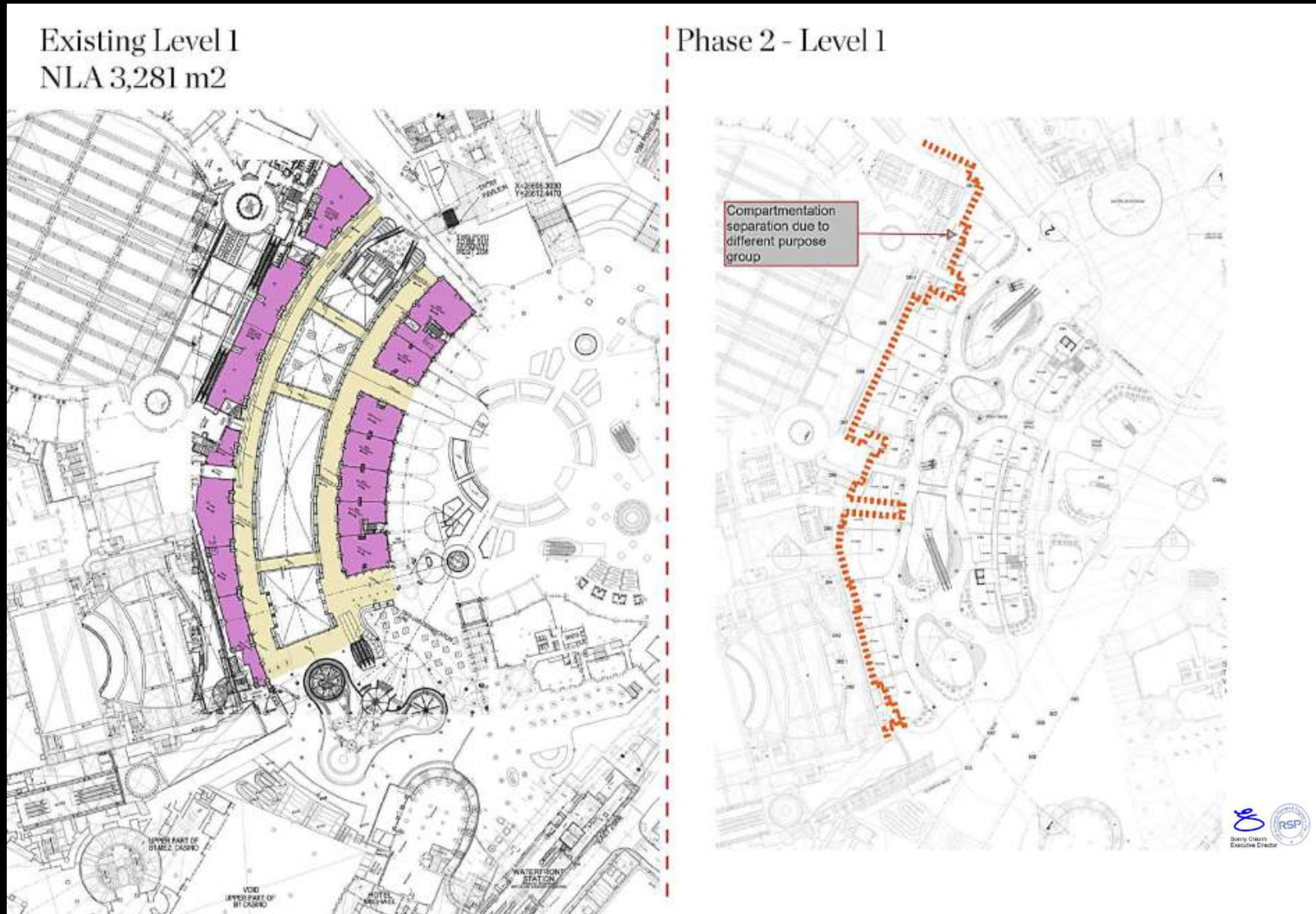
CL: 3.2.1 & 3.2.3



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

COMPARTMENTATION LIMITATION

CL: 3.2.1 & 3.2.3



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

COMPARTMENTATION LIMITATION

CL: 3.2.1 & 3.2.3

Phase 2 - Level 2



SCDF CODE COMPLIANCE STUDY (SINGAPORE CIVIL DEFENCE FORCE)

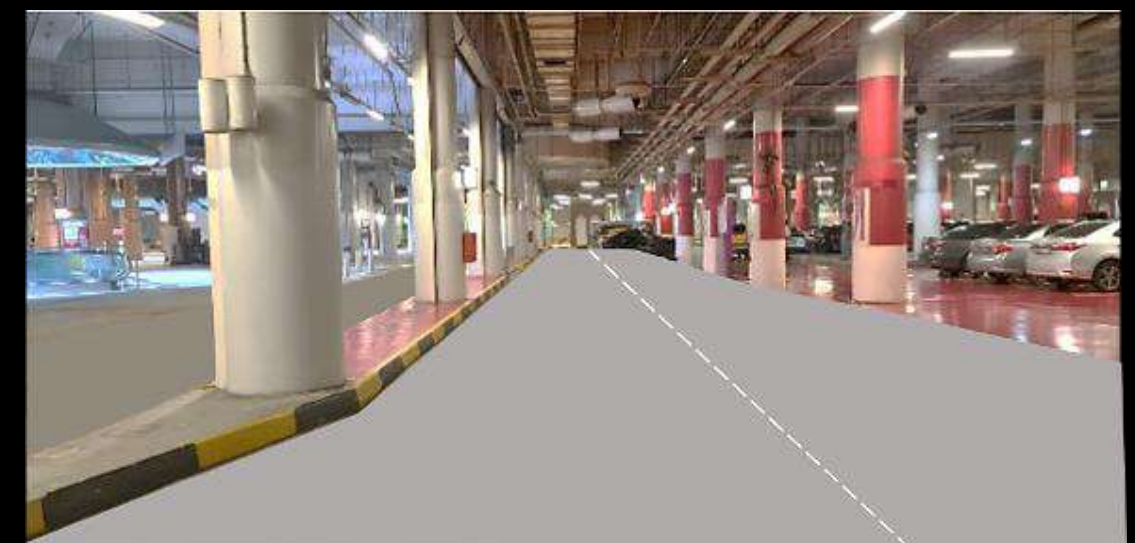
SITE PHTOTOS



TRANSPORTATION HUB WORKS

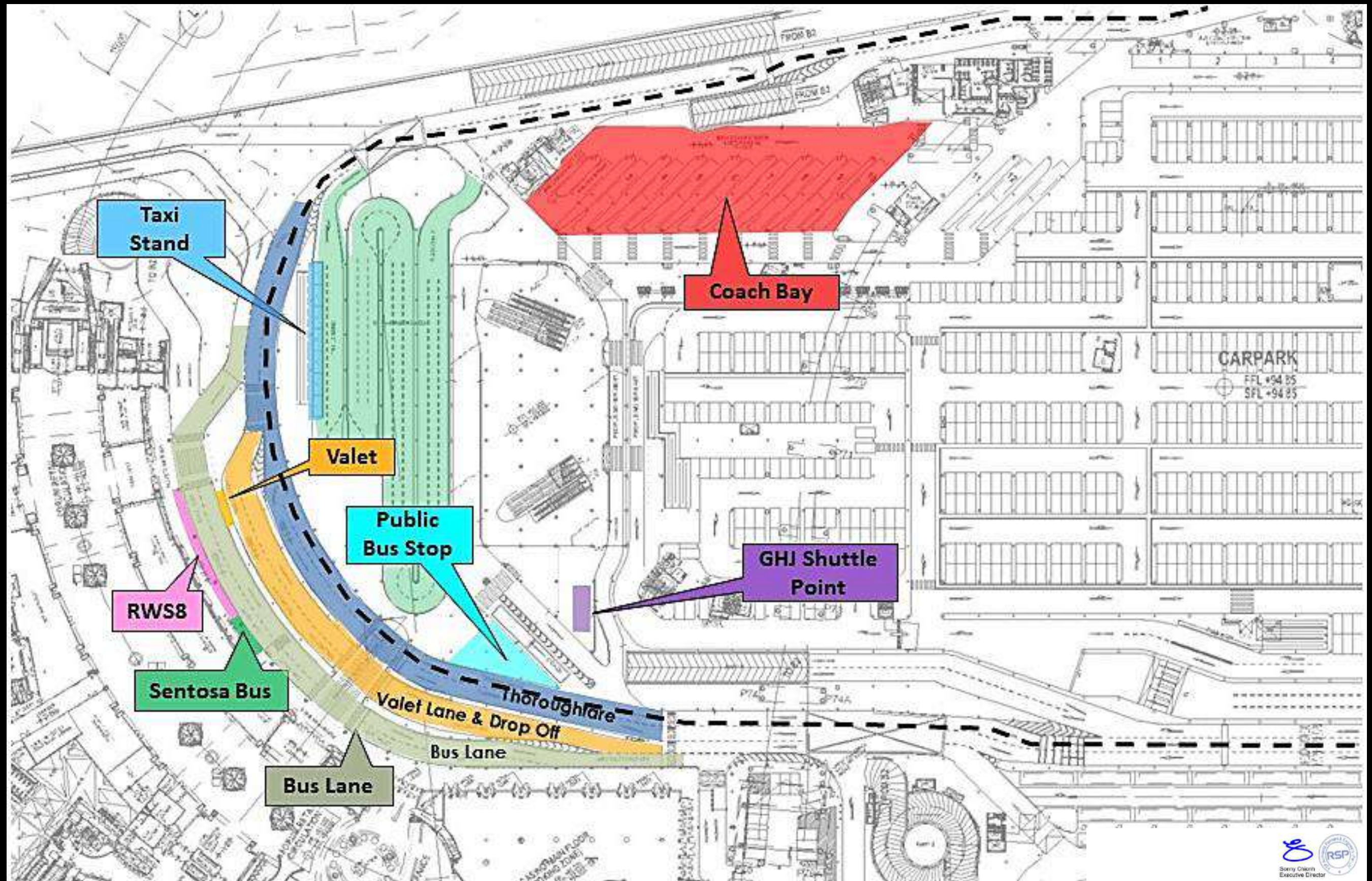
WORK SCOPE

- @ Temp Taxi Stand (Week 1 to 3)
 - Propose to remove existing epoxy and keep it to concrete default to be maintenance free.
 - Basic road markings such as arrows, lane divider lines, etc still required.
 - New taxi stand / queue railing, follow existing floor/kerb and railing design.
 - Propose to recycle the railing from the existing taxi stand.
 - Kerb extension or topping-up (partially need reinstatement after WF construction).
 - Shifting of bollards to behind columns on the right hand side of photo in the green-dotted-line area. Security to confirm if the existing bollards are for bomb blast.
 - Retain existing lighting, ceiling, M&E services and fire protection.
 - Existing big ass fan need to be relocated.
 - install infrastructure for electrical and water for eco-cooler.
 - no change to existing smoke exhaust/ventilation system.
 - To further explore if the existing smoke exhaust pipes are in the way of buses. May need to remove / modify.
- @ Temp RWS8 / GHJ (Week 2 or 3 to Week 6)
 - Shift eco-cooler, standing directory, bench, fans, etc to new taxi stand.
 - The two big ass fans at existing Taxi Stand to be relocated to the new Coach Bay waiting area.
 - Standing directory to be relocated to the interim taxi stand.
 - Railing can be recycled for interim taxi stand queue.
 - Propose to hack away existing taxi stand queue kerbs and make good with peddle wash similar to the rest of the area.



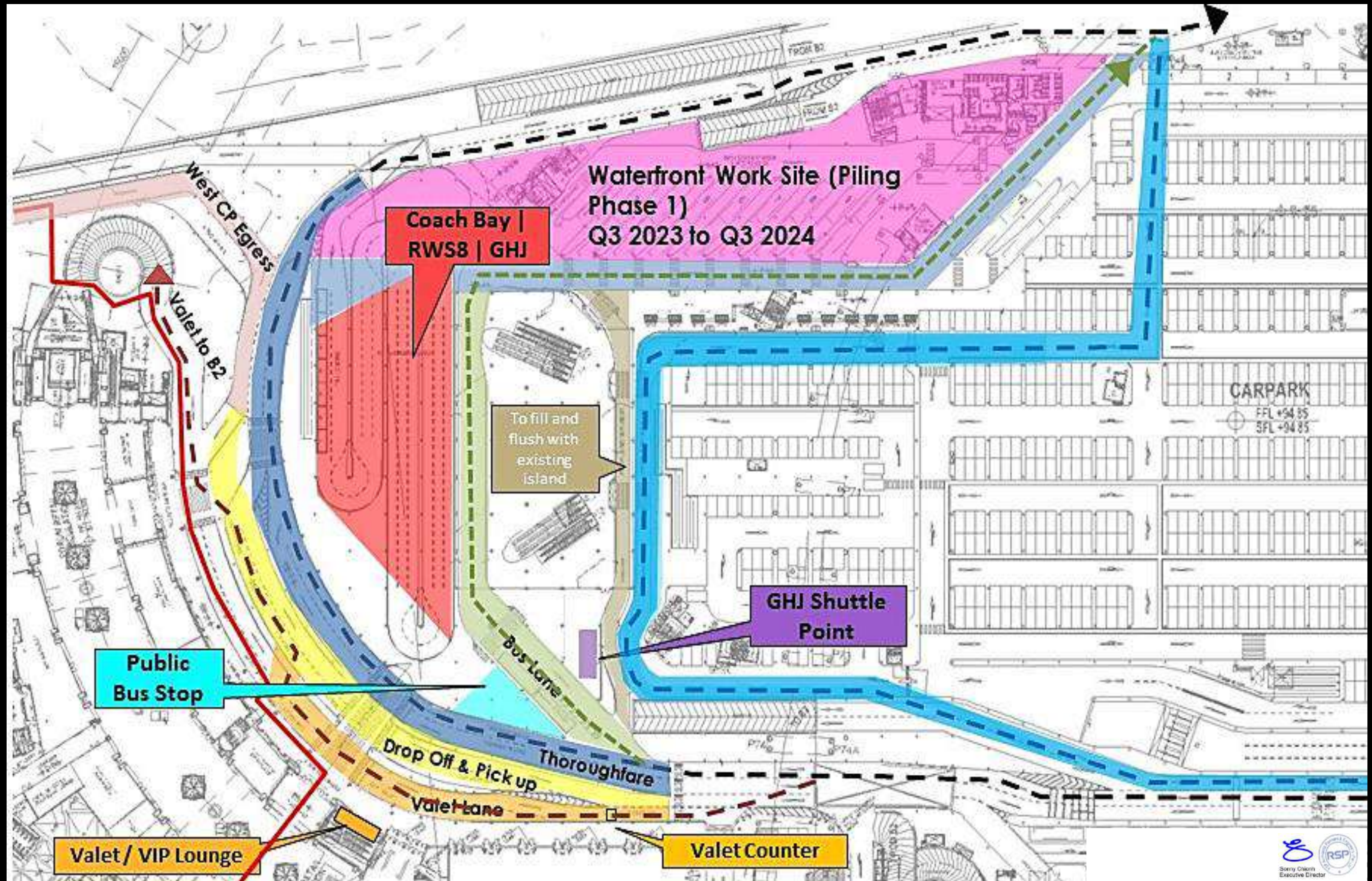
TRANSPORTATION HUB WORKS

CONCEPTUAL LAYOUT - EXISTING CONDITION



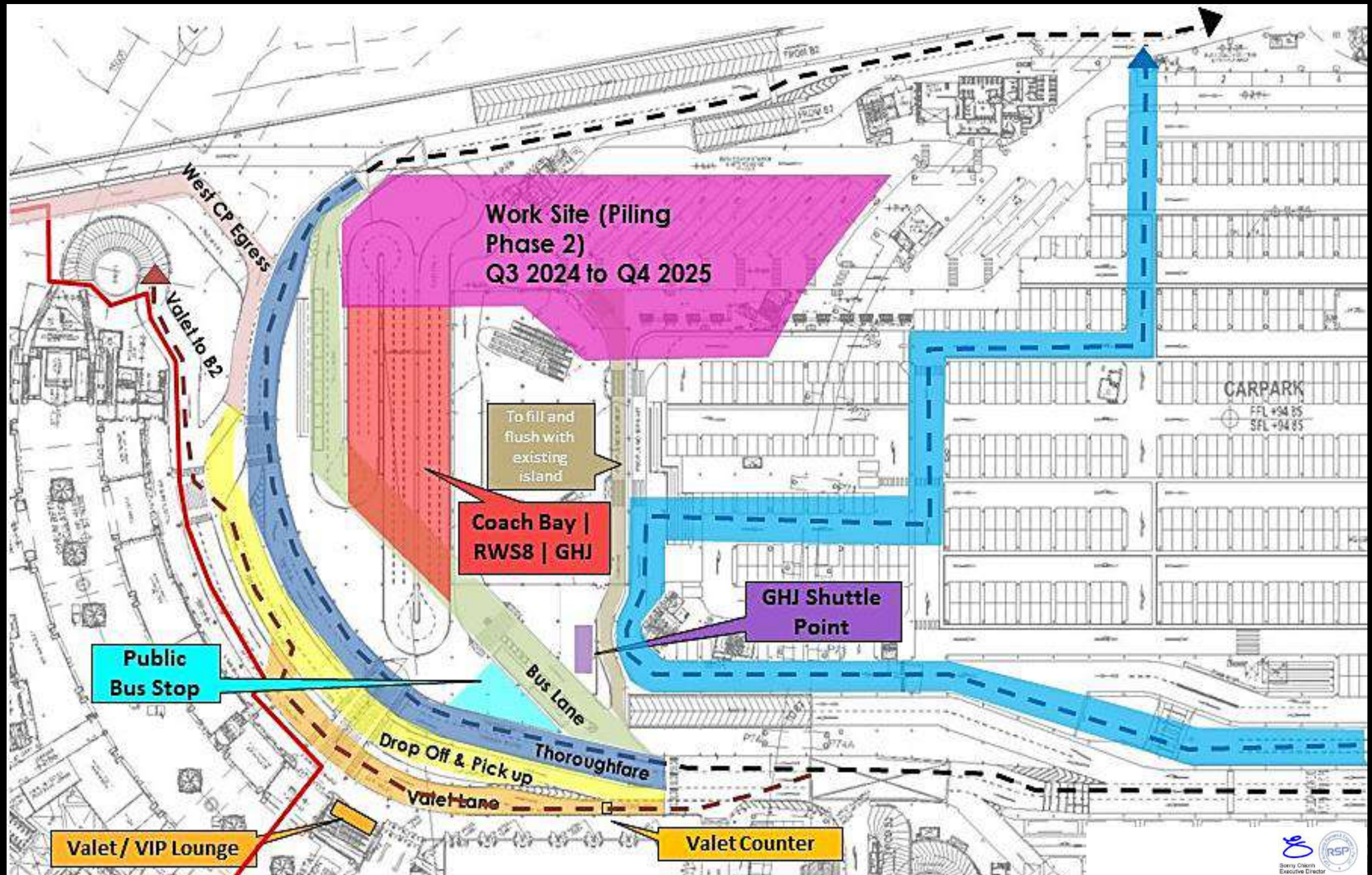
TRANSPORTATION HUB WORKS

CONCEPTUAL LAYOUT - PHASE 1 CONDITION (FORUM UNDER CONSTRUCTION & WATERFRONT PILING WORK)



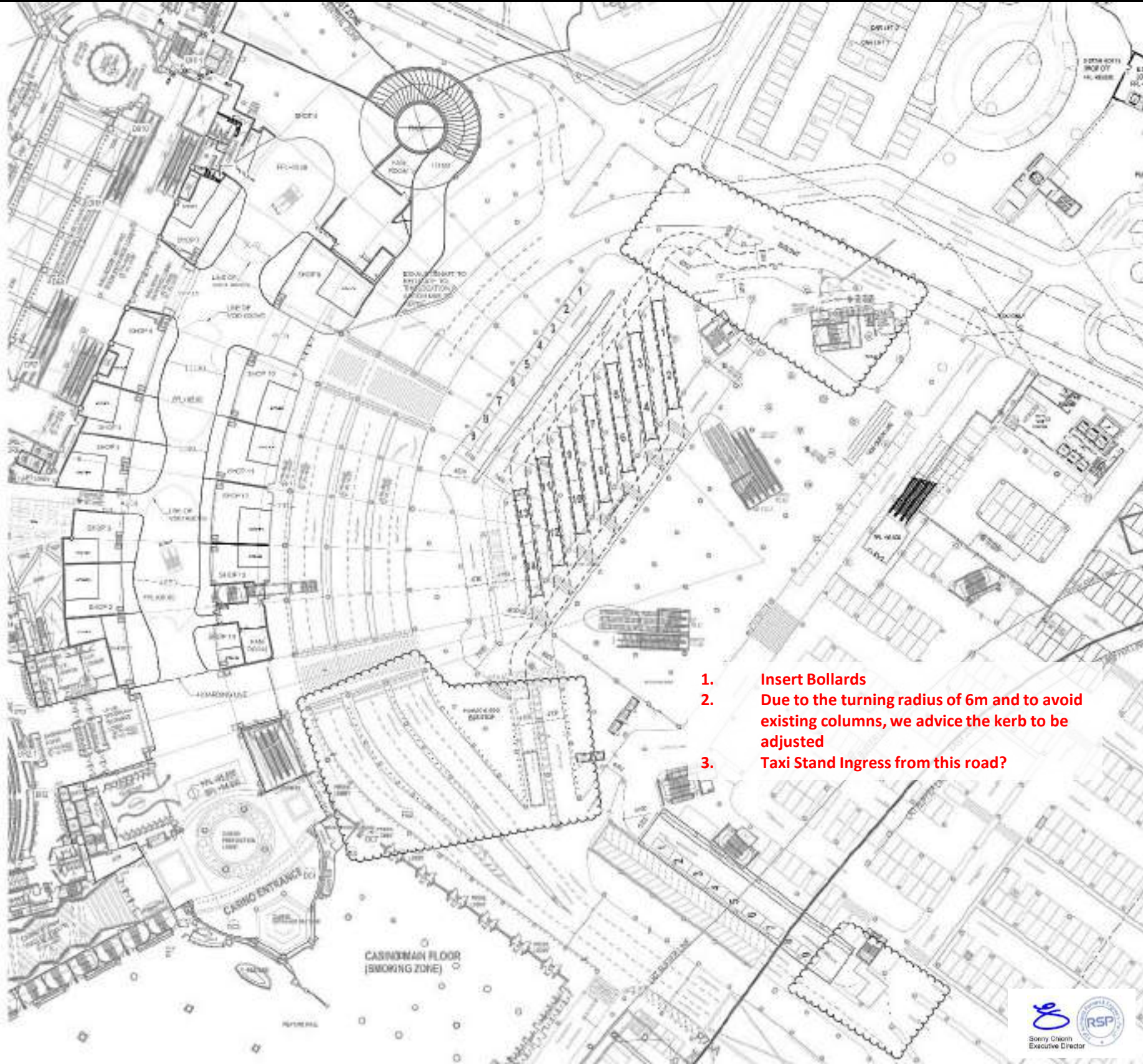
TRANSPORTATION HUB WORKS

CONCEPTUAL LAYOUT - PHASE 2 CONDITION (FORUM CONSTRUCTION COMPLETED & WATERFRONT PILING WORK)



TRANSPORTATION HUB WORKS

CONCEPTUAL LAYOUT - EXISTING CONDITION



Items	Rigid-framed vehicles of length < 7.5m		Rigid-framed vehicles of length ≥ 7.5m		Articulated vehicles (eg. prime movers, 20', 40' & 45' trailers)	
a) Parking lot:						
Parallel parking	3.3m x 3.0m		14.0m x 3.3m		19.0m x 3.3m	
Angled parking	7.5m x 3.0m		12.0m x 3.3m		14.0m x 3.3m	
b) Width of parking aisle:	1-Way	2-Way	1-Way	2-Way	1-Way	2-Way
Parallel parking	4.5m	7.4m	4.5m	7.4m	4.5m	7.4m
30°-parking	4.5m	7.4m	4.5m	7.4m	7.0m	7.4m
45°-parking	5.0m	7.4m	5.5m	7.4m	9.5m	9.5m
60°-parking	6.5m	7.4m	7.0m	7.4m	11.0m	11.0m
90°-parking	9.0m	9.6m	11.0m	11.0m	12.6m	12.0m
c) Width of Accessway:	1-Way	2-Way	1-Way	2-Way	1-Way	2-Way
On Straight	4.5m	7.4m	4.5m	7.4m	4.5m	7.4m
On Curve	5.5m per lane		7.5m per lane		9.0m per lane for 40' & 45' trailer 6.0m per lane for 20' trailer	
d) Inner turning radius of curve	6.0m		6.0m		6.0m	

NOTE:
According to the 2019 LTA code, the parking aisle is 5.5 meters long and the access way is 4.5 meters wide.

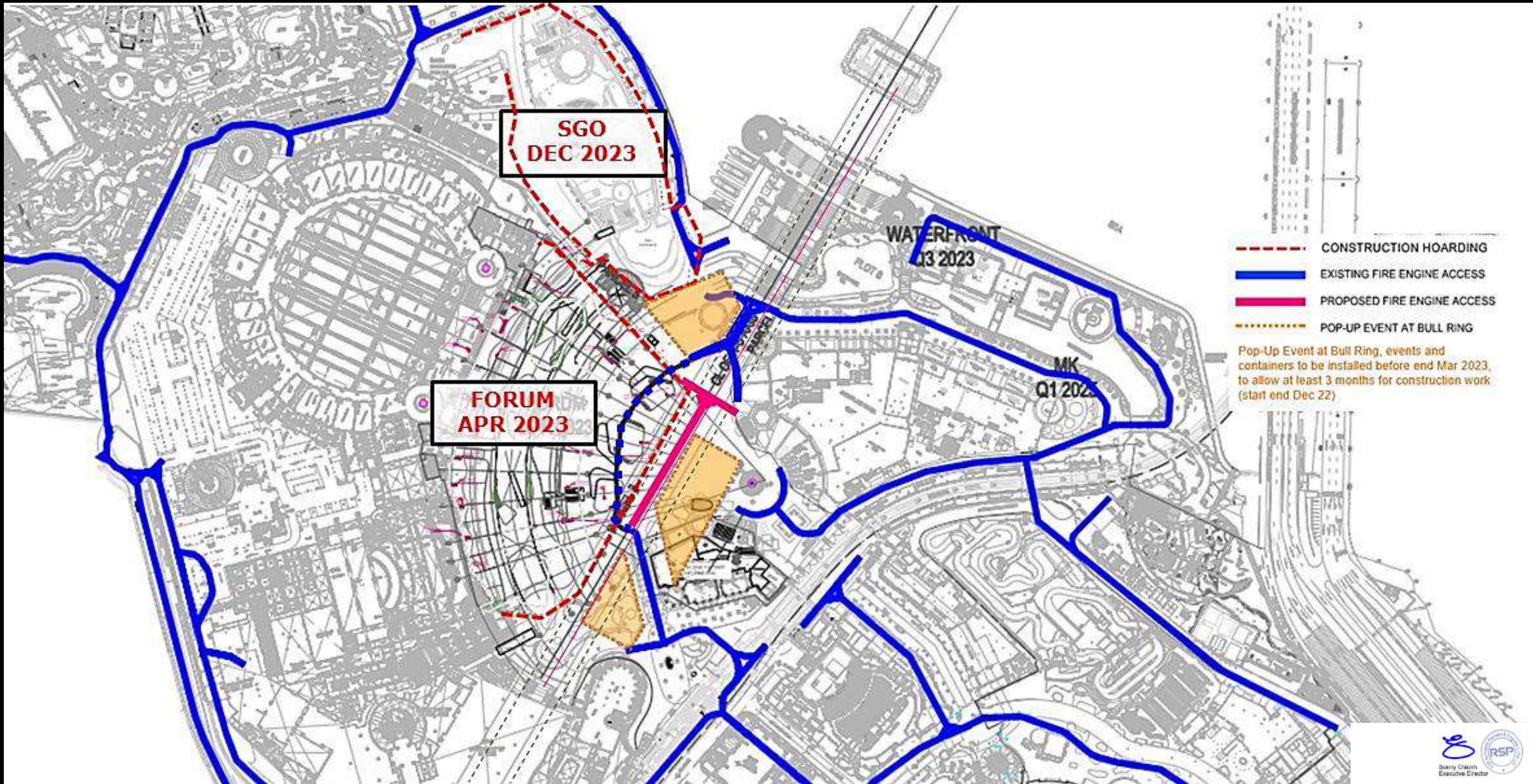
TRANSPORTATION HUB WORKS

SITE PHOTOS



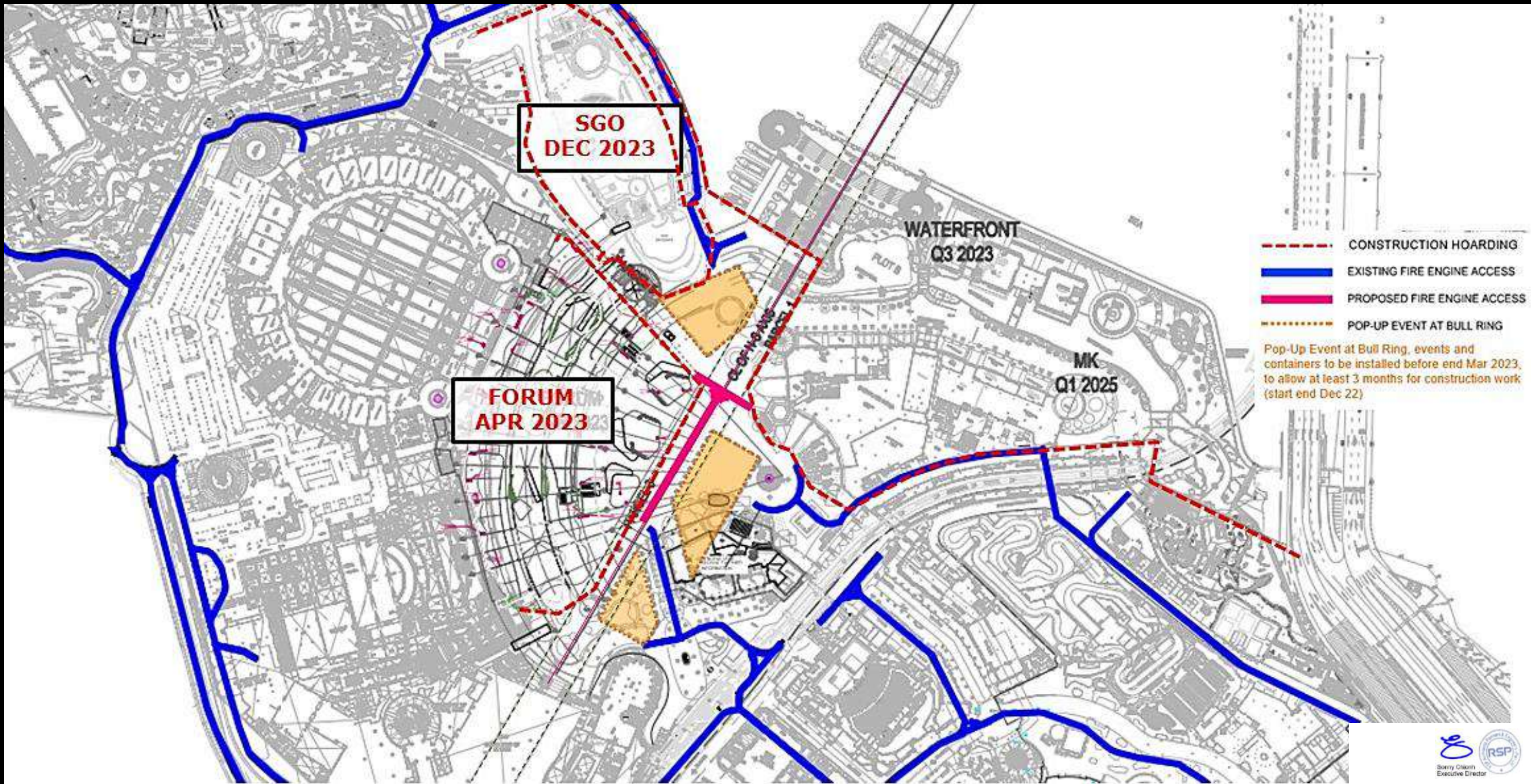
FIRE ENGINE ACCESS ROUTE

CONCEPTUAL PROPOSAL FOR FEA ROUTE FOR APRIL 2023 TO Q3 2024 BEFORE WATERFRONT CONSTRUCTION



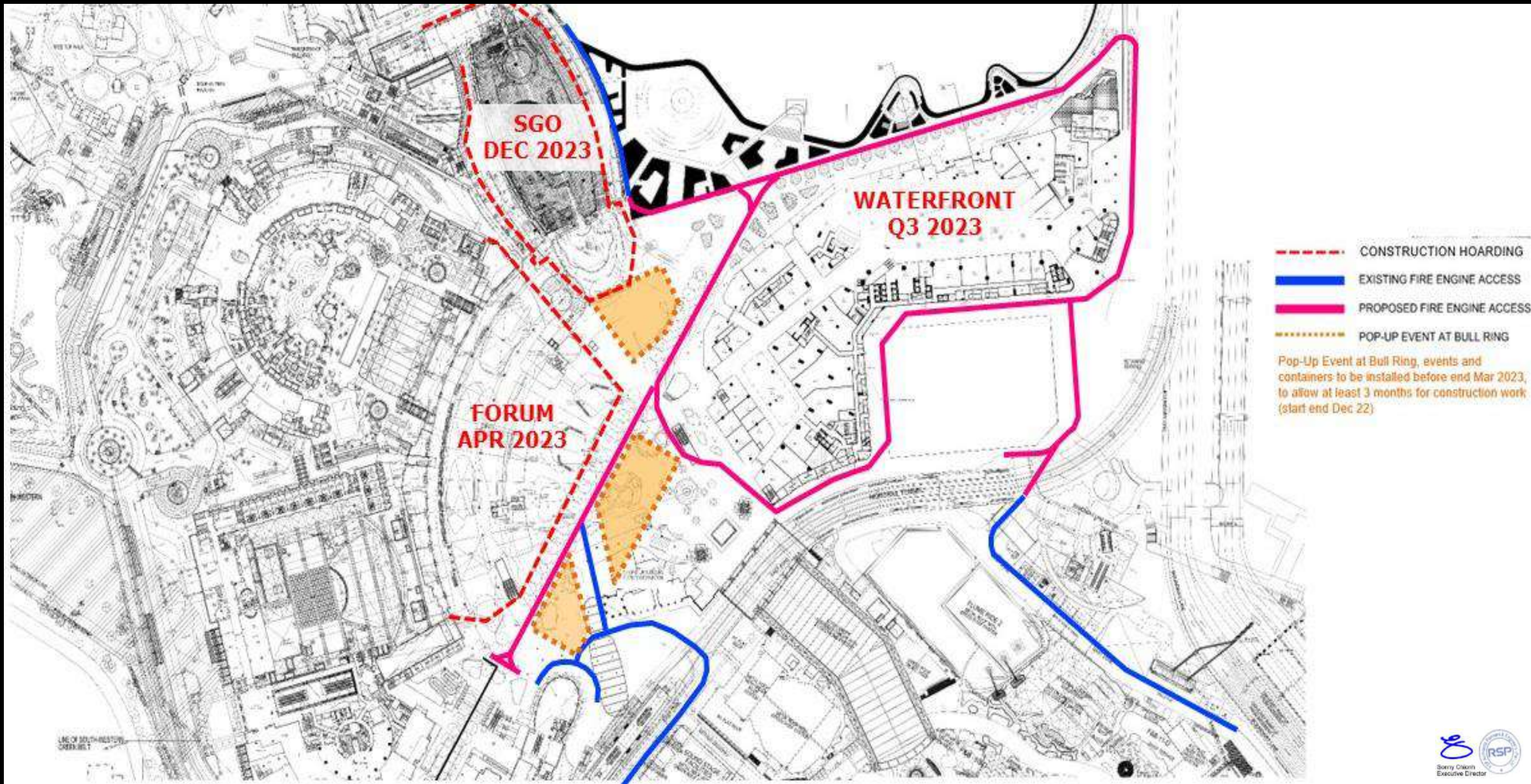
FIRE ENGINE ACCESS ROUTE

CONCEPTUAL PROPOSAL FOR FEA ROUTE FOR Q3 2023 TO Q2 2028 BEFORE WATERFRONT CONSTRUCTION



FIRE ENGINE ACCESS ROUTE

CONCEPTUAL PROPOSAL FOR SITEWIDE FIRE ENGINE ACCESS PLAN



SITE PHOTOS



— *CapitaSpring* —

To examine the building's current design strategies and planning and to suggest modifications that can be made to the M&E riser area due to safety concerns following a person's fall during maintenance check.

CAPITASPRING



DEVELOPMENT INFORMATION

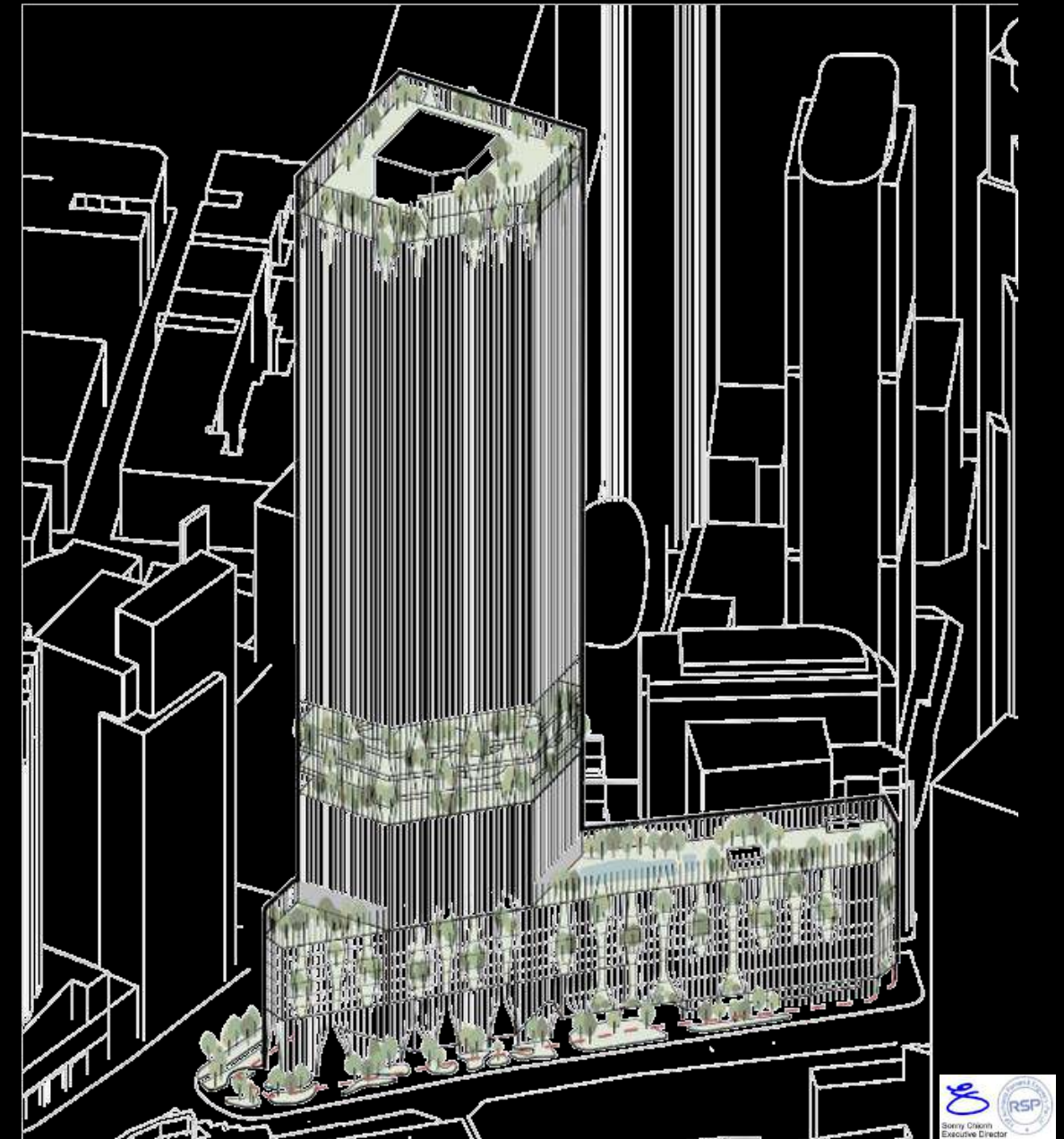
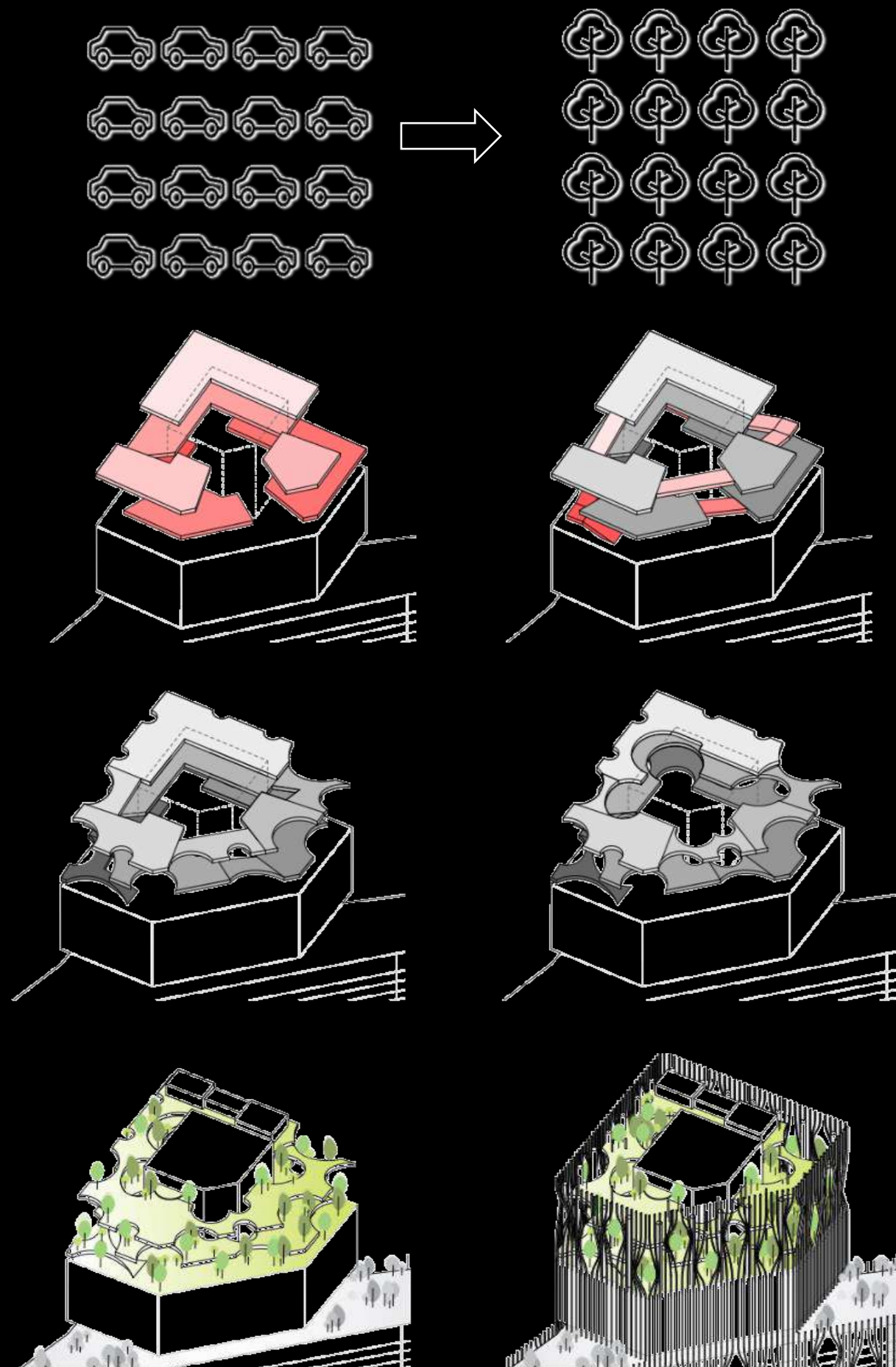
Name of client : CI Office Trustee Pte Ltd As Trustee-manager Of Glory Office Trust

Project Address : 86 and 88 Market Street, S048948

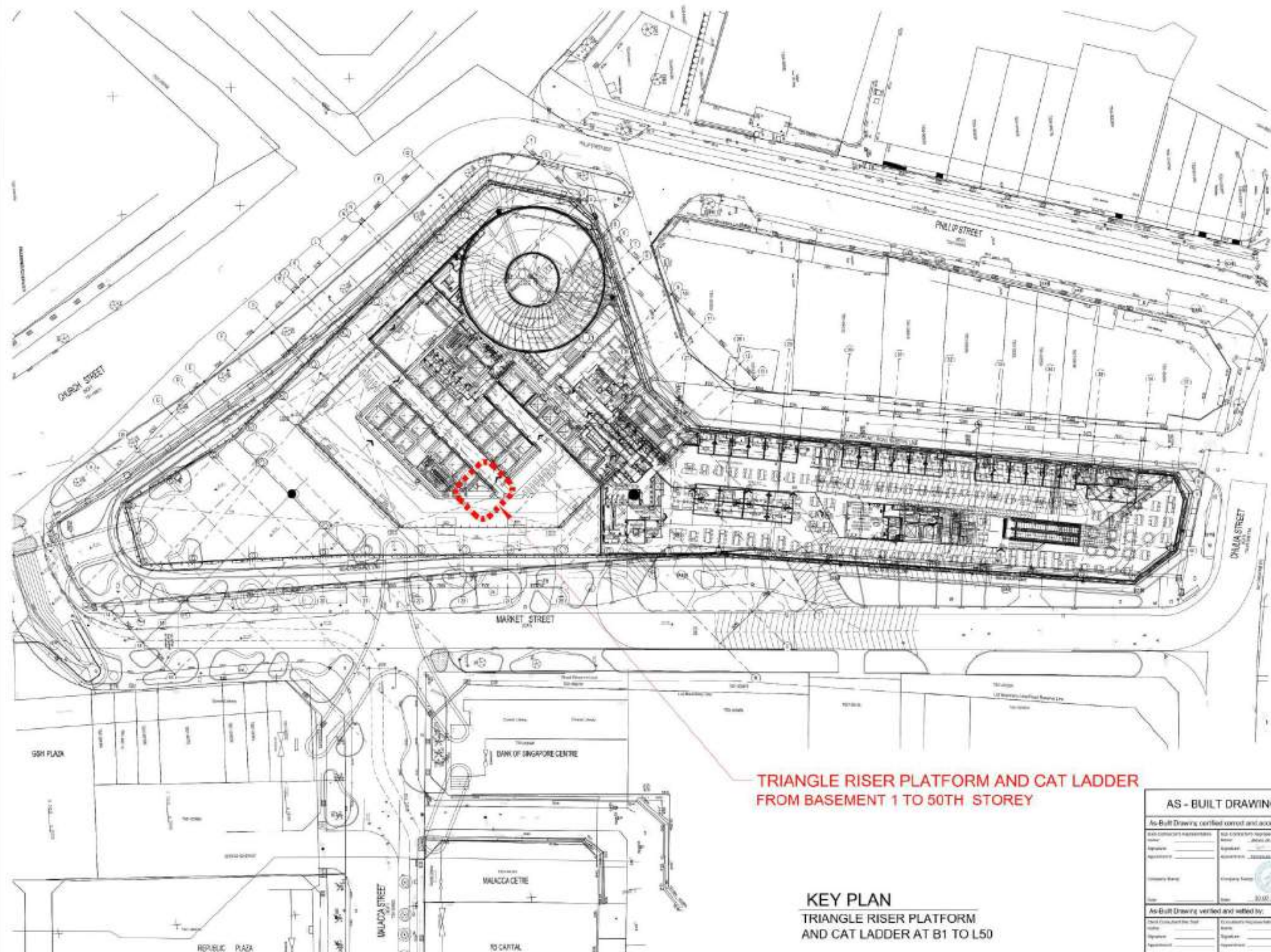
Floor Area : 93,350.77 m²

CONSULTANTS/VENDORS	COMPANY
Design Consultant/Lead Designer	BIG-Bjarke Ingels Group and Carlo Ratti Associati
Project Architect	RSP Architects Planners & Engineers (Pte) Ltd
Civil & Structure	Arup Singapore Pte Ltd
Façade	
Acoustics	
Environmental Sustainability Design	
Vertical Transportation	
AV	Beca Carter Hollings & Ferner (SEAsia) Pte Ltd
Mechanical & Electrical	
Quantity Surveyor	Arcadis Singapore Pte Ltd
SR Interior Designer	Takenouchi Webb
Landscape	COEN Design International
Lighting	Nipek Pte Ltd
Signage	Asylum Creative Pte Ltd
Main Contract	Dragages Singapore Pte Ltd

PROGRAMME AND DEVELOPMENT



A dynamic interplay of orthogonal lines, the lush greenery cascades from the vast terraces that comprise the architectural form of the building.



**TRIANGLE RISER PLATFORM AND CAT LADDER
FROM BASEMENT 1 TO 50TH STOREY**

KEY PLAN
TRIANGLE RISER PLATFORM
AND CAT LADDER AT B1 TO L50

PROJECT GLORY
PROPOSED DEVELOPMENT OF A 51-STORY COMMERCIAL DEVELOPMENT WITH A BASEMENT AND COMPOSITE SHOPPING-HAMPER CENTRE (AIRSPACE LOT) SERVED APARTMENT / OFFICE / MULTISTORY CARPARK AND AUXILIARY FACILITIES ON LOTS 05050 & 05050A PT. TS 01 AT MARKET STREET / CHURCH STREET / PHILIP STREET (DOWNTOWN CORE PLANNING AREA)

- CLIENT**
CL OFFICE TRUSTEE PTE. LTD.
100 ROBINSON ROAD #21-01 SINGAPORE 068902
TEL: 65-6733 1111 FAX: 65-6733 1888
- ARCHITECT**
RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD.
100 ROBINSON ROAD #21-01 SINGAPORE 068902
TEL: 65-6733 1111 FAX: 65-6733 1888
- STRUCTURAL ENGINEER**
MWH (SINGAPORE) PTE. LTD.
100 ROBINSON ROAD #21-01 SINGAPORE 068902
TEL: 65-6733 1111 FAX: 65-6733 1888
- M&E CONSULTANT**
SEA (OVERSEAS) & EARTH (S.E. ASIA) PTE. LTD.
100 ROBINSON ROAD #21-01 SINGAPORE 068902
TEL: 65-6733 1111 FAX: 65-6733 1888
- M&E ENGINEER**
SQUIRE MECH. PTE. LTD.
100 ROBINSON ROAD #21-01 SINGAPORE 068902
TEL: 65-6733 1111 FAX: 65-6733 1888
- SAFETY ENGINEER**
ARCADIS SINGAPORE PTE. LTD.
100 ROBINSON ROAD #21-01 SINGAPORE 068902
TEL: 65-6733 1111 FAX: 65-6733 1888
- LANDSCAPE ARCHITECT**
COEN DESIGN INT. PTE. LTD.
100 ROBINSON ROAD #21-01 SINGAPORE 068902
TEL: 65-6733 1111 FAX: 65-6733 1888



REVISIONS

NO.	DATE	DESCRIPTION
1	12/11/2019	AS-BUILT DRAWING

APPROVALS

DESIGNED BY: [Signature]
CHECKED BY: [Signature]
ISSUED BY: [Signature]

RSP

Sony Chhori
Executive Director

AS-BUILT

DRAGAGE

Dragage Singapore

JC

Jai Lin Construction Pte Ltd

KEY PLAN - TRIANGLE RISER PLATFORM AND CAT LADDER AT BASEMENT TO 50TH STOREY

DATE	12/11/2019 - 30/07/2021	SCALE	1:300 @ A4
PROJECT	GL	DESIGN	JLC
STRUCTURE	SS	SO	++
NO.	304	X	

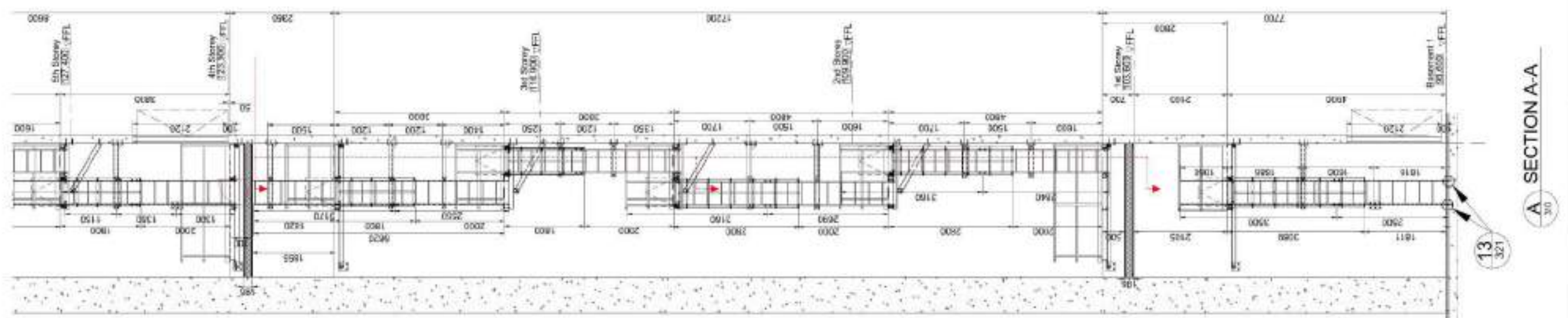
AS - BUILT DRAWING

As-Built Drawing certified correct and accurate:

NAME	DESIGNER	DATE
[Signature]	[Signature]	30.07.2021

As-Built Drawing verified and settled by:

NAME	DESIGNER	DATE
[Signature]	[Signature]	30.07.2021



LEGEND

SBI-1 UB 100X100X17.2KG (S275)
SBI-2 ANGLE BAR 90X90X6MM THK (S275)
SBI-3 TAPERED FLANGE 100X50X5X30KG/M
SBI-4 ANGLE BAR 50X50X6MM THK
SBI-5 ANGLE BAR 75X50X6MM THK
SBI-6 ANGLE BAR 90X50X6MM THK
SHS75: HOLLOW SECTION 75X75X6MM THK

— FIRE RATED CEILING
BY OTHERS
--- SPRINKLER POINT WITH Ø82mm SDNP PIPE
BY OTHERS

[illegible]

1. *Journal of Management Studies*, 1996, 33, 1, 1-14.

GL	JLG	SS	SD	++	##
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Sonny Chionh
Executive Director

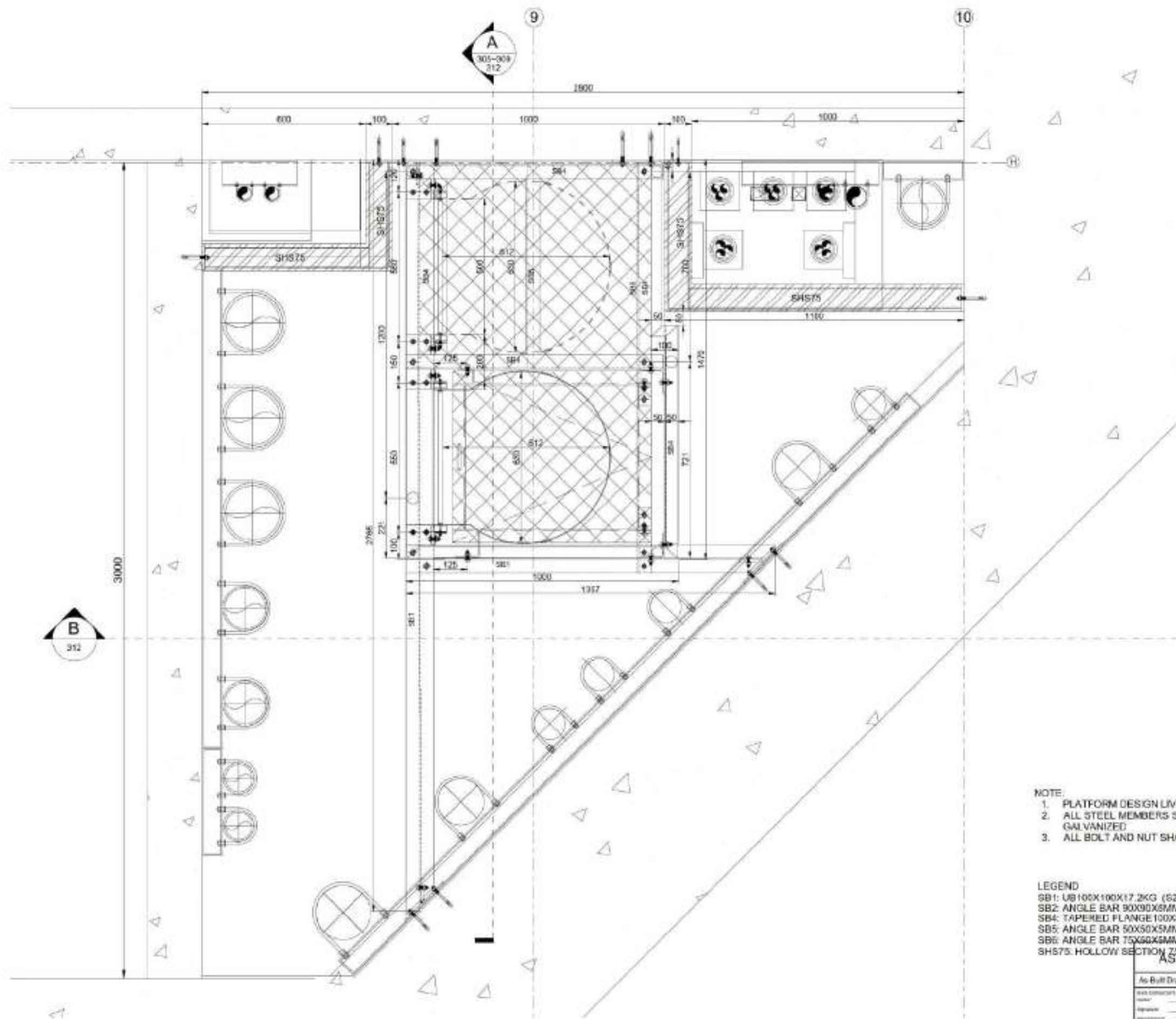
AS-BUILT



久林 JIC

SECTION A-A
TRIANGLE RISER CATWALK
PLATFORM AND CAT LADDER
AT BASEMENT TO 50TH STOREY

DATE 12/11/2019 - 30/07/2021		BILL 150 @ A1	
CITY JL		COUNTRY 30.07.2021 JL	
GL	JLC	SS	SD ++ ++ 305



- NOTE:
1. PLATFORM DESIGN LIVE LOAD 5kPa
 2. ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED
 3. ALL BOLT AND NUT SHALL BE GRADE 8.8

LEGEND
 SB1: UB100X100X17.2KG (S275)
 SB2: ANGLE BAR 90X90X8MM THK (S275)
 SB4: TAPERED FLANGE 100X50X5X8.36KG/M
 SB5: ANGLE BAR 50X50X5MM THK
 SB6: ANGLE BAR 75X50X5MM THK
 SHS75: HOLLOW SECTION 75X75X5MM THK

AS-BUILT DRAWING

As-Built Drawing certified correct and accurate

As-Built Drawing verified and set by:

As-Built Drawing verified and set by:

As-Built Drawing verified and set by:

As-Built Drawing verified and set by:

As-Built Drawing verified and set by:

As-Built Drawing verified and set by:

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As-Built Drawing verified and set by:

PROJECT GLORY

PROPOSED DEVELOPMENT OF A 51-STORY COMMERCIAL DEVELOPMENT WITH A BASEMENT AND COMPREHENSIVE SHOPPING HUB CENTRE (AIR SPACE LOT) SERVED APARTMENT / OFFICE / MULTISTORY CARPARK AND AUXILIARY FACILITIES ON LOTS DISON & 000004P.T. TS 01 AT MARKET STREET / CHULIA STREET / CHURCH STREET (DOWNTOWN CORE PLANNING AREA)

CL OFFICE TRUSTEE PTE. LTD.

100, ROBINSON ROAD, #11-01, ROBINSON SQUARE, SINGAPORE 068902
 Tel: +65 (0)11 388 1881 Fax: +65 (0)11 388 1882

RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD

1, KALLANG ROAD, #11-01, KALLANG SQUARE, SINGAPORE 349301
 Tel: +65 (0)11 388 1881 Fax: +65 (0)11 388 1882

ARUP SINGAPORE PTE. LTD.

10, ROBINSON ROAD, #11-01, ROBINSON SQUARE, SINGAPORE 068902
 Tel: +65 (0)11 388 1881 Fax: +65 (0)11 388 1882

MEYER (SINGAPORE) PTE. LTD.

10, ROBINSON ROAD, #11-01, ROBINSON SQUARE, SINGAPORE 068902
 Tel: +65 (0)11 388 1881 Fax: +65 (0)11 388 1882

SEA GROUP HOLDINGS & FINANCIAL (SINGAPORE) PTE. LTD.

1, KALLANG ROAD, #11-01, KALLANG SQUARE, SINGAPORE 349301
 Tel: +65 (0)11 388 1881 Fax: +65 (0)11 388 1882

SQUIRE MECH PTE. LTD.

1, KALLANG ROAD, #11-01, KALLANG SQUARE, SINGAPORE 349301
 Tel: +65 (0)11 388 1881 Fax: +65 (0)11 388 1882

ARCADIS SINGAPORE PTE. LTD.

1, KALLANG ROAD, #11-01, KALLANG SQUARE, SINGAPORE 349301
 Tel: +65 (0)11 388 1881 Fax: +65 (0)11 388 1882

COEN DESIGN INT. PTE. LTD.

1, KALLANG ROAD, #11-01, KALLANG SQUARE, SINGAPORE 349301
 Tel: +65 (0)11 388 1881 Fax: +65 (0)11 388 1882

AS-BUILT DRAWING

As-Built Drawing certified correct and accurate

As-Built Drawing verified and set by:

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As-Built Drawing verified and set by:

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As-Built Drawing verified and set by:

As-Built Drawing verified and set by:

PROJECT GLORY
 PROPOSED DEVELOPMENT OF A 51-STORY COMMERCIAL DEVELOPMENT WITH A BASEMENT AND COMPREHENSIVE SHOPPING MALL, CENTRE (AIR SPACE LOT) SERVED APARTMENT / OFFICE / MULTISTORY CARPARK AND AUXILIARY FACILITIES ON LOTS 0505N & 0060N PT, TS 01 AT MARKET STREET / CHULIA STREET / CHURCH STREET (DOWNTOWN CORE PLANNING AREA)

CL OFFICE TRUSTEE PTE. LTD.
 11, ROBINSON ROAD, #11-01, SINGAPORE 068902
 TEL: +65 (0)4 348 8888 FAX: +65 (0)4 348 8889

ARCHITECT: RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD.
 11, ROBINSON ROAD, #11-01, SINGAPORE 068902
 TEL: +65 (0)4 348 8888 FAX: +65 (0)4 348 8889

STRUCTURAL CONSULTANT: ARUP SINGAPORE PTE. LTD.
 11, ROBINSON ROAD, #11-01, SINGAPORE 068902
 TEL: +65 (0)4 348 8888 FAX: +65 (0)4 348 8889

MECHANICAL ENGINEER: MWHARD (SINGAPORE) PTE. LTD.
 11, ROBINSON ROAD, #11-01, SINGAPORE 068902
 TEL: +65 (0)4 348 8888 FAX: +65 (0)4 348 8889

ELECTRICAL CONSULTANT: RITA (SINGAPORE) & PARTNERS (PTE) LTD.
 11, ROBINSON ROAD, #11-01, SINGAPORE 068902
 TEL: +65 (0)4 348 8888 FAX: +65 (0)4 348 8889

MECHANICAL CONSULTANT: SQUARE TECH PTE. LTD.
 11, ROBINSON ROAD, #11-01, SINGAPORE 068902
 TEL: +65 (0)4 348 8888 FAX: +65 (0)4 348 8889

SAFETY SUPERVISOR: ARCADES SINGAPORE PTE. LTD.
 11, ROBINSON ROAD, #11-01, SINGAPORE 068902
 TEL: +65 (0)4 348 8888 FAX: +65 (0)4 348 8889

LANDSCAPE CONSULTANT: COEN DESIGN PT. PTE. LTD.
 11, ROBINSON ROAD, #11-01, SINGAPORE 068902
 TEL: +65 (0)4 348 8888 FAX: +65 (0)4 348 8889



NO.	REV.	DATE	BY	CHKD BY	DESCRIPTION
1	1	30.07.2021	JLC	SS	ISSUED FOR CONSTRUCTION

CONSTRUCTION NOTES:
 1. ALL DIMENSIONS ARE IN METERS.
 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR.

RSP

Seny Chiam
 Executive Director

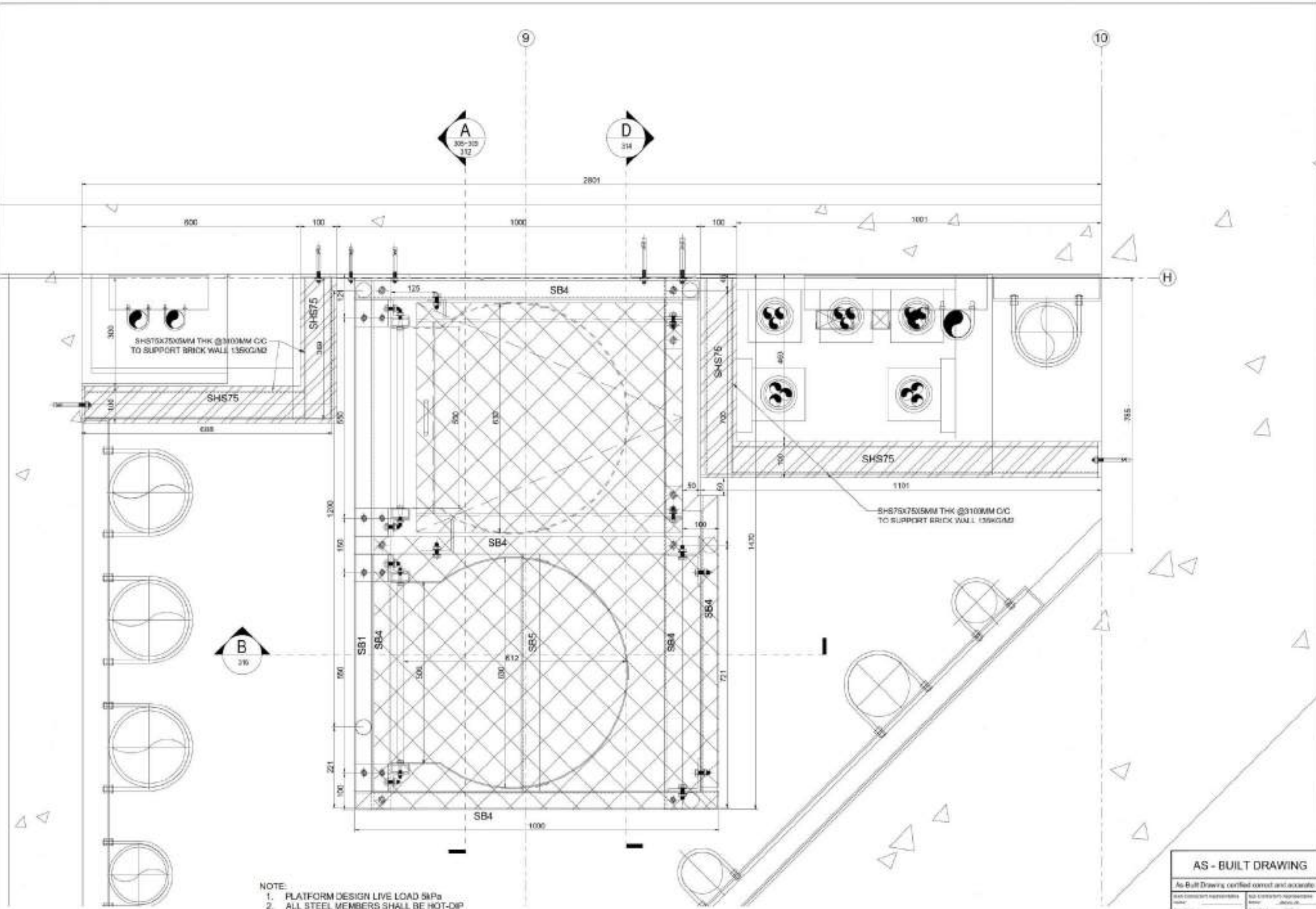
AS-BUILT

DRAGONER SINGAPORE

JLC

PLAN - TRIANGLE RISER INTERMEDIATE PLATFORM AND CAT LADDER AT BASEMENT TO 50TH STOREY

DATE: 12/11/2019 - 30/07/2021	SCALE: 1:50 & A1
PROJECT: JLC	DESIGN: SS
CONSTRUCTION: SD	++ ++
311	X



- NOTE:**
1. PLATFORM DESIGN LIVE LOAD 5kPa
 2. ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED
 3. ALL BOLT AND NUT SHALL BE GRADE 8.8

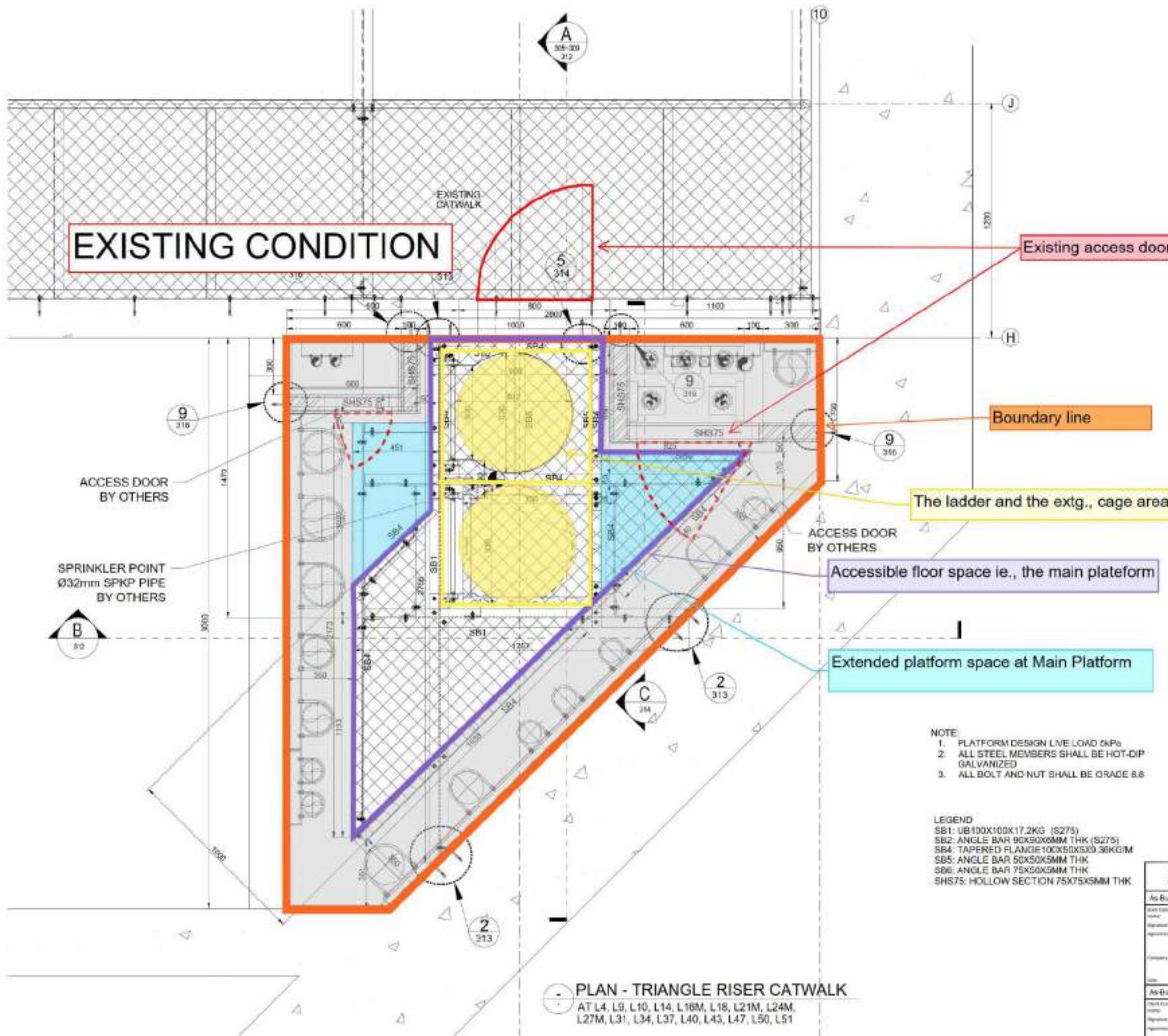
- LEGEND**
- SB1: UB100X100X17.2KG (S275)
 - SB2: ANGLE BAR 90X90X5MM THK (S275)
 - SB3: TAPERED FLANGE 100X50X5X9.3KG/M
 - SB4: ANGLE BAR 50X50X5MM THK
 - SB5: ANGLE BAR 75X50X5MM THK
 - SB6: ANGLE BAR 75X50X5MM THK
 - SHS75: HOLLOW SECTION 75X75X5MM THK

PLAN - TRIANGLE RISER INTERMEDIATE PLATFORM

AS - BUILT DRAWING

As-Built Drawing certified correct and accurate:

As-Built Drawing verified and set by:



- NOTE
1. PLATFORM DESIGN LIVE LOAD 5kPa
 2. ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED
 3. ALL BOLT AND NUT SHALL BE GRADE 8.8

LEGEND

SB1: UB100X100X17.2KG (S275)
 SB2: ANGLE BAR 90X90X6MM THK (S275)
 SB4: TAPERED FLANGE 100X50X5X0.36KG/M
 SB5: ANGLE BAR 50X50X5MM THK
 SB6: ANGLE BAR 75X50X5MM THK
 SHS75: HOLLOW SECTION 75X75X5MM THK

PLAN - TRIANGLE RISER CATWALK
 AT L4, L9, L10, L14, L16M, L18, L21M, L24M,
 L27M, L31, L34, L37, L40, L43, L47, L50, L51

PROJECT GLORY

PROPOSED DEVELOPMENT OF A 51-STORY COMMERCIAL DEVELOPMENT WITH A BASEMENT AND COMPREHENSIVE SHOPPING/HAMPER CENTRE (AIR SPACE LOT) SERVED APARTMENT/OFFICE/MULTISTORY CARPARK AND AUXILIARY FACILITIES ON LOTS 0505N & 00600-PT, TS 01 AT MARKET STREET / CHULIA STREET / CHURCH STREET (DOWNTOWN CORE PLANNING AREA)

CLIENT
 CL OFFICE TRUSTEE PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 069011
 MOBILE: 9892 1234
 TEL: 65-6733 3888 FAX: 65-6733 3889

ARCHITECT
 RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 069011
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STRUCTURAL CONSULTANT
 MJP SINGAPORE PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 069011
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MECHANICAL ENGINEER
 MWHM (SINGAPORE) PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 069011
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ELECTRICAL ENGINEER
 RITA CHEN HOLDINGS & FORM (S) PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 069011
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MECHANICAL ENGINEER
 SQUIRE MECH. PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 069011
 MOBILE: 9892 1234
 TEL: 65-6733 3888 FAX: 65-6733 3889

SAFETY ENGINEER
 ARCADIS SINGAPORE PTE. LTD.
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 MOBILE: 9892 1234
 TEL: 65-6733 3888 FAX: 65-6733 3889

LANDSCAPE CONSULTANT
 COEN DESIGN INT. PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 069011
 MOBILE: 9892 1234
 TEL: 65-6733 3888 FAX: 65-6733 3889

PREP PLAN

REVISIONS

NO.	DATE	DESCRIPTION
1	12/11/2019	AS-BUILT DRAWING

APPROVALS

FOR THE CLIENT: Sonny Chionh, Executive Director

FOR THE ARCHITECT: RSP

AS-BUILT

CONSTRUCTION

Jia Lie Construction Pte Ltd
 10 ROBINSON ROAD #21-01 SINGAPORE 069011
 MOBILE: 9892 1234
 TEL: 65-6733 3888 FAX: 65-6733 3889

AS-BUILT DRAWING

As-Built Drawing certified correct and accurate:

NAME	DESIGNATION	DATE
_____ Signature	_____ Designation	_____ Date

As-Built Drawing verified and settled by:

NAME	DESIGNATION	DATE
_____ Signature	_____ Designation	_____ Date

REVISIONS

NO.	DATE	DESCRIPTION
1	12/11/2019 - 30/07/2021	1:10 @ A1

PROJECT INFORMATION

NO.	DESCRIPTION	NO.	DESCRIPTION
GL	JLC	SS	SD
++	++	310	X

PROJECT GLORY
 PROPOSED ERECTION OF A 51-STORY COMMERCIAL DEVELOPMENT WITH BASEMENT AND COMPREHENSIVE SHOPPING MALL CENTRE (AIR SPACE LOT) SERVED APARTMENT / OFFICE / MULTISTORY CARPARK AND AUXILIARY FACILITIES ON LOTS 0505N & 00600-PT, TS 01 AT MARKET STREET / CHULIA STREET / CHURCH STREET (DOWNTOWN CORE PLANNING AREA)

CLIENT
 CL OFFICE TRUSTEE PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 068902
 TEL: 65-6733 3888 FAX: 65-6733 3889

ARCHITECT
 RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 068902
 TEL: 65-6733 3888 FAX: 65-6733 3889

STRUCTURAL CONSULTANT
 MJP SINGAPORE PTE. LTD.
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MECHANICAL ENGINEER
 MWHAM (SINGAPORE) PTE. LTD.
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ELECTRICAL ENGINEER
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 10 ROBINSON ROAD #21-01 SINGAPORE 068902
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MECHANICAL ENGINEER
 SQUIRE MECH. PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 068902
 TEL: 65-6733 3888 FAX: 65-6733 3889

SAFETY ENGINEER
 ARCADIS SINGAPORE PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 068902
 TEL: 65-6733 3888 FAX: 65-6733 3889

LANDSCAPE CONSULTANT
 COEN DESIGN INT. PTE. LTD.
 10 ROBINSON ROAD #21-01 SINGAPORE 068902
 TEL: 65-6733 3888 FAX: 65-6733 3889



NO.	DATE	DESCRIPTION
1	01/01/2021	AS-BUILT DRAWING
2	01/01/2021	REVISION

REVISIONS:

- 1. CHANGES
- 2. ISSUED WITH COMMENTS
- 3. REWORK AND RESUBMIT

RSP



Sonny Chionh
 Executive Director

AS-BUILT

DRUGAGAN SINGAPORE

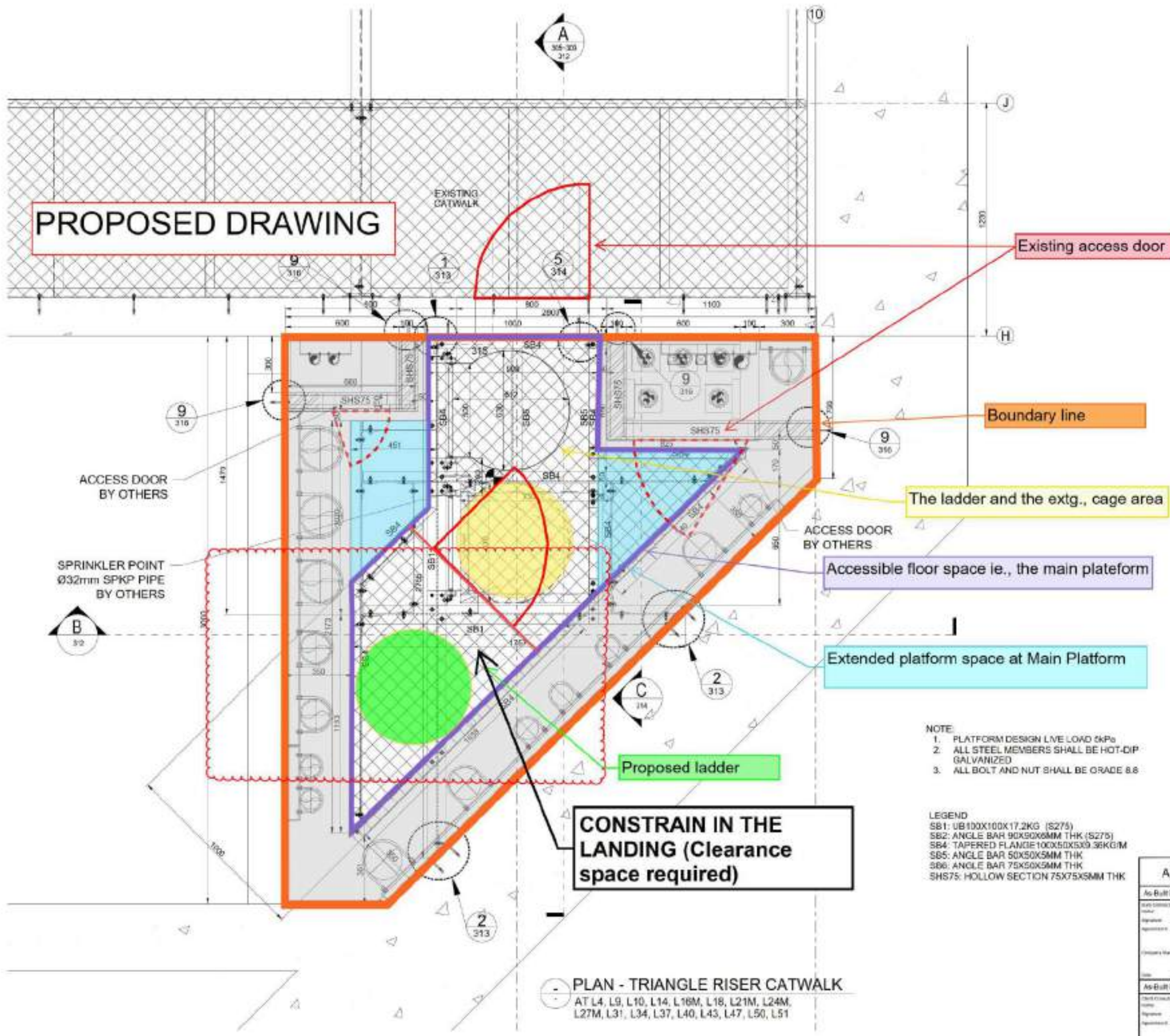


JIC



PLAN - TRIANGLE RISER CATWALK PLATFORM AND CAT LADDER AT BASEMENT TO 50TH STOREY

DATE	12/11/2019 - 30/07/2021	SCALE	1:10 @ A1
PROJECT	GL	DESIGN	JLC
CONTRACT	SS	SO	++
NO.	310	X	



- NOTE**
1. PLATFORM DESIGN LIVE LOAD 5kPa
 2. ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED
 3. ALL BOLT AND NUT SHALL BE GRADE 8.8

LEGEND

SB1: UB100X100X17.2KG (S275)
 SB2: ANGLE BAR 90X90X6MM THK (S275)
 SB4: TAPERED FLANGE 100X50X5X0.36KG/M
 SB5: ANGLE BAR 50X50X5MM THK
 SB6: ANGLE BAR 75X50X5MM THK
 SHS75: HOLLOW SECTION 75X75X5MM THK

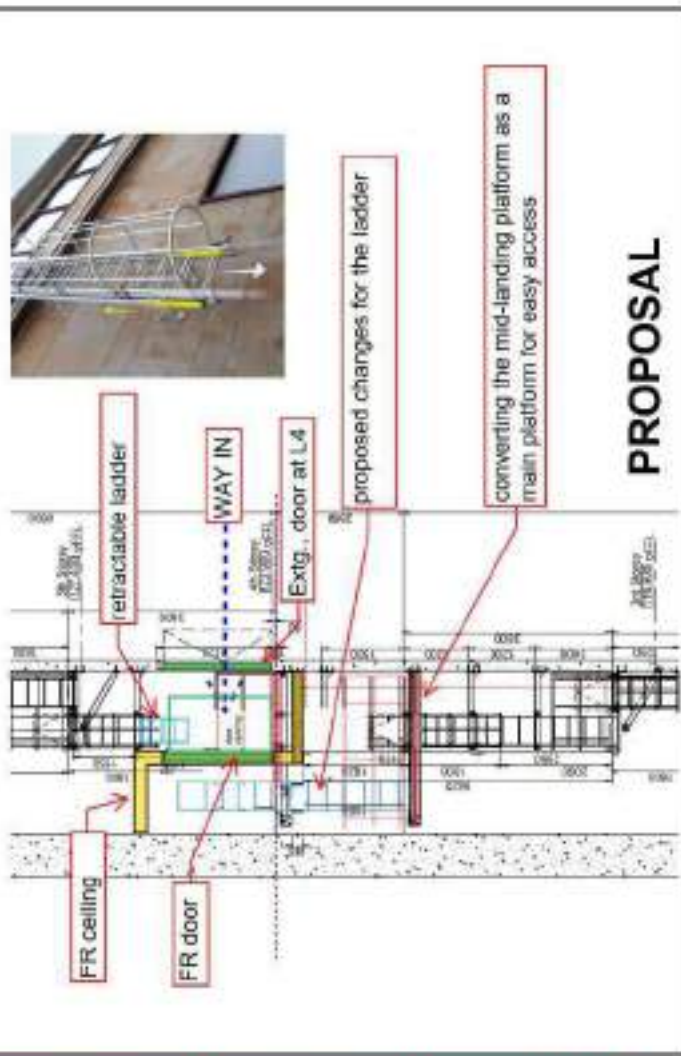
CONSTRAIN IN THE LANDING (Clearance space required)

PLAN - TRIANGLE RISER CATWALK
 AT L4, L9, L10, L14, L16M, L18, L21M, L24M, L27M, L31, L34, L37, L40, L43, L47, L50, L51

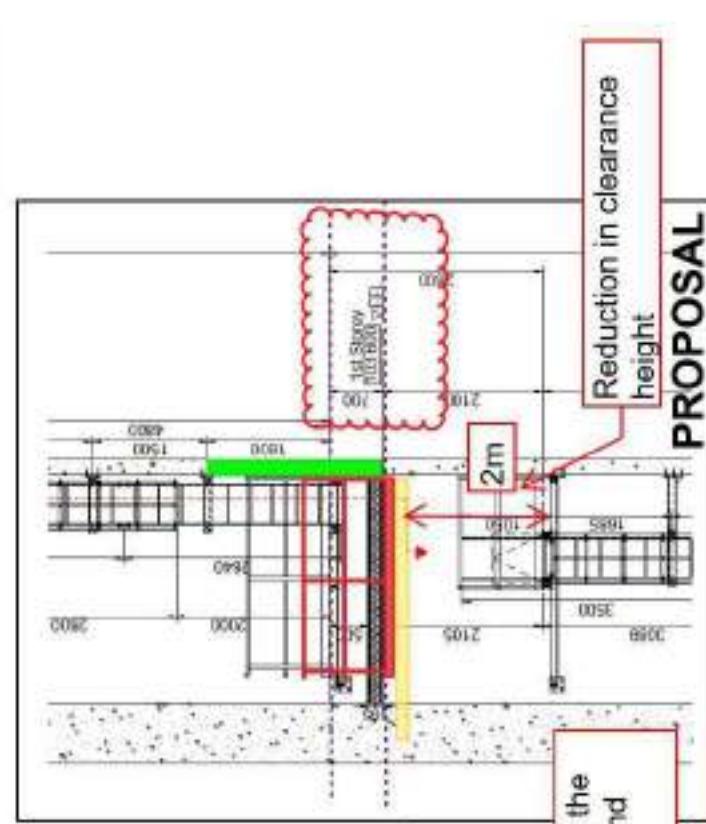


1. door at L1
2. no door at L1 and direct access from L4

keyplan



PROPOSAL



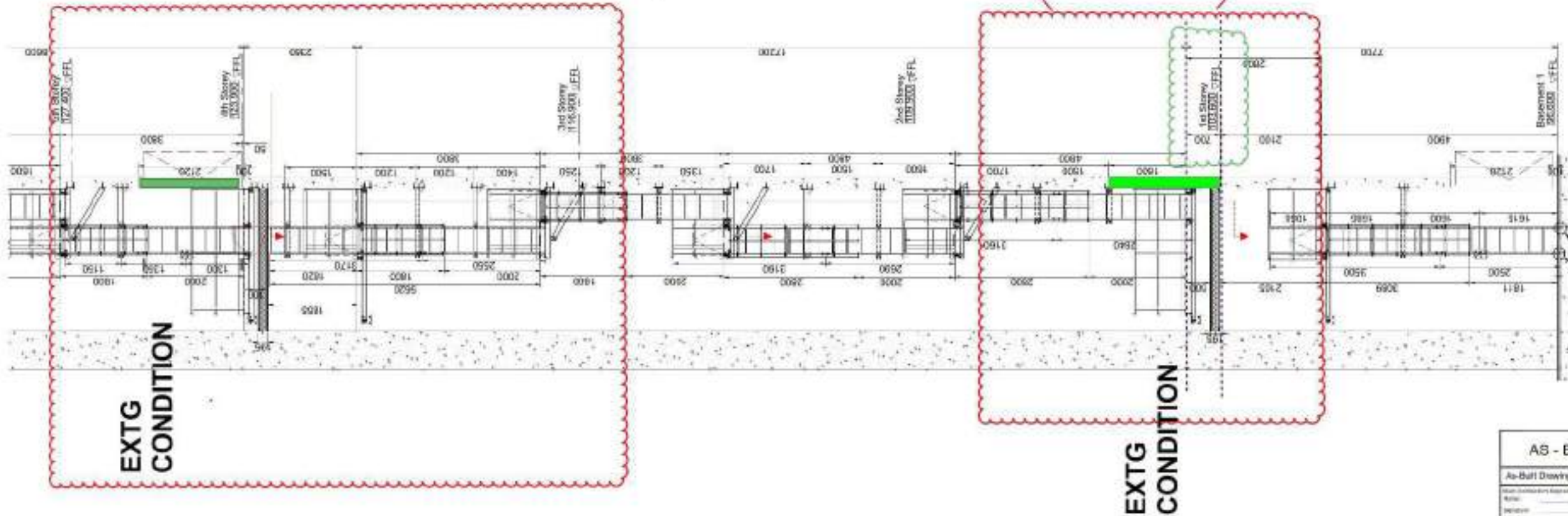
PROPOSAL

(i) Modifying the FR ceiling and Platform.

(ii) Retaining the FR ceiling. Modifying the Platform

raise in FL, a step-up in the platform (150mm)

PROPOSAL



EXTG
CONDITION

EXTG
CONDITION

SECTION A-A

13/321

AS - BUILT DRAWING

As-Built Drawing certified correct and accurate:

Drawn/Checked/As-Built/Date:	As-Built/Date:
Drawn/Checked/As-Built/Date:	As-Built/Date:
Drawn/Checked/As-Built/Date:	As-Built/Date:
Drawn/Checked/As-Built/Date:	As-Built/Date:

As-Built Drawing verified and noted by:

Drawn/Checked/As-Built/Date:	As-Built/Date:
Drawn/Checked/As-Built/Date:	As-Built/Date:
Drawn/Checked/As-Built/Date:	As-Built/Date:
Drawn/Checked/As-Built/Date:	As-Built/Date:

PROJECT GLORY

PROPOSED ERECTION OF A 51-STORY COMMERCIAL DEVELOPMENT WITH A BASEMENT AND COMBINING SHOPPING/HAMPER CENTRE (AIR SPACE LOT) SERVICE APARTMENT / OFFICE / MULTISTORY CARPARK AND ANCILLARY FACILITIES ON LOTS DESIGN & CONSTRUCTION AT MARKET STREET / CHULIA STREET / CHURCH STREET (DOWNTOWN CORE PLANNING AREA)

CLIENT: CL OFFICE TRUSTEE PTE. LTD.
100 ROBINSON ROAD #10-01, SINGAPORE 068902
TEL: +65 6371 1000 FAX: +65 6371 1001

ARCHITECT: RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD.
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STRUCTURAL ENGINEER: ARUP SINGAPORE PTE. LTD.
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SINGAPORE 238591
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M/E/C/E: M/LRANKIN (SINGAPORE) PTE. LTD.
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MEP CONSULTANT: BETA GROUP HOLDINGS & TRUST (SINGAPORE) PTE. LTD.
1, RAJAWATY AVENUE #10-01
SINGAPORE 238591
TEL: +65 6371 1000 FAX: +65 6371 1001

MEP ENGINEER: SQUIRE MECH PTE. LTD.
1, RAJAWATY AVENUE #10-01
SINGAPORE 238591
TEL: +65 6371 1000 FAX: +65 6371 1001

LANDSCAPE ARCHITECT: ARKIS SINGAPORE PTE. LTD.
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LANDSCAPE CONSULTANT: COEN DESIGN PT. PTE. LTD.
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TEL: +65 6371 1000 FAX: +65 6371 1001



NO.	DATE	DESCRIPTION
1	10/01/2021	ISSUED FOR PERMIT
2	10/01/2021	ISSUED FOR CONSTRUCTION
3	10/01/2021	ISSUED FOR AS-BUILT

APPLY WITH: R/S
☐ 0/0/0/0
☐ ISSUED WITH COMMENTS
☐ ISSUED WITH REVISION

RSP
Sunny Chiong
Executive Director

AS-BUILT

D Dragages Singapore
A member of the Singaporean Group

JC Jui Lin Construction Pte Ltd
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TEL: +65 6371 1000 FAX: +65 6371 1001

SECTION A-A
TRIANGLE RISER CATWALK
PLATFORM AND CAT LADDER
AT BASEMENT TO 50TH STOREY

DATE: 12/11/2019 - 30/07/2021	SCALE: 1:50 @ A1
PROJECT: JLC SS SD ++ ++ 305 X	

Wilmar International Limited Headquarters

Understanding the design and construction phase to determine the building's final output quality and deal any defects that arise during the post-construction stage – to approve the rectified defects, analysis the product reports, etc.



DEVELOPMENT INFORMATION

Client	:	Wilmar International Limited
Development Manager	:	Perennial Real Estate Holdings Limited
Architects	:	RSP Architects Planners & Engineers Pte. Ltd.
Structural Engineers	:	RSP Architects Planners & Engineers Pte. Ltd.
M&E Engineer	:	Squire Mech Pte. Ltd.
Location	:	LOT 05440X MK03 / 28 Biopolis Road, Singapore, 138568
Site area	:	7,850 m ²
Plot ratio	:	2.5
Building Area (m ²) (GFA)	:	19,597 m ²
Typical Floor plate area	:	2,500 m ² - 4500 m ²
Typical Floor to Floor	:	4.9 m
Laboratory Innovation Functions	:	Food & Enzyme
Asia Pacific Headquarters Functions	:	Corporate Office, Shipping, E-commerce, Trading and amenities (auditorium, canteen & exhibition hall)
Awards	:	Building and Construction Authority of Singapore - Green Mark GoldPlus SIA Design Award (Singapore) - 2021 MIPIM Awards (Asia Pacific) - Commercial Building 2021



Zaha Hadid Architects
One North Masterplan

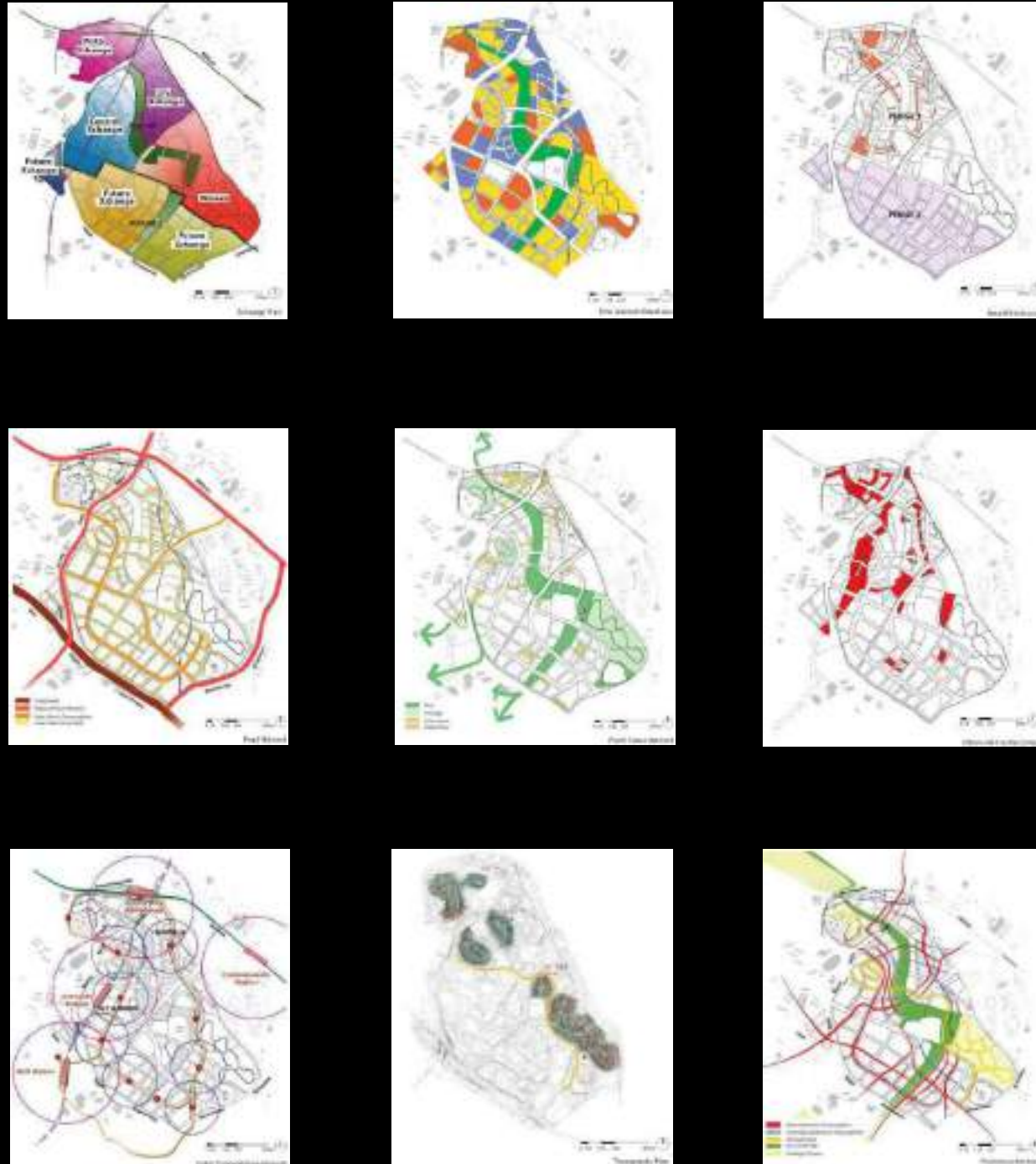


DESIGN DEVELOPMENT

GENESIS

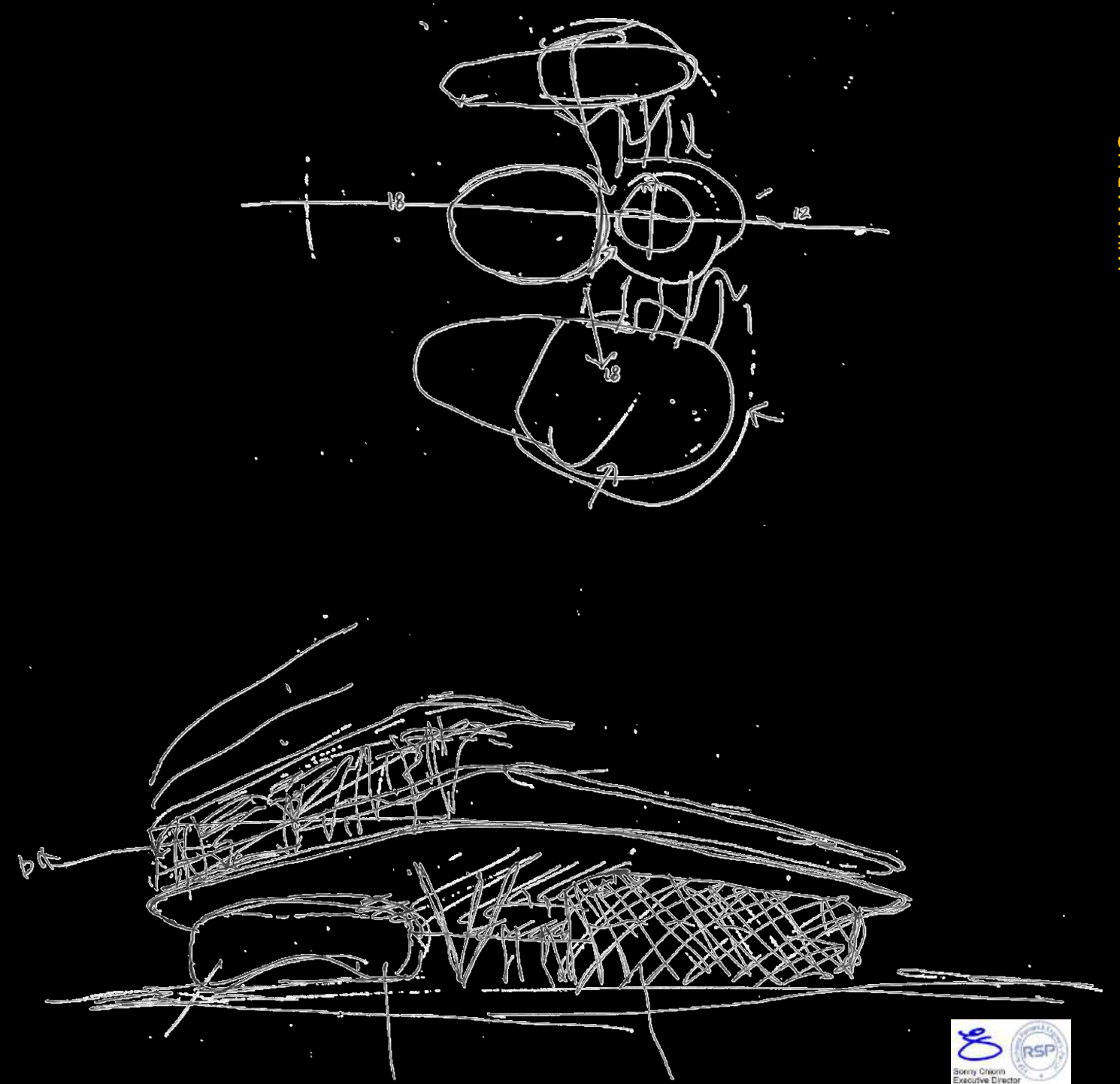
Zaha Hadid Architects first envisioned the One North masterplan in 2001 with JTC and SHDG as the artificial landscape formation to an entire urban quarter.

DESIGN DEVELOPMENT



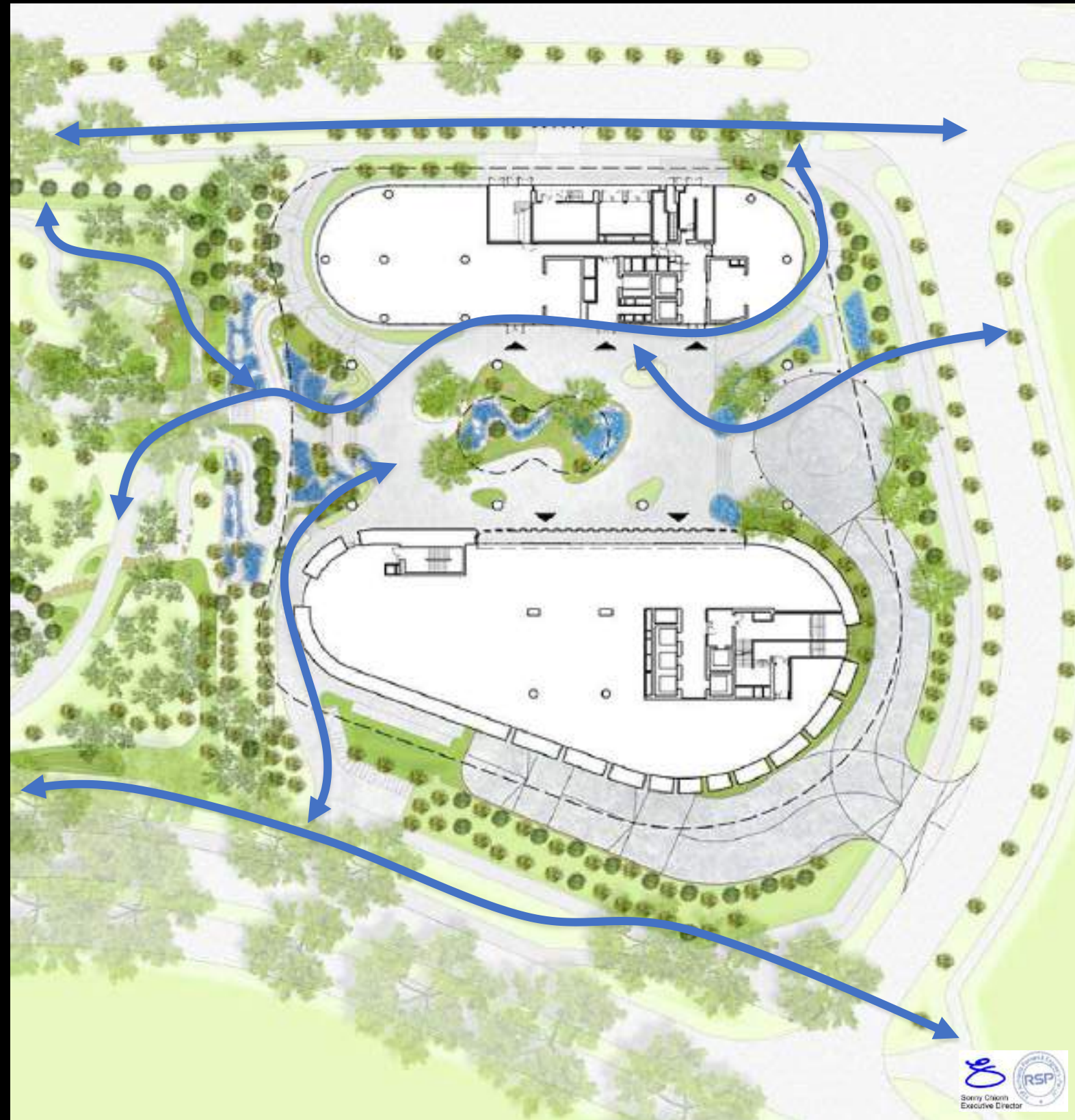
JTC PLANNING DESIGN GUIDELINES

JTC (Jurong Town Corporation) planning department explored the various amenities of architecture as a city, pinning down the 'must haves' & 'good to haves'.



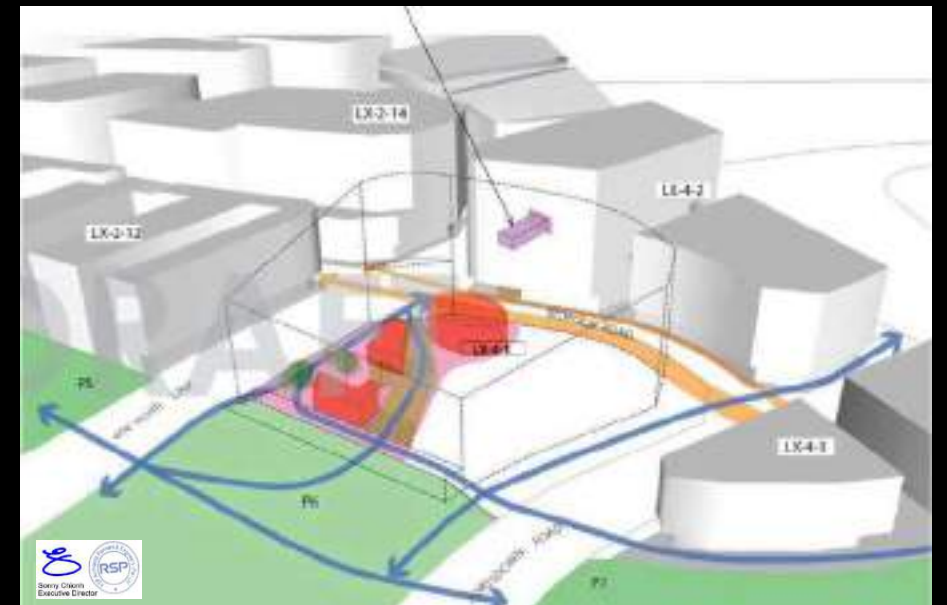
CONCEPT

With response to the site and leveraging on the Client (Wilmar) business core, Eric Parry developed an organic form characterized by landscapes, ribbon glass and an open plaza tunneling through the ground floor.



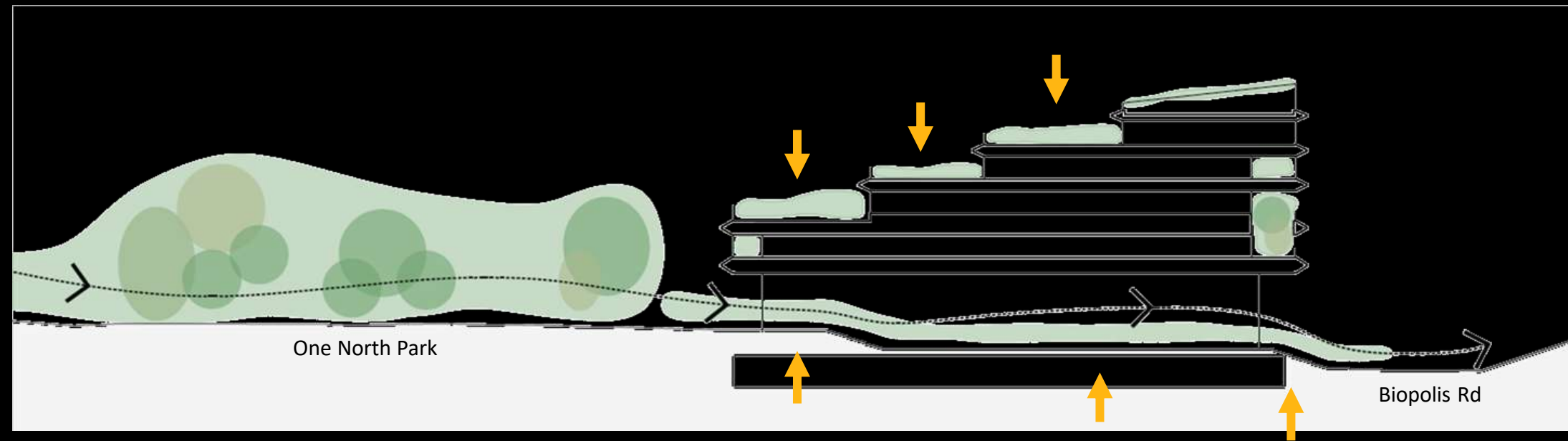
DESIGN DEVELOPMENT

The first storey was left fully permeable and boundaries were seamless between the built-up area and its surrounding to maintain connectivity – the bulk of operational spaces were pushed into the upper floors.

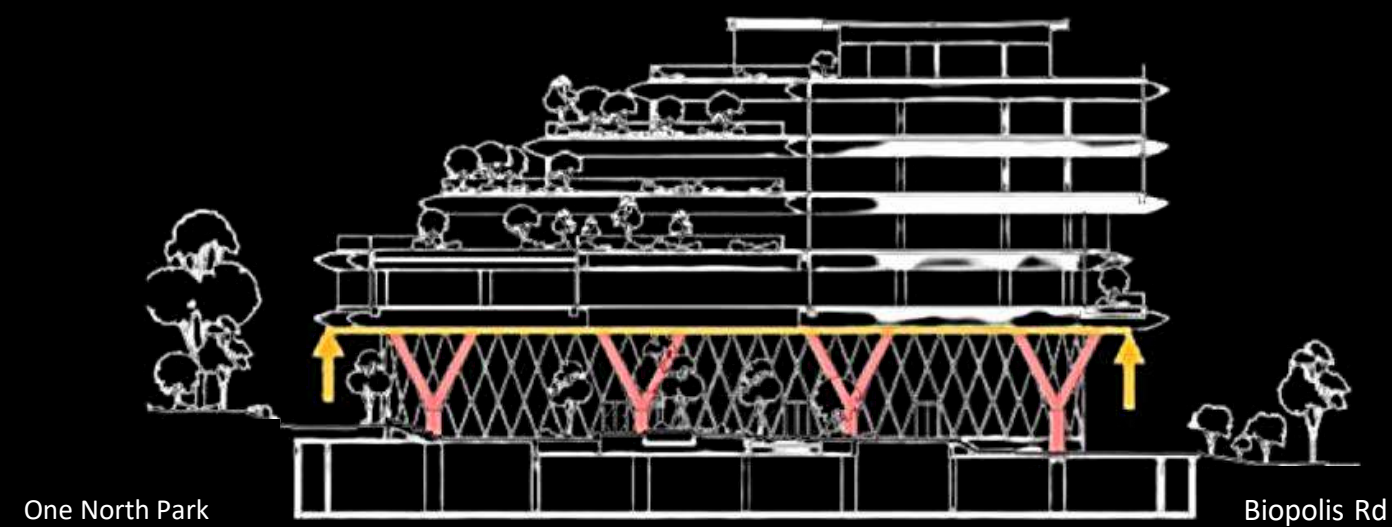


DESIGN DEVELOPMENT

TERRAIN



Negotiating between 6m height differences between the Park and the entrance, the plaza was tiered 'downwards', and in reverse, to carry the landscape through the top of the building, the office floors were tiered 'upwards'.

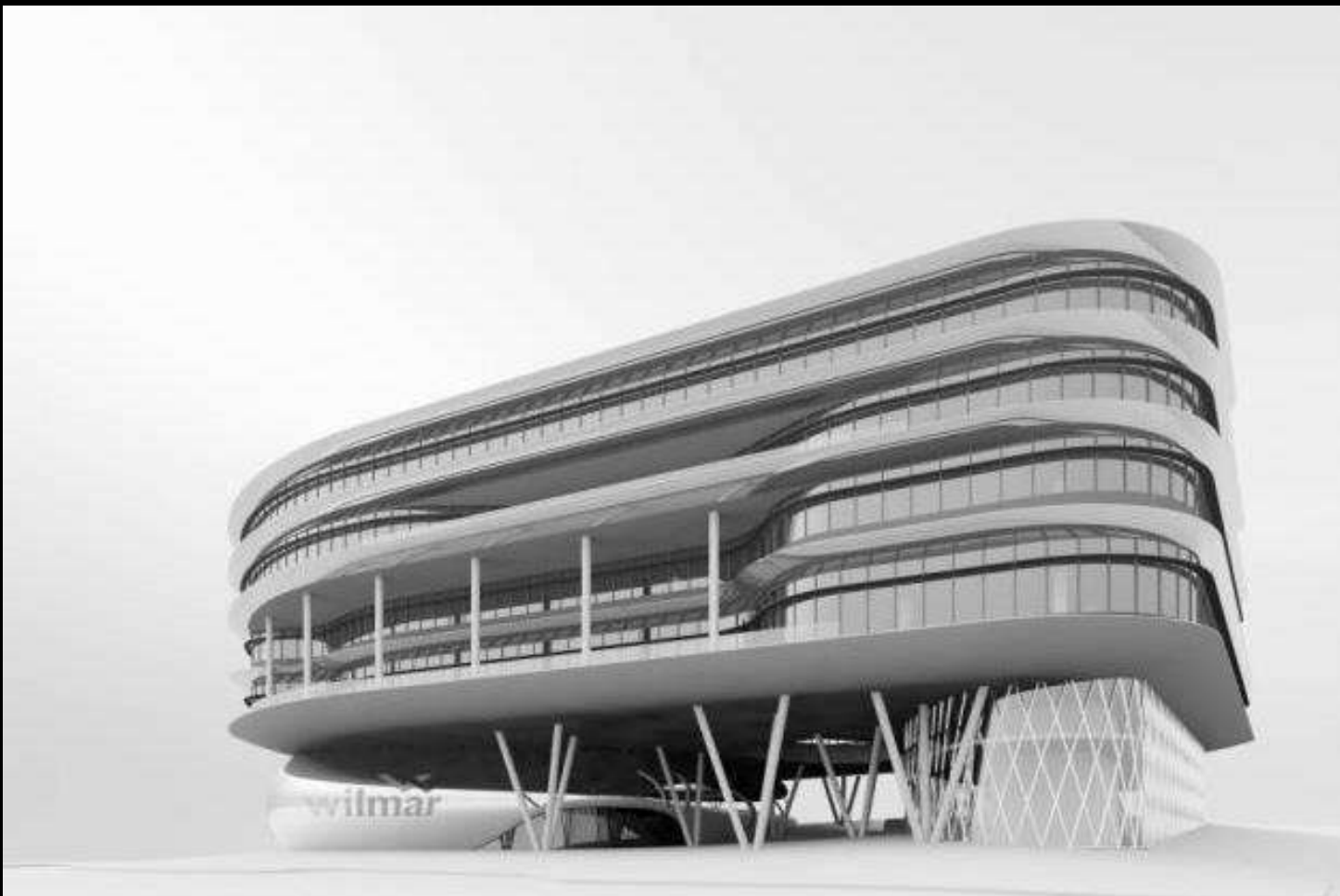
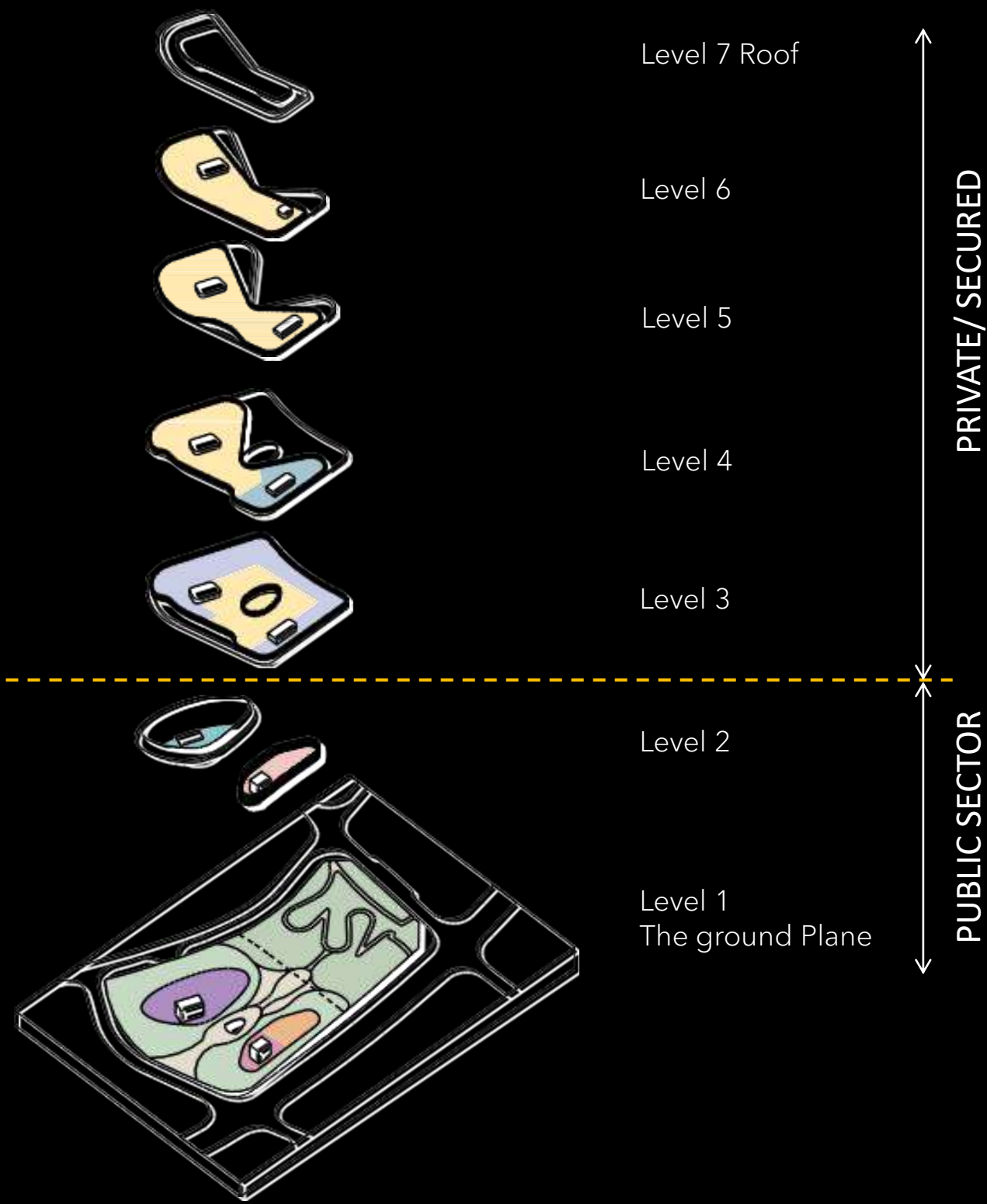


LIFTING THE BUILDING OVER THE PLAZA

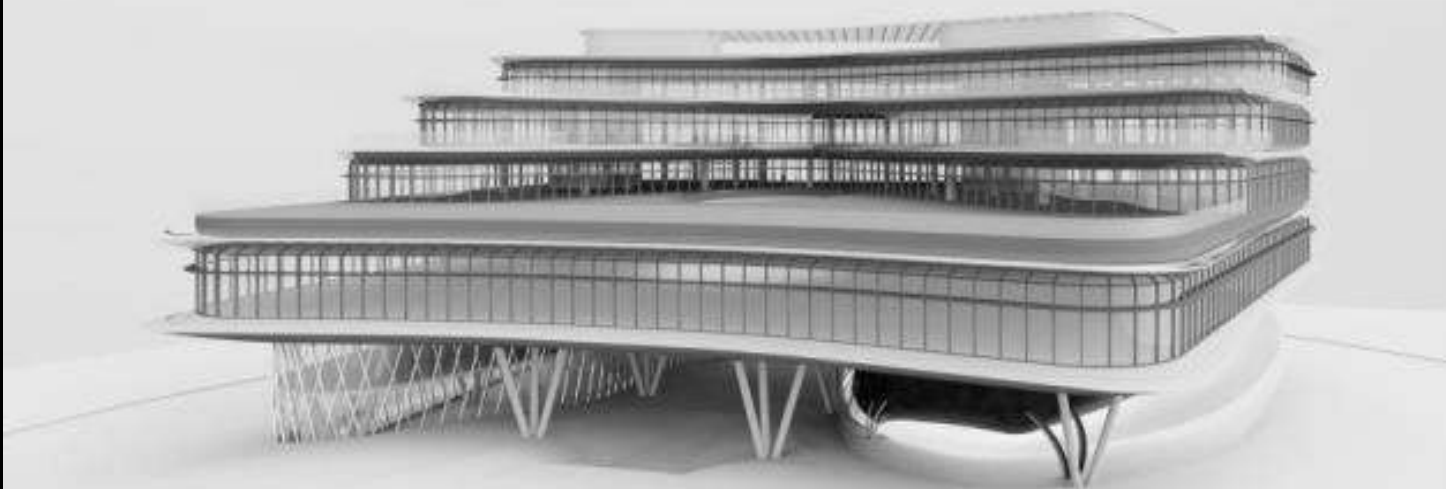
To support the openness and flexibility of the plaza space, columns holding up the office and lab stories converged 4 regular grid columns to one major 'trunk' - thus gaining the name 'tree columns'.

DESIGN DEVELOPMENT

CLEAR SEPARATION OF PUBLIC + PRIVATE AREAS



View from the East



View from the West



DESIGN DEVELOPMENT

FAÇADE

The two core volumes are made of opposing elements - one representing the exhibition center wrapped in glass, and the other the private reception in metal cladding.

The office and lab floors above are fully wrapped in ceramic fins on every level, to emphasize the tiering planes.

CONSTRUCTION



POST - CONSTRUCTION



DEFECTS AND ANALYSIS

Among the number of defects, life safety issues were highlighted. Following consultation with manufacturers and advisors regarding the product, the following report was summarized for the Architect's direction.

Defect : Safety ring dislodge
 Area : Level 3, 4, 5 & 6 Building perimeter
 Location : Roof Terrace
 Type : Architecture & MEP

Attached is a copy of the defect issue with the status "pending, followed by the report

1.2	
Defect ID	0021
Area	Zone Level L5 Area Level 5
Location	Roof Terrace
Form	ARCH
Description	Other
Status	Completed
Created	20/04/2022 11:40 by Ang Kim Chuan
Confirmed	25/04/2022 11:40 by Lim Sook Ben
Completed	06/07/2022 00:00 by Lim Sook Ben
Assignee	Threat Singapore Pte Ltd
Comments (1) 28/04/2022 11:40 by Ang Kim Chuan : To check all. There are multiple of these not properly installed.	

Pending repair

Photos - Before Rectification	Photos - After Completion
	
Photo: 28/04/2022 11:44:34 - 25/04/2022 11:45	Photo: 19/05/2022 09:47:55 - 19/05/2022 09:50
	
	Photo: 26/05/2022 11:53:04 by - 07/07/2022 14:01
	

Zone Level L5 Area Level 5	
Defect ID	0021
Area	Zone Level L5 Area Level 5
Location	L5 SC
Form	ARCH
Description	Safety ring dislodge
Status	Completed
Created	18/05/2022 09:20 by JMD/Threat Singapore Pte Ltd
Confirmed	24/05/2022 11:40 by Lim Sook Ben
Completed	06/07/2022 11:40 by Lim Sook Ben
Assignee	Threat Singapore Pte Ltd
Comments (1) 28/04/2022 11:40 by Ang Kim Chuan : To check all. There are multiple of these not properly installed.	

Pending repair

Photos - Before Rectification	Photos - After Completion
	
Photo: 28/04/2022 11:44:34 - 25/04/2022 11:45	Photo: 19/05/2022 09:47:55 - 19/05/2022 09:50
	
	Photo: 26/05/2022 11:53:04 by - 07/07/2022 14:01
	

Soehy Chiam
Executive Director

DEFECTS AND ANALYSIS

REPORT

- o Project Name : Wilmar International Limited
- o Area/ Location : Level 3, 4, 5 & 6 Building perimeter
- o Item : Ring-safe Anchor system
- o Consultants and contractors reported that a total of 40 numbers of Ringsafe Anchor was found to be damaged by end user and would need replacement.

- o Functions of Ringsafe Anchor :

Anchorage points with fall indicators are intended exclusively for anchoring a personal fall protection system. Anchorage points with fall indicator meet the requirements of standard EN795-A1 (safety code) for the fixed anchorage devices for a single user.

The Ringsafe device is an anchorage point fitted with a fall indicator. If the operator connected to this device falls, its operation is indicated by the breaking of fastener S on ring A, causing the ring to be displaced downwards or breakage.

The PPE system must be connected to the Ringsafe using a connector attached to the ring which constitutes the fall indicator. Ringsafe anchorage points with fall indicator are intended exclusively for anchoring a personal fall system.

The fall indicator on the Ringsafe is triggered by a Force > 250 daN. The Ringsafe has been designed for easy attachment of a remote connector (electricity workers, pylon workers, window cleaners, etc).



DEFECTS AND ANALYSIS

REPORT

o Design of Ringsafe Anchor :

- 316L Stainless Steel
- Resistance > 10kN
- Fall indicator : uncoupling of ring A by breaking of section S, force > 250daN

o Inspection and Maintenance

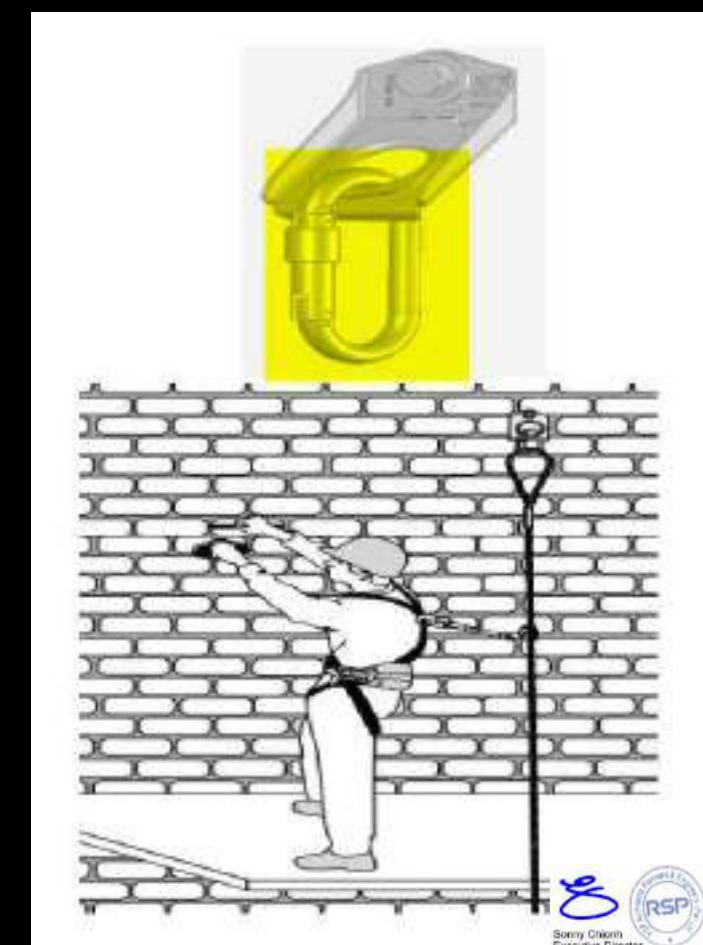
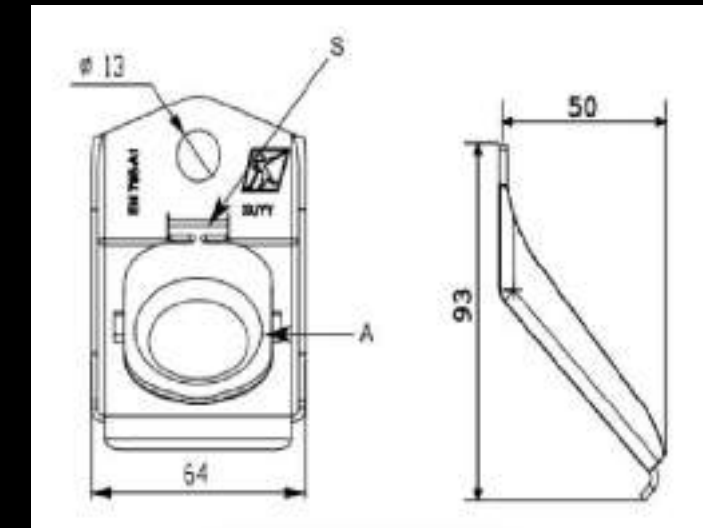
Before use of each Ringsafe :

- Visual inspection to check that it is in apparent good condition
- Check that the indicator ring A is still in place and the section S is not damaged.
- If the Ringsafe has been involved in a fall, it is essential that it is no longer used. It must be scrapped and replaced after checking the structure

o Warning against hazardous operations

The following is prohibited :

- Use of Ringsafe which no longer has a fall indicator.
- Use of Ringsafe which has a fault due to corrosion, deformation, etc .
- Use of Ringsafe which has stopped a fall and which has not been replaced.
- Using one Ringsafe for the protection of a number of people.
- Suspending loads from the Ringsafe.
- Making any modification to the Ringsafe.



DEFECTS AND ANALYSIS

Example of another defect issue in Wilmar International limited

Defect : Fire curtain damaged and unable to open

Area : Level 5

Location : Office Spaces

Type : MEP

KA FABRIC SHUTTERS PTE LTD - WILMAR HQ - DLP

Zone Level L5 Area Level 5

1.1		RSP
Defect ID	T14-1	Site check on 13/08/2022
Area	Zone Level L5 Area Level 5	
Location	Office Spaces	
Type	MEP	
Description	Fire curtain damage level 5B2	Anushree Ramanathan
Status	Completed	
Created	16/07/2022 13:30 by Selvam	
Confirmed	19/07/2022 11:38 by Lok San	JOSEPH CHUA 21/09/2022
Completed	20/08/2022 10:48 by Lok San	
Assignee	KA Fabric Shutters Pte Ltd	

Page 1 / 11



DEFECTS AND ANALYSIS

Example of another defect issue in Wilmar International limited

Defect : Fire curtain damaged and unable to open

Area : Level 5

Location : Office Spaces

Type : MEP

Inspection of the defect's rectification on-site



DEFECTS AND ANALYSIS

HENSEN - WILMAR HQ - DLP

Zone Level B2 Area Basement 2

S.I.

Defect ID: 101-4

Area: Zone Level B2 Area Basement 2

Location: 101-4

Type: ACCH

Subtype: 101-4

Description: 101-4

Status: Closed

Created: 21/06/2022 10:00:00

Confirmed: 21/06/2022 10:00:00

Completed: 21/06/2022 10:00:00

Assigned: 101-4

Comments (1)

21/06/2022 11:00:00 by Ag: 101-4

Photos - Before Rectification

Photos - At Completion

Photo 101-4-1: 21/06/2022 10:00:00

Photo 101-4-2: 21/06/2022 10:00:00

S.I.

Defect ID: 101-5

Area: Zone Level B2 Area Basement 2

Location: 101-5

Type: ACCH

Subtype: 101-5

Description: 101-5

Status: Closed

Created: 21/06/2022 10:00:00

Confirmed: 21/06/2022 10:00:00

Completed: 21/06/2022 10:00:00

Assigned: 101-5

Comments (1)

21/06/2022 11:00:00 by Ag: 101-5

Photos - Before Rectification

Photos - At Completion

Photo 101-5-1: 21/06/2022 10:00:00

Photo 101-5-2: 21/06/2022 10:00:00

G-TECH METAL PTE LTD - WILMAR HQ - DLP

Zone Level B2 Area Basement 2

S.I.

Defect ID: 101-6

Area: Zone Level B2 Area Basement 2

Location: 101-6

Type: ACCH

Subtype: 101-6

Description: 101-6

Status: Closed

Created: 21/06/2022 10:00:00

Confirmed: 21/06/2022 10:00:00

Completed: 21/06/2022 10:00:00

Assigned: 101-6

Comments (1)

21/06/2022 11:00:00 by Ag: 101-6

Photos - Before Rectification

Photos - At Completion

Photo 101-6-1: 21/06/2022 10:00:00

Photo 101-6-2: 21/06/2022 10:00:00

S.I.

Defect ID: 101-7

Area: Zone Level B2 Area Basement 2

Location: 101-7

Type: ACCH

Subtype: 101-7

Description: 101-7

Status: Closed

Created: 21/06/2022 10:00:00

Confirmed: 21/06/2022 10:00:00

Completed: 21/06/2022 10:00:00

Assigned: 101-7

Comments (1)

21/06/2022 11:00:00 by Ag: 101-7

Photos - Before Rectification

Photos - At Completion

Photo 101-7-1: 21/06/2022 10:00:00

Photo 101-7-2: 21/06/2022 10:00:00

S.I.

Defect ID: 101-8

Area: Zone Level B2 Area Basement 2

Location: 101-8

Type: ACCH

Subtype: 101-8

Description: 101-8

Status: Closed

Created: 21/06/2022 10:00:00

Confirmed: 21/06/2022 10:00:00

Completed: 21/06/2022 10:00:00

Assigned: 101-8

Comments (1)

21/06/2022 11:00:00 by Ag: 101-8

Photos - Before Rectification

Photos - At Completion

Photo 101-8-1: 21/06/2022 10:00:00

Photo 101-8-2: 21/06/2022 10:00:00

S.I.

Defect ID: 101-9

Area: Zone Level B2 Area Basement 2

Location: 101-9

Type: ACCH

Subtype: 101-9

Description: 101-9

Status: Closed

Created: 21/06/2022 10:00:00

Confirmed: 21/06/2022 10:00:00

Completed: 21/06/2022 10:00:00

Assigned: 101-9

Comments (1)

21/06/2022 11:00:00 by Ag: 101-9

Photos - Before Rectification

Photos - At Completion

Photo 101-9-1: 21/06/2022 10:00:00

Photo 101-9-2: 21/06/2022 10:00:00

S.I.

Defect ID: 101-10

Area: Zone Level B2 Area Basement 2

Location: 101-10

Type: ACCH

Subtype: 101-10

Description: 101-10

Status: Closed

Created: 21/06/2022 10:00:00

Confirmed: 21/06/2022 10:00:00

Completed: 21/06/2022 10:00:00

Assigned: 101-10

Comments (1)

21/06/2022 11:00:00 by Ag: 101-10

Photos - Before Rectification

Photos - At Completion

Photo 101-10-1: 21/06/2022 10:00:00

Photo 101-10-2: 21/06/2022 10:00:00

S.I.

Defect ID: 101-11

Area: Zone Level B2 Area Basement 2

Location: 101-11

Type: ACCH

Subtype: 101-11

Description: 101-11

Status: Closed

Created: 21/06/2022 10:00:00

Confirmed: 21/06/2022 10:00:00

Completed: 21/06/2022 10:00:00

Assigned: 101-11

Comments (1)

21/06/2022 11:00:00 by Ag: 101-11

Photos - Before Rectification

Photos - At Completion

Photo 101-11-1: 21/06/2022 10:00:00

Photo 101-11-2: 21/06/2022 10:00:00

DEFECTS AND ANALYSIS

WILMAR HQ - DLP - Defects Report

Area: **Common Area**
 Date: **2023-03-01**
 Location: **WILMAR HQ**
 Type: **Defect**
 Description: **Common Area**
 Created: **2023-03-01**
 Confirmed: **2023-03-01**
 Assigned: **2023-03-01**
 Status: **Open**

Photo - Before/After

Photo - In Progress

Page 1/1

WILMAR HQ - DLP - Defects Report

Area: **Common Area**
 Date: **2023-03-01**
 Location: **WILMAR HQ**
 Type: **Defect**
 Description: **Common Area**
 Created: **2023-03-01**
 Confirmed: **2023-03-01**
 Assigned: **2023-03-01**
 Status: **Open**

Photo - Before/After

Photo - In Progress

Page 2/1

WILMAR HQ - DLP - Defects Report

Area: **Common Area**
 Date: **2023-03-01**
 Location: **WILMAR HQ**
 Type: **Defect**
 Description: **Common Area**
 Created: **2023-03-01**
 Confirmed: **2023-03-01**
 Assigned: **2023-03-01**
 Status: **Open**

Photo - Before/After

Photo - In Progress

Page 3/1

WILMAR HQ - DLP - Defects Report

Area: **Common Area**
 Date: **2023-03-01**
 Location: **WILMAR HQ**
 Type: **Defect**
 Description: **Common Area**
 Created: **2023-03-01**
 Confirmed: **2023-03-01**
 Assigned: **2023-03-01**
 Status: **Open**

Photo - Before/After

Photo - In Progress

Page 4/1

WILMAR HQ - DLP - Defects Report

Area: **Common Area**
 Date: **2023-03-01**
 Location: **WILMAR HQ**
 Type: **Defect**
 Description: **Common Area**
 Created: **2023-03-01**
 Confirmed: **2023-03-01**
 Assigned: **2023-03-01**
 Status: **Open**

Photo - Before/After

Photo - In Progress

Page 5/1

WILMAR HQ - DLP - Defects Report

Area: **Common Area**
 Date: **2023-03-01**
 Location: **WILMAR HQ**
 Type: **Defect**
 Description: **Common Area**
 Created: **2023-03-01**
 Confirmed: **2023-03-01**
 Assigned: **2023-03-01**
 Status: **Open**

Photo - Before/After

Photo - In Progress

Page 6/1

WILMAR HQ - DLP - Defects Report

Area: **Common Area**
 Date: **2023-03-01**
 Location: **WILMAR HQ**
 Type: **Defect**
 Description: **Common Area**
 Created: **2023-03-01**
 Confirmed: **2023-03-01**
 Assigned: **2023-03-01**
 Status: **Open**

Photo - Before/After

Photo - In Progress

Page 7/1

WILMAR HQ - DLP - Defects Report

Area: **Common Area**
 Date: **2023-03-01**
 Location: **WILMAR HQ**
 Type: **Defect**
 Description: **Common Area**
 Created: **2023-03-01**
 Confirmed: **2023-03-01**
 Assigned: **2023-03-01**
 Status: **Open**

Photo - Before/After

Photo - In Progress

Page 8/1

WILMAR HQ

[illegible][illegible][illegible][illegible]

Site Name: <u>University of Hong Kong</u> Date: <u>01/09/2018</u> Location: <u>Shatin, New Territories</u> Type: <u>Academy</u> Category: <u>Other</u> Overall: <u>Completed in August 2018</u> Comments: <u>Completed in August 2018</u> Designer: <u>Architect: HKS, Landscape: HKS</u> Material: <u>Aluminum, Steel, Glass, Concrete</u>		 RSP RSP RSP
Information Project: <u>University of Hong Kong</u> Address: <u>Shatin, New Territories</u>		
Photos - General Overview		
 Photo: 001 - 001 - 001 - 001		 Photo: 002 - 002 - 002 - 002
 Photo: 003 - 003 - 003 - 003		 Photo: 004 - 004 - 004 - 004

[illegible][illegible]

— 61 Robinson —

To prepare a Technical Due Diligence Report for project Robin – Architectural C&S M&E Appraisal Report. The scope of works in general is to study included reviews and findings for code compliance and technical issues of the property.



61 ROBINSON



OVERVIEW

This report was prepared upon the request of the Viva Land Investment & Development Joint Stock Company. RSP Architects Planners & Engineers (Pte) Ltd was engaged to complete due diligence study of the property 61 Robinson.

The schedule for works is as follows:

Site Visit (M&E) - 14 Sep 2022

Site Visit (Arch + C&S) - 16 Sept 2022

DEVELOPMENT INFORMATION

Name	:	61 Robinson
		The property, previously known as Robinson Centre, is a 20 storey height office building development comprising of 5 storey retail with 2.5 levels of car park
Location	:	61 Robinson Road - Central Business District (CBD), Singapore 068893
Approved GFA	:	The total gross floor area is 16,731.913 m ²
Approved Plot Ratio	:	The overall plot ration is 11.90 (gross).
Building height	:	The height of the building is 150.50 m, inclusive of all structures and fixtures above the rooftop, such as antennae, water tanks, lift motor rooms, maintenance equipment, lighting conductors etc.

SITE AND ITS SURROUNDINGS



PLANNING DATA

FLOT	SITE AREA	EXISTING OVERALL GFA	GFA EXEMPTION (END-OF TRIP FACILITIES) (SQM)	DECAINTED SLAB & NEW RISER SHAFT	PROPOSED ADDITIONAL GFA (SQM)	PROPOSED OVERALL GFA	PROPOSED PLOT RATIO	ARSL (M)	DESCRIPTION
LOT 152, 9991A, 9991B, 9991C, 9991D, 9991E, 9991F, 9991G, 9991H, 9991I, 9991J, 9991K, 9991L, 9991M, 9991N, 9991O, 9991P, 9991Q, 9991R, 9991S, 9991T, 9991U, 9991V, 9991W, 9991X, 9991Y, 9991Z, 9992A, 9992B, 9992C, 9992D, 9992E, 9992F, 9992G, 9992H, 9992I, 9992J, 9992K, 9992L, 9992M, 9992N, 9992O, 9992P, 9992Q, 9992R, 9992S, 9992T, 9992U, 9992V, 9992W, 9992X, 9992Y, 9992Z, 9993A, 9993B, 9993C, 9993D, 9993E, 9993F, 9993G, 9993H, 9993I, 9993J, 9993K, 9993L, 9993M, 9993N, 9993O, 9993P, 9993Q, 9993R, 9993S, 9993T, 9993U, 9993V, 9993W, 9993X, 9993Y, 9993Z, 9994A, 9994B, 9994C, 9994D, 9994E, 9994F, 9994G, 9994H, 9994I, 9994J, 9994K, 9994L, 9994M, 9994N, 9994O, 9994P, 9994Q, 9994R, 9994S, 9994T, 9994U, 9994V, 9994W, 9994X, 9994Y, 9994Z, 9995A, 9995B, 9995C, 9995D, 9995E, 9995F, 9995G, 9995H, 9995I, 9995J, 9995K, 9995L, 9995M, 9995N, 9995O, 9995P, 9995Q, 9995R, 9995S, 9995T, 9995U, 9995V, 9995W, 9995X, 9995Y, 9995Z, 9996A, 9996B, 9996C, 9996D, 9996E, 9996F, 9996G, 9996H, 9996I, 9996J, 9996K, 9996L, 9996M, 9996N, 9996O, 9996P, 9996Q, 9996R, 9996S, 9996T, 9996U, 9996V, 9996W, 9996X, 9996Y, 9996Z, 9997A, 9997B, 9997C, 9997D, 9997E, 9997F, 9997G, 9997H, 9997I, 9997J, 9997K, 9997L, 9997M, 9997N, 9997O, 9997P, 9997Q, 9997R, 9997S, 9997T, 9997U, 9997V, 9997W, 9997X, 9997Y, 9997Z, 9998A, 9998B, 9998C, 9998D, 9998E, 9998F, 9998G, 9998H, 9998I, 9998J, 9998K, 9998L, 9998M, 9998N, 9998O, 9998P, 9998Q, 9998R, 9998S, 9998T, 9998U, 9998V, 9998W, 9998X, 9998Y, 9998Z, 9999A, 9999B, 9999C, 9999D, 9999E, 9999F, 9999G, 9999H, 9999I, 9999J, 9999K, 9999L, 9999M, 9999N, 9999O, 9999P, 9999Q, 9999R, 9999S, 9999T, 9999U, 9999V, 9999W, 9999X, 9999Y, 9999Z	15,738.340 SQ.M	10,738.340 SQ.M	4.00 SQ.M	27.00 SQ.M	1,074.00 SQ.M	16,731.213 SQ.M	11.38	100.00	PROPOSED ADDITION & ALTERATION WORKS TO EXISTING 20 STOREY OFFICE BUILDING INVOLVING EXISTING 1ST TO UPPER 5TH STOREY AND SURPLUS CARPARK CONVERSION OF 5TH AND UPPER 5TH STOREY TO SHOP USE ON LOTS 152T, 9992K, 99963N, 9991A OF TS 30 AT 61 ROBINSON ROAD (DOWNTOWN CORE PLANNING AREA)

GFA DATA

STOREY	EXISTING GFA (SQM)	GFA EXEMPTION (END-OF TRIP FACILITIES) (SQM)	DECAINTED SLAB & NEW RISER SHAFT	PROPOSED ADDITIONAL GFA (SQM)	PROPOSED NEW GFA (SQM)
1ST STOREY	888.00	4.00	—	33.27	887.27
2ND STOREY	360.00	—	77.60	—	437.60
3RD STOREY	74.28	—	—	—	74.28
4TH STOREY	71.14	—	—	—	71.14
5TH STOREY	71.14	—	—	—	71.14
UPPER 5TH STOREY	115.20	—	—	1,040.78	1,155.98
6TH STOREY TO ROOFTOP	11,588.219	—	—	—	11,588.219
TOTAL GFA	12,788.340 SQ.M	4.00 SQ.M	77.60 SQ.M	1,074.00 SQ.M	16,731.213 SQ.M

REFUSE OUTPUT CALCULATION

Category	Refuse Output (L/Day)	Total Area	Total Daily Refuse (L/Day)
Office	35 per 100 sq.m. GFA	11,378.573	2,306.79
Shop / Trade Premises	30 per 100 sq.m. GFA	845.34	253.90
Restaurant/F&B Outlet	300 per 100 sq.m. GFA	322.84	645.68
Pantry at Upper 5th Storey	300 per 100 sq.m. GFA	3.39	6.78
Common Circulation at Upper 5th Storey	Non-Simultaneous	181.77	—
Total		12,731.923	3,206.37
Refuse Output for a day		3,206.37 L/day	< 4,000 L/day. Compactor not needed
Refuse Output for 2 days		6,412.74 L/day	
Refuse Bin required		10 Nos.	

Category	INCREASE / DECREASE IN GFA (m2)	NEW OTHER AREA (m2)	30% (m2)
1ST STOREY	25.24	4.00	33.27
2ND STOREY	-17.40	80.34	2.90
3RD STOREY	0.00	12.53	12.53
4TH STOREY	0.00	0.00	0.00
5TH STOREY	0.00	21.39	21.39
UPPER 5TH STOREY	1,043.28	1.98	1,045.26
ROOF	0.00	20.53	36.52
TOTAL	947.32	114.50	1,165.96

DRAINAGE

The Developer/Owner has given due consideration to the Public Utilities Board's advice and is aware that the lower platform level may subject the development site to flood risk.

PUB (CATCHMENT & WATERWAYS DEPARTMENT) REQUIREMENTS

- The planning, design, construction activities and procedures for plan submission shall comply fully with the requirements as stipulated in the latest edition of the Code of Practice on Surface Water Drainage and The Sewerage and Drainage (Surface Water Drainage) Regulations 2007.
- The capacity of internal drains shall be sufficient to intercept and discharge all runoff from the development site.
- The runoff within, upstream of and adjacent to the development lot can be effectively drained away without causing flooding within the lot or in areas outside the lot.

PUB (SEWERAGE) REQUIREMENTS

Position of Sanitary Pipes

- Sanitary pipes shall not be placed above potable water storage tank, electrical transformer/switchgear or above swimming pools and their balancing tanks.
- In all non-residential buildings (e.g. commercial buildings, shopping malls, hotel, hospital etc), the sanitary pipes shall be located such that: 1. no pipes from WC shall be located at the ceiling of a commercial unit.
- no discharge stack or overhead sanitary pipe shall be sited within areas of the food establishment/F&B unit where food is cooked, prepared, stored or served.
- all works are to be carried out in strict compliance with our Code of Practice on Sewerage and Sanitary Works. (Including discharge pipe shall not be located in places where it can cause health and safety hazards such as locating the discharge pipe above any potable water storage tank/ detention tank and electrical transformer/ switchgear.)

ENVIRONMENTAL HEALTH

- The design, installation and maintenance of roof scupper drains shall comply with the requirements stated in the SS 525.
- owner undertakes to carry out regular maintenance of the roof scupper drains.
- on the areas where food is prepared, cooked, stored or served, there is no manhole, overhead sanitary / waste / drain pipe, inspection / screen chamber, grease trap located within, or other areas where they are likely to give rise to nuisance, health or hygiene hazards during maintenance.

GENERAL NOTES FOR BCA:

- ALL MATERIAL FOR GLASS BARRIER SHALL COMPLY WITH SAFETY FROM FALLING UNDER CLAUSE H.3.6 OF THE APPROVED DOCUMENT.
- GLASS AT HEIGHT SHALL COMPLY WITH THE CLAUSE H.0 OF THE APPROVED DOCUMENT.
- ALL ACCESSIBLE ROOM DOORWAYS SHALL COMPLY WITH 1:25 GRADIENT AS PER CLAUSE 4.4.11 OF THE BCA CODE.
- ALL NEW STAIRWAYS SHALL COMPLY WITH CLAUSE 4.11 OF THE BCA CODE.
- ALL NEW URINALS FOR AMBULANT DISABLED SHALL COMPLY WITH CLAUSE 5.5 OF THE BCA CODE.
- HEARING ENHANCEMENT SYSTEMS WILL BE PROVIDED IN ACCORDANCE WITH CLAUSE 6.9 OF THE APPROVED DOCUMENT.

LTA CARPARKING REQUIREMENTS

Proposed Lot	Type	Car	Motorcycle	Bicycle	Lorry / Loading Bay	Garage	Others (Accessible)	Others (Non-Accessible)	Number of Parking Lots Required	
									Minimum	Maximum
152T	Office	100	100	100	100	100	100	100	100	100
9992K	Office	100	100	100	100	100	100	100	100	100
99963N	Office	100	100	100	100	100	100	100	100	100
9991A	Office	100	100	100	100	100	100	100	100	100
Total		400	400	400	400	400	400	400	400	400

Category	Car	Motorcycle	Bicycle	Lorry / Loading Bay	Garage	Others (Accessible)	Others (Non-Accessible)
Existing number of parking lots (including existing parking lots for 152T, 9992K, 99963N, 9991A)	100	100	100	100	100	100	100
Breakdown of Proposed Number of Parking Lots (including existing parking lots for 152T, 9992K, 99963N, 9991A)	100	100	100	100	100	100	100
152T	100	100	100	100	100	100	100
9992K	100	100	100	100	100	100	100
99963N	100	100	100	100	100	100	100
9991A	100	100	100	100	100	100	100
Total	400	400	400	400	400	400	400

* NOTE:
With reference to LTA supported and approved Waiver Application CR2000026-95278 dated 2 September 2020 and DC Clearance issued 8 October 2020, LTA Ref No.: LTA/08C/01.230.028

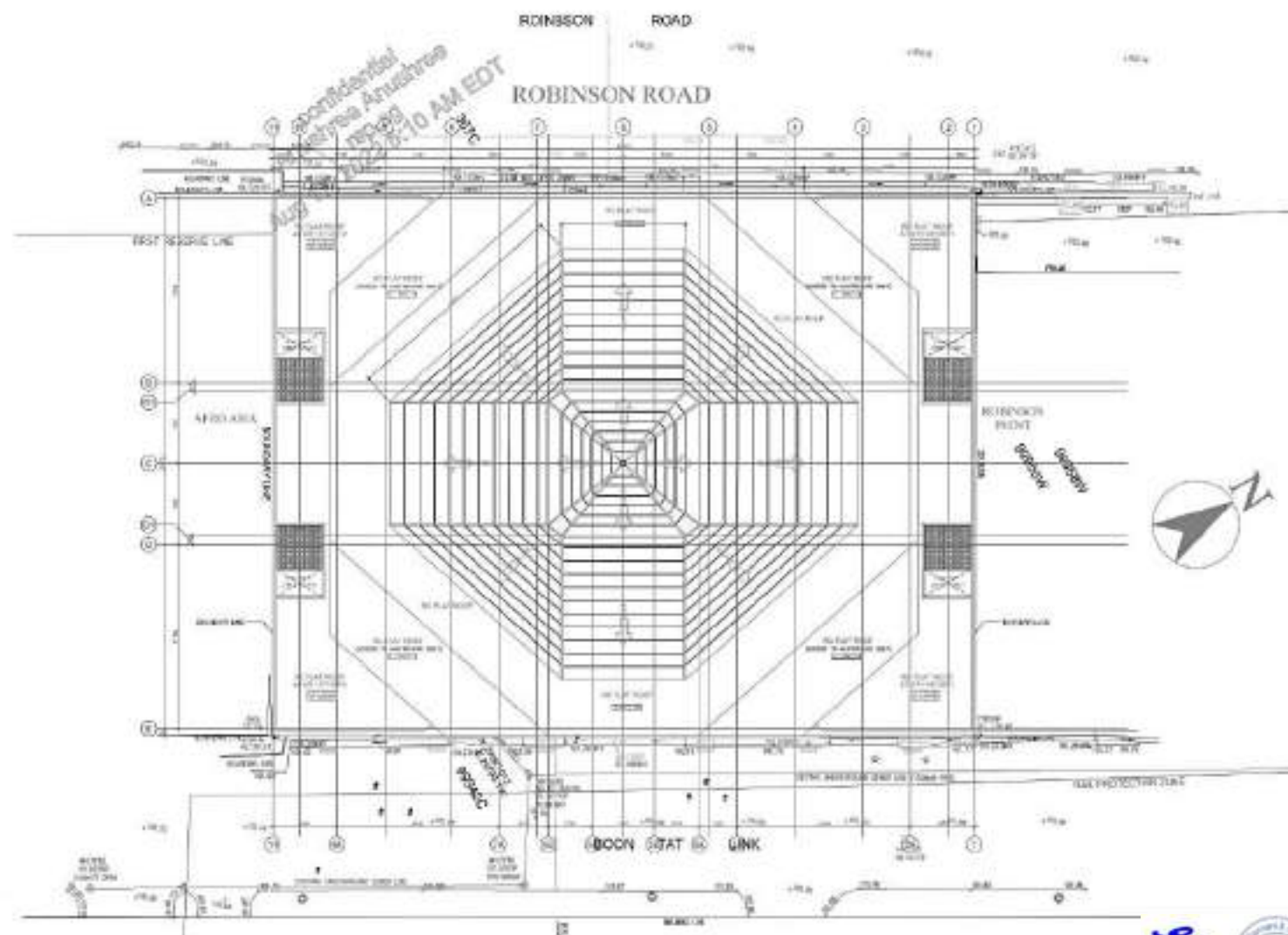


LOCATION PLAN
Not To Scale

NEA SANITARY PROVISIONS

Proposed Lot	Type	Car	Motorcycle	Bicycle	Lorry / Loading Bay	Garage	Others (Accessible)	Others (Non-Accessible)	Number of Sanitary Facilities Required	
									Minimum	Maximum
152T	Office	100	100	100	100	100	100	100	100	100
9992K	Office	100	100	100	100	100	100	100	100	100
99963N	Office	100	100	100	100	100	100	100	100	100
9991A	Office	100	100	100	100	100	100	100	100	100
Total		400	400	400	400	400	400	400	400	400

Category	Car	Motorcycle	Bicycle	Lorry / Loading Bay	Garage	Others (Accessible)	Others (Non-Accessible)
Existing number of sanitary facilities (including existing sanitary facilities for 152T, 9992K, 99963N, 9991A)	100	100	100	100	100	100	100
Breakdown of Proposed Number of Sanitary Facilities (including existing sanitary facilities for 152T, 9992K, 99963N, 9991A)	100	100	100	100	100	100	100
152T	100	100	100	100	100	100	100
9992K	100	100	100	100	100	100	100
99963N	100	100	100	100	100	100	100
9991A	100	100	100	100	100	100	100
Total	400	400	400	400	400	400	400



1 SITE PLAN
1:200M

CC Building and Construction Authority 20115793 IORITY 4/5 N/A Pro 178-2020

Building Plans Controlled by the Building Control Authority

- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.
- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.
- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.

Owner's Consent

178-2020-0182-0001 Building Control Authority

- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.
- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.
- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.

Rev.	Date	Remarks
1		
2		
3		
4		
5		

USE STAIRS - PROVIDED

LANDOWNER / DEVELOPER'S NAME

ROBINSON (CP) INVESTMENT PRIVATE LIMITED
1 TEMASEK BOULEVARD,
#12-01 SUTTE TOWER FIVE,
SINGAPORE 069551

Tel: +65 8338 8232

Forums Architects
47 ANN SIANG ROAD
UNIT 10-01/02/03
SINGAPORE 069529
TEL: +65 624 2771
FAX: +65 624 2781
info@forums-architects.com
www.forums-architects.com

- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.
- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.
- The proposed building shall comply with the Building Control Authority's (BCA) requirements for building control under section 15A of the Building Control Act 2007.

178-2020-0182-0001 Building Control Authority

Project Description:

PROPOSED ADDITION & ALTERATION WORKS TO EXISTING 20 STOREY OFFICE BUILDING INVOLVING EXISTING 1ST TO UPPER 5TH STOREY AND SURPLUS CARPARK CONVERSION OF 5TH AND UPPER 5TH STOREY TO SHOP USE ON LOTS 152T, 9992K, 99963N, AND 9991A OF TS 30 AT 61 ROBINSON ROAD (DOWNTOWN CORE PLANNING AREA)

Drawing Title:

SP01-SITE PLAN

Project No.: A1774-00128-2020

Drawing No.: 01

Project Code: CAP/1774-00128-20

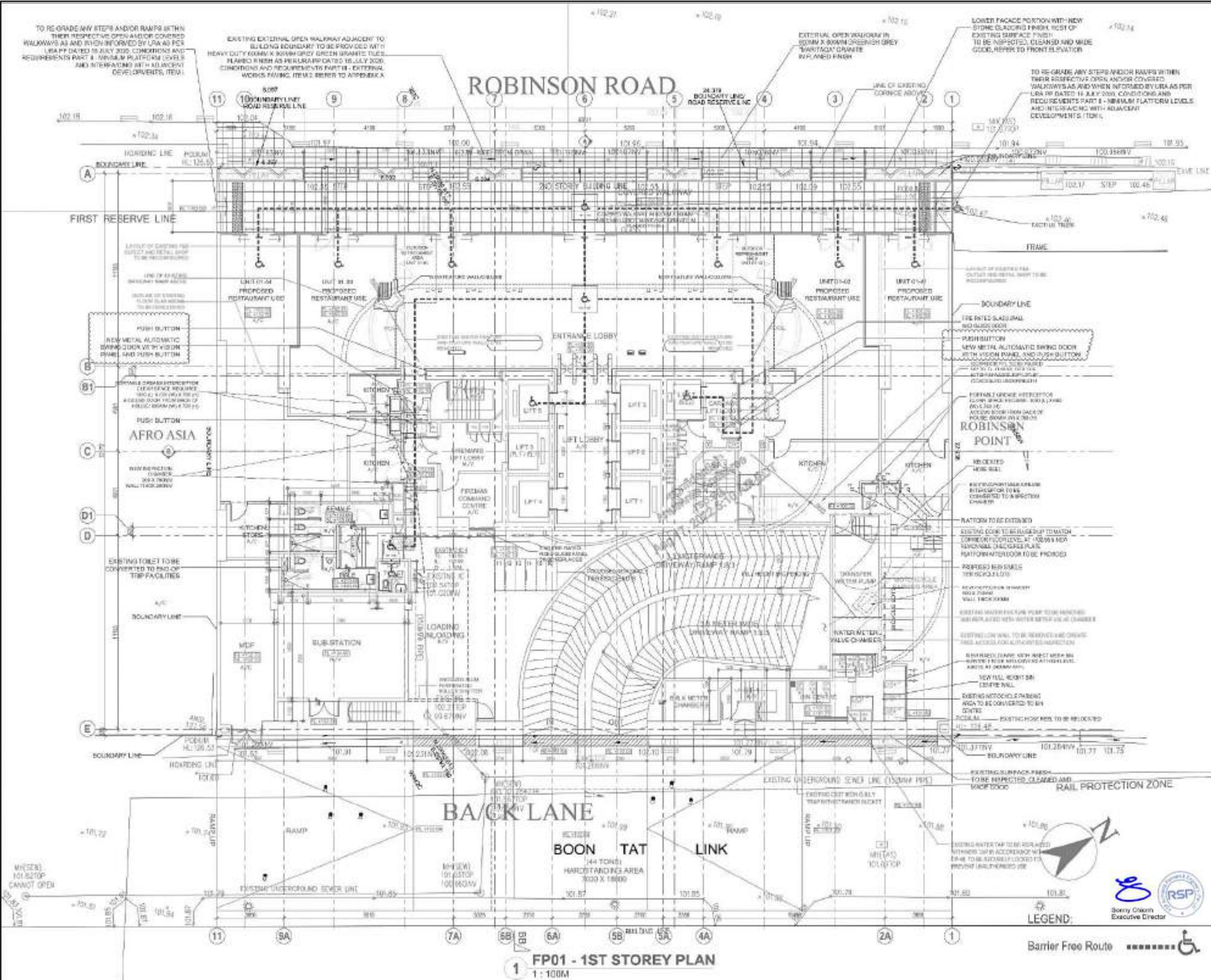
Scale: No. 000000

Date: 01 Feb 2021

Drawn: 00

Checked: WCM/YZ





sheet of 13
CC
Priority

Building and Construction 2021/22
4/5

128-2020

Building Plans Division with available sections in Appendix A

NOTES:

1. The proposed building plans are in accordance with the Building Control Regulations.
2. The building plans are in accordance with the Building Control Regulations.
3. The building plans are in accordance with the Building Control Regulations.
4. The building plans are in accordance with the Building Control Regulations.
5. The building plans are in accordance with the Building Control Regulations.
6. The building plans are in accordance with the Building Control Regulations.
7. The building plans are in accordance with the Building Control Regulations.
8. The building plans are in accordance with the Building Control Regulations.
9. The building plans are in accordance with the Building Control Regulations.
10. The building plans are in accordance with the Building Control Regulations.
11. The building plans are in accordance with the Building Control Regulations.

Owner's Details:

NAME: ROBINSON (CP) INVESTMENT PRIVATE LIMITED
 11 ROBINSON ROAD, SINGAPORE 068913
 TEL: +65 6338 8000

DATE: 12 MAR 2021

DESIGNER: SORRY CHION EXECUTIVE DIRECTOR

PROJECT DESCRIPTION: PROPOSED ADDITION & ALTERATION WORKS TO EXISTING 20 STOREY OFFICE BUILDING INVOLVING EXISTING 1ST TO UPPER 5TH STOREY AND SURPLUS CARPARK CONVERSION OF 5TH AND UPPER 5TH STOREY TO SHOP USE ON LOTS 152T, 99952K, 99953N, AND 99951A OF TS 30 AT 61 ROBINSON ROAD (DOWNTOWN CORE PLANNING AREA)

Drawing Title: FP01-1ST STOREY PLAN

Project No: A1774-00128-2020

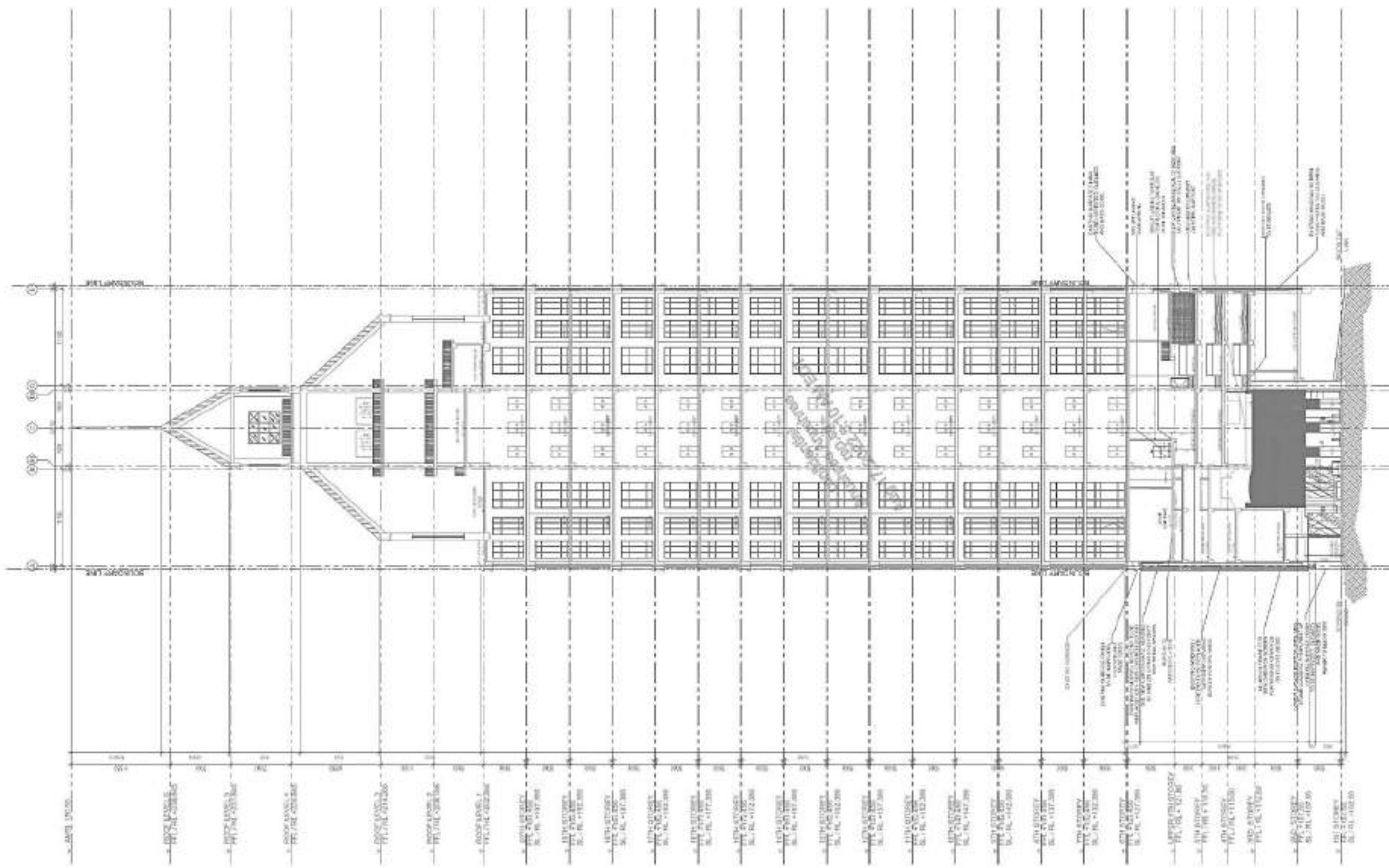
Drawing No: 02

Scale: 1:100M

Date: 12 MAR 2021

Drawn: CC

Checked: WOV/YZ



1 FX01 - SECTION A 1:25RM

LIGHTING MAINTENANCE AND SERVING TO BE CARRIED-OUT OUTSIDE THE BUILDING TO COMPLY TO BSA DESIGN FOR SAFETY AND

12 sheet of 13

**BUILDING AND
CONSTRUCTION AUTHORITY**

APPROVED UNDER SECTION 5/
SECTION 5A OF THE BUILDING
CONTROL ACT (CAP20)

Project Ref No: A1774-00128-2020

Building Plans Consistent with Acceptable Solutions in Approved Document

6. 2022.05.20.20.24 Javítsa az 1/1. feladat 2. kérdését a következőre:

- (ii) the preparation of basic books only as it corresponds with the Building Control Regulations; and
- (iii) the design, testing and construction of mass transit systems with the approval of the provisions of the Building Control Regulations and the associated conditions in the Approved Document.

Overall Score:

© 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677,

100. Pflüger does not lie outside of the field within the meaning of the

(2) After having obtained the prior in the majority of the land, and having obtained the consent of the subcommittee to submit this plan to the Court, said Authority, under the Planning Act (Cap. 225, § 8(2)(c)),

Rev.	Date:	Remarks:

LAB TENURE FREEDOM

LABORER DEVELOPERS INC.

ROBSON (CP) INVESTMENT PRIVATE LIMITED
2 TOMKES BOULEVARD,
#12-01 SUNITED TOWER FIVE,
SINGAPORE 020808

Tel: +85 6535 9132



47 ADDITIONAL HEAD
UNIT NUMBER: 05-01
SINGAPORE 699720
TEL : +65 6734 2578
FAX : +65 6332 4903

info@carewesthills.com
www.carewesthills.com

¹ WORLD CRIME WAR: heavily cited, judged fairly subject matter; grades under 30 drop to 0 after 5 rating; Control Ad. Cite 70, 1st.

- (a) the presence of these building plans are in accordance with the Building Control Regulations; and
- (b) the building/buildings shown on these plans are in accordance with the provisions of the Building Control Regulations and the applicable notices in the Supplement Document.

PRODUCED IN U.S.A.

Project Description:
**PROPOSED ADDITION &
 ALTERATION WORKS TO EXISTING
 20 STOREY OFFICE BUILDING
 INVOLVING EXISTING 1ST TO UPPER
 5TH STOREY AND SURPLUS
 CARPARK CONVERSION OF 5TH AND
 UPPER 5TH STOREY TO SHOP USE
 ON LOTS 1627, 99952K, 99953N, AND
 99951A OF TS 30 AT 61 ROBINSON
 ROAD (DOWNTOWN CORE PLANNING
 AREA)**

Drawing Title

FX01- SECTION A

Project No:	Drawing No:
A1174-00129-2020	

Project Code: _____ Rev. _____
C:\PS\UTTA\406\PS...

Solve:	Date:	Drawn:	Checked:
as indicated	01 Feb 2021	EE	WOW / YZ



Sonny Chionh
Executive Director

ARCHITECTURAL APPRAISAL METHODOLOGY

The methods employed in the audit process were tailored to the objective of the architectural audit. Since the scope for the architectural audit focused on code and regulation compliance and building defects / technical issues. The methods used are based on the following:

- a. A study of drawings and document made available by Viva Land Investment & Development Joint Stock Company.
- b. Physical on-site visual inspections to review and ascertain the condition of the building .

Based on the date of the latest Written Permission obtained from URA and the first Building Plan approval obtained from FSSD and BCA, it is assumed the building complies with all authority code and regulation prevalent at that time. If an addition & alteration works programme is undertaken, the works shall subject to compliance with the following latest code and regulation, but not limited to:

- BCA Approved Documents 2019
- Code on Accessibility in the Building Environment 2019
- LTA Vehicle Parking Provision 2019
- NEA Code of Practice on Environmental Health
- PUB Code of Practice
- FSSD Fire Code 2018
- Green Mark 2021 Version 1.1

REVIEW OF ARCHITECTURAL DRAWINGS WITH AS-BUILT CONDITION AND APPROVED STATUTORY DOCUMENTS WITH RECOMMENDATIONS

The non- compliances have been categorized into three types to facilitate quick review and have been outlined as follows:

Category 1 – High priority (marked in **RED**)

Category 2 – Mid priority (marked in **YELLOW**)

Category 3 – Low priority (marked in **GREEN**)

Category 4 – Non-compliance to be addressed in future AEI (marked in **ORANGE**)

URA/SLA (URBAN REDEVELOPMENT AUTHORITY/ SINGAPORE LAND AUTHORITY)

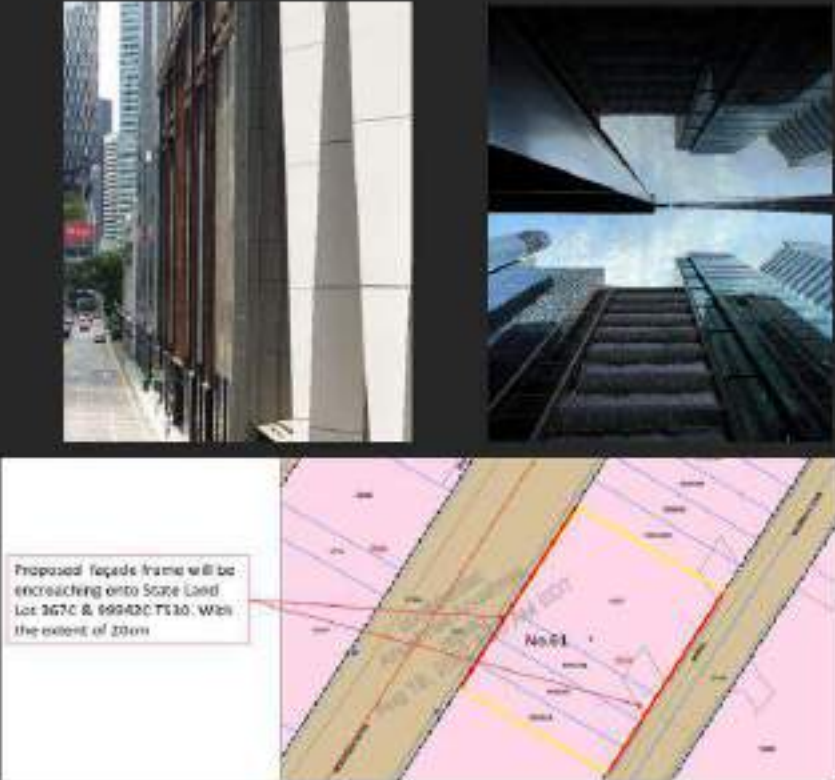
CATEGORY 1 – IMMEDIATE NON-COMPLIANCE ISSUES (HIGH RISK)

Issues that require immediate/near immediate attention

Location	1 st to 20 th Storey	Area / Room
Observation	No Immediate or High-Risk Issues sighted.	
Action	N.A	

CATEGORY 4 – ISSUES TO BE ADDRESSED IN FUTURE AEI WORKS

Items deemed as in compliance with the prevalent code/requirement and shall comply to latest code in future AEI.

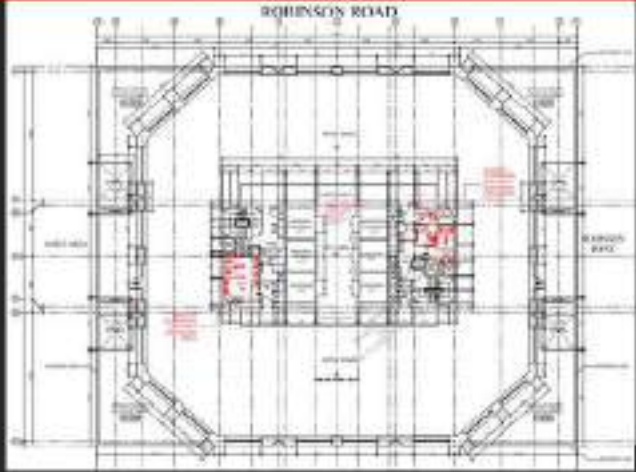
Location	1 st Storey	Along building frontage and rear
	 Proposed facade frame will be encroaching onto State Land Lot 367C & 699420 T130, with the extent of 20m	
Observation	Minor encroachment of facade panel/frame onto the state land facing Robinson Road (Front) and Maxwell Link (Rear). SLA is aware on the encroachment.	
Action	No action taken as TOL/license period is granted between 12.02.21 to 13.02.24. To consider removal/modification of panel for future AEI works to save on monthly TOL fee being paid.	

FSSD (FIRE SAFETY AND SHELTER DEPARTMENT (FSSD) IS A SUBDIVISION OF THE SINGAPORE CIVIL DEFENCE FORCE (SCDF))

CATEGORY 1 – IMMEDIATE NON-COMPLIANCE ISSUES (HIGH RISK)

Issues that require immediate/near immediate attention

Location	2 nd Storey	Fire Corridor of Exit Staircase 1
Labour cost		
Observation	Electrical Sockets located within fire escape corridors leading to Fire Exit Stairs.	
Action	Electrical Sockets advised to be removed	

Location	6 th to 20 th Storey	Typical Office Floor
		
Observation	- Only 1 Fire Hose Reel (HR) provided for each typical office floor which seem inadequate. - Typical Office Storey plans were not submitted in the recent A&A works.	
Action	To allow for another HR to serve each typical office floor level (30m distance).	

FSSD (FIRE SAFETY AND SHELTER DEPARTMENT (FSSD) IS A SUBDIVISION OF THE SINGAPORE CIVIL DEFENCE FORCE (SCDF))

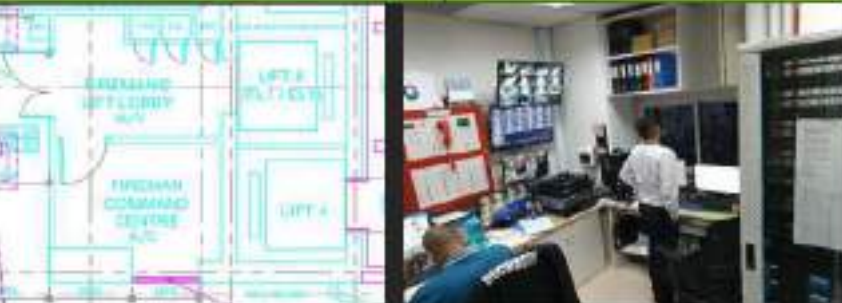
CATEGORY 2 – SECONDARY NON-COMPLIANCE ISSUES (MID RISK)

Issues that require action

Location	All typical Floor	Common area
		
	Typical Office level	
Observation	Hose reel Door clash with Fire Fighting Lobby Door. HR door unable to open-up to approximately 180 degree which leads to obstruction to the hose being run out in either direction. Additionally, the hose reel imposes obstruction at fire escape. (SS CP 29 4.3.2)	
	Typical Office Storey plans were not submitted in the recent A&A works	
Action	To remove HR door or relocate HR to avoid any obstruction to HR access. To comply with Fire Code and SS575-2012.	

CATEGORY 3 – NON-COMPLIANCE ISSUES (LOW RISK)

Issues that require action

Location	1 st Storey	Fire Command Centre
		
Observation	The free working space does not fully meet the minimum requirement of 6 sqm based on current site conditions. The 6 sqm clear space as approved under FSSD BP plan is occupied by furniture.	
Action	To reinstate the condition as per approved FSSD BP plan or to re-layout the furniture to provide clear space of 6 sqm.	

CATEGORY 4 – ISSUES TO BE ADDRESSED IN FUTURE AEI WORKS

Items deemed as in compliance with the prevalent code/requirement and shall comply to latest code in future AEI

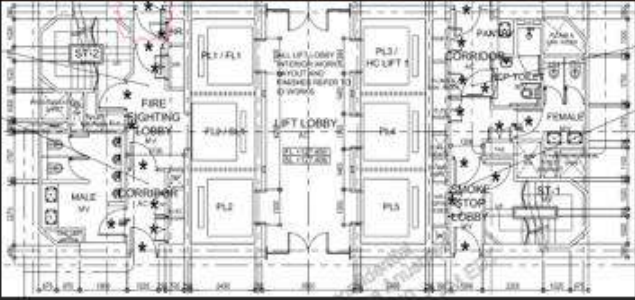
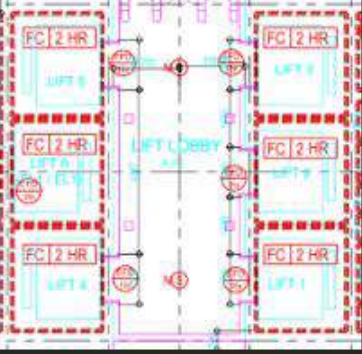
Location	6 th to 20 th Storey	Typical Exit Staircase
		
Observation	The escape route radius (turning corner) within exit staircase does not seem sufficient. The Typical Office Storey plans were not submitted in the recent A&A works. As-built on site does not seem to tally with the provided drawings accurately.	
Action	To comply to Fire Code 2018 during future AEI.	

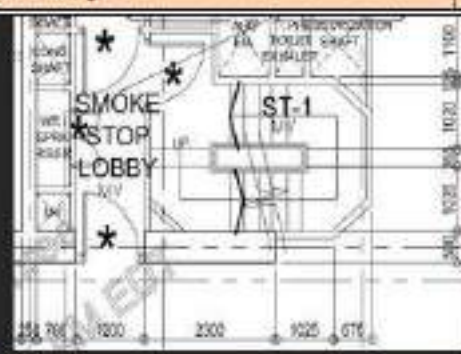
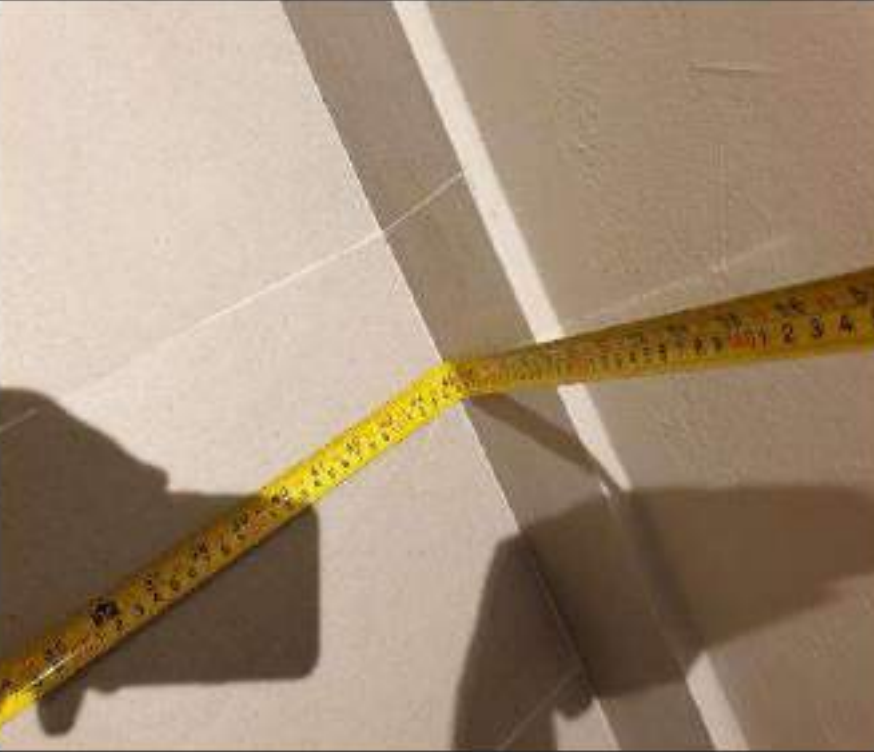
Location	6 th to 20 th Storey	Typical Exit Staircase / Fire Fighting / Smoke Stop Lift Lobby
		
Observation	No PWD is has been provided on site which is deemed as compliant under Fire code 2007. Under Fire Code 2018 Cl 3.2., PWD holding point area (at least 2 per floor) is required. PWD only provided for the earlier/latest A&A works (1 st to 5 th storey)(refer to the picture).	
	Typical Office Storey plans were not submitted in the recent A&A works.	
Action	To comply to Fire Code 2018 during AEI	

FSSD (FIRE SAFETY AND SHELTER DEPARTMENT (FSSD) IS A SUBDIVISION OF THE SINGAPORE CIVIL DEFENCE FORCE (SCDF))

CATEGORY 4 – ISSUES TO BE ADDRESSED IN FUTURE AEI WORKS

Items deemed as in compliance with the prevalent code/requirement and shall comply to latest code in future AEI

Location	All storeys	Fire/Passenger Lift
	   	
Observation	The building is provided with 1 no. of fire lift based on fire code 2007. Evacuation lift is not required based fire code 2007. However, additional 1 no of fire lift and 1 no of Evacuation lift (could be one of the two fire lifts) shall be provided based on fire code 2018 CI 6.6.4 & 6.6.5. It seems based on the approved FSSD drawings for the earlier A&A works, The Fire Lift also serves as the Evacuation Lift. Typical Office Storey plans were not submitted in the recent A&A works.	
Action	To comply to Fire Code 2018 during AEI	

Location	All storeys	Smoke Stop Lobby of Staircase 1
	  	
Observation	The clear width of the smoke stop lobby is at approx. 1100mm as measured on site. The site condition complies to Fire code 2007 which had not specified on the clear width if the area of the smoke stop lobby meets a minimum size of 3 sqm. The provided drawing indicates 1200mm which is slightly less than as measured on site. The smoke stop lobby is required to have a clear width at min 1200mm based on Fire code 2018 2.2.13 (b) 4.	
Action	To comply to Fire Code 2018 during AEI	

BCA (BUILDING AND CONSTRUCTION AUTHORITY)

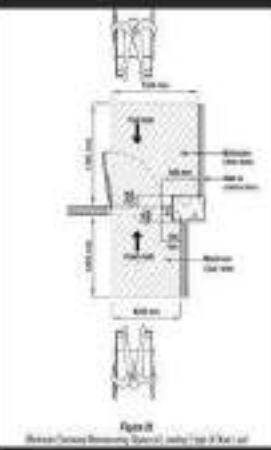
CATEGORY 1 - IMMEDIATE NON-COMPLIANCE ISSUES (HIGH RISK)

Issues that require immediate/near immediate attention

Location	1 st to 20 th Storey	Area / Room
Observation	No Immediate or High-Risk Issues sighted.	
Action	N.A	

CATEGORY 2 - SECONDARY NON-COMPLIANCE ISSUES (MID RISK)

Issues that require action

Location	6th to 20th Storey	HCP corridor
	 	
	 	
Observation	Maneuvering spaces at doors (in front of Handicapped WC) does not meet the minimum requirement in dimension specified in Code on Accessibility 2007 CI 3.8.4. Less than 1500mm based on site measurement.	
Action	The current site condition does not comply to BCA Code on Accessibility 2007. To comply to BCA Code on Accessibility 2019 during AEI	

CATEGORY 3 - NON-COMPLIANCE ISSUES (LOW RISK)

Issues that require action

Location	1 st to 20 th Storey	Area / Room
Observation	No Immediate or High-Risk Issues sighted.	
Action	N.A	

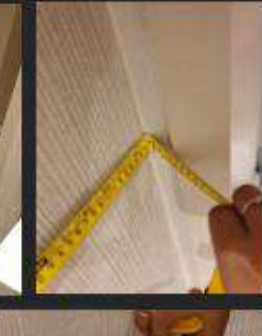
CATEGORY 4 - ISSUES TO BE ADDRESSED IN FUTURE AEI WORKS

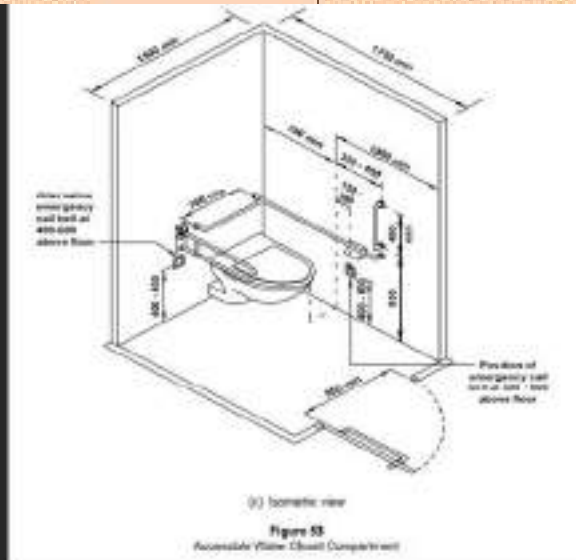
Items deemed as in compliance with the prevalent code/requirement and shall comply to latest code in future AEI

Location	6th to 20th Storey	All Exit Staircases
	  	
Observation	- The width of the thread complies to the min 250mm requirement under CI. E 3.4 of BCA approved document 2011. The width of the thread is required to be at least 275mm under the latest code. - Nosing not provided in contract colours (Code on Accessibility 2007 CI 3.9.3) - Detectable warning surfaces not provided at top, bottom, and immediate landing (Code on Accessibility 2007 CI 3.9.4) - Handrail not complied with the extension of 300mm at top and bottom steps and not returned to the wall/floor/post properly (Code on Accessibility 2007 CI 3.9.5) - No provision of Braille and tactile, which is allowed under the 2007 code. However, Braille and tactile information is required at the upper and lower end of the handrail based on Code on Accessibility 2013 CI 4.11.1.2. - No barrier provided at staircase up to the height of 75mm (BCA approved document Item 2011 H.3.4.1). - Railing void opening more than 100mm - No provision of Braille at staircase signage which is allowed under the 2007 code. However, Braille at staircase signage is required under Code on Accessibility 2019 Figure 45	
Action	To comply to BCA Code on Accessibility 2019 during AEI for all items	

CATEGORY 4 - ISSUES TO BE ADDRESSED IN FUTURE AEI WORKS

Items deemed as in compliance with the prevalent code/requirement and shall comply to latest code in future AEI

Location	6th to 20th Storey	Handicapped Toilet	
			
			
			
			

Location	6th to 20th Storey	Handicapped Toilet
	 (g) Isometric view Figure 5B Accessible Water Closet Compartment	
Observation	On-site measurements were taken on to check for compliance. It has been sighted on non-compliances in required dimensions with the current BCA code. Typical office Storey Plans were not submitted in the recent A&A works.	
Action	To comply to BCA Code on Accessibility 2019 during AEI for all items	

Location	6th to 20th Storey	Ambulant Toilet	
			
Observation	Raised floor of approx. 100mm drop sighted with no ramp/slope access from office space to Handicapped WC. Typical Office Storey plans were not submitted in the recent A&A works		
Action	To remove or set back raised floor at office to allot for ramp space, To comply to BCA Code on Accessibility 2019 during AEI for all items		

GENERAL CONDITION, DEFECTS AND DETERIORATION (REPORT ON ON-SITE VISUAL INSPECTION) WITH RECOMMENDATIONS

The following observations are based on architectural/authority drawings provided and site observations dated 16/09/2022

CATEGORY 1 - IMMEDIATE NON-COMPLIANCE ISSUES (HIGH RISK)

Issues that require immediate/near immediate attention

Location	1 st to 20 th Storey	Area / Room
Observation	No Immediate or High-Risk Issues sighted.	
Action	N.A	

CATEGORY 2 - DEFERRED/ ROUTINE MAINTAINENCE DEFECTS (MID RISK)

Defect items which can be deferred or rectified during the routine maintenance program

Location	All Storeys	Area / Room
Observation	No Mid-Risk Issues sighted.	
Action	N.A	

CATEGORY 3 - DEFERRED/ROUTINE MAINTAINENCE MINOR DEFECTS (LOW RISK)

Minor defect items which can be deferred or rectified during the routine maintenance program

Refer the tabulation attached at the side for the major number of defects work found in the project.

Location	Roof	Roof Storey
		
		
		
Observation	1. Floor and wall finishing not in general good condition aesthetically. 2. Cracks, stains, efflorescence and inconsistent colour and texture on the wall and beams. 3. Paint peeled off at joint and walls. 4. Deterioration of the surface finishes. 5. Degradation issues on the parapet wall with deteriorated painting conditions. 6. Minor corrosion and stains on metal parts/support and on trellis and vertical support. 7. Minor water ponding sighted on scupper drain.	
Action	1. Flooring/tiles to be rectified and replaced; cracks to be rectified and patched during routine maintenance. 2. Cleaning, corrosion treatment and replacement/reinstallation required for floor/wall finishes. 3. Walls to be patched up and replaster/repaint with floor screeded to fall at minor water ponding areas. 4. Maintenance/corrosion treatment is required for steel/metal surfaces/components. 5. Warranty not provided for 6th storey and above. Likely to have expired. (For reference, waterproofing warranty under common practice is 10 years)	

WEST MALL

Harvey Norman
CATHAYCold Storage
TON & STEFANIE
Sinhait

West Mall

To verify the site, record the existing fire fighting provisions that are already in place and include those provisions on the proposed tender drawings. Additionally, to check the SCDF code and conduct a basic study on the lift and exit staircase coverage.

DESIGN PROPOSAL



Proposed Addition and Alteration work to existing 5-Storey shopping complex with 3 Basement and a new single storey extension on Lot 03071V MK 10 at Bukit Batok Central.

The design intent runs around alteration of the façade, extension of single storey and proposal of new shopfronts in the existing landscape area.

Façade Details :

EXISTING

1. Column cladding
Existing column cladded in Off-white Aluminium panel + Bronze finish trim
2. Ventilation Grilles
Existing ventilation grilles replaced by vertical louvers

PROPOSED

3. Fixed Glass Panels
Existing green fixed glass panels replaced by dark-tinted spandrel glass with similar frit pattern to POPS space.
Frit pattern is enlarged to better conceal internal façade of the existing building.



DESIGN PROPOSAL



DESIGN PROPOSAL



FAMILY ROOM

- Finishes**
Warm toned terracotta finishes (similar to those in female toilet) are used to give a warm atmosphere.
Edge stone finish is applied on all glass panels to give a soft and safe space to all.
- Access Furniture**
A wooden bench is placed along the wall to provide a place for people to sit.
A wooden bench is placed along the wall to provide a place for people to sit.



FAMILY ROOM

- Finishes**
Dark wood, neutral finishes (similar to male toilet) are applied to give a warm atmosphere.
Glass screen and panel glass are added to enhance space.
- Access Furniture**
A wooden bench is placed along the wall to provide a place for people to sit.
A wooden bench is placed along the wall to provide a place for people to sit.
A wooden bench is placed along the wall to provide a place for people to sit.
- Family Material**
To complement the color palette provided by the family changing table, family material is kept in a simple solid surface (white or light grey).



TOILET CUBICLES

- | | |
|---|---|
| 
R001
TOILET FLUSH VALVE | 
R002
TOILET SEAT |
| 
R003
TOILET BOWL | 
R004
TOILET PAPER |
| 
R005
TOILET PAPER | 
R006
TOILET PAPER |



FEMALE TOILETS

- Finishes**
Terracotta floor and wall tiles in warm grey and blue tones.
Solid surface finish.
Family provides a range of colors in "Showering Glass" solid surface material.
Ceramic subway wall tiles.
Towel bar.
- Overall**
Warm toned material and color palette choice light grey/blue, with gold-toned accents to add a subtle elegance.
- Full length Mirror Wall**
Large mirror to keep the room bright and airy in the main part of the space.



MALE TOILETS

- Finishes**
Terracotta floor and wall tiles in warm grey and blue tones.
Solid surface finish.
Family provides a range of colors in "Showering Glass" solid surface material.
Ceramic subway wall tiles.
Towel bar.
- Overall**
Dark wood, neutral and color palette choice light grey/blue, with gold-toned accents to add a subtle elegance to the space.
- Full length Mirror Wall**
Large mirror to keep the room bright and airy in the main part of the space.

BUKIT BATOK CENTRAL CAT4

-  HOSE REEL
-  FIRE EXTINGUISHER
-  FIRE ALARM AND
MANUAL CALL POINT
-  LIFT COVERAGE
-  ESCAPE STAIRCASE
COVERAGE

NOTES

1. Fire alarm and fire extinguisher shall be provided in accordance with the Fire Code.
2. Fire alarm shall be provided in accordance with the Fire Code.
3. Fire alarm shall be provided in accordance with the Fire Code.
4. Fire alarm shall be provided in accordance with the Fire Code.
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14. Fire alarm shall be provided in accordance with the Fire Code.
15. Fire alarm shall be provided in accordance with the Fire Code.
16. Fire alarm shall be provided in accordance with the Fire Code.
17. Fire alarm shall be provided in accordance with the Fire Code.

PRELIMINARY TENDER DRAWING

DATE: 01/06/2022

PROJECT TITLE:

PROPOSED ADDITIONS & ALTERATIONS TO
EXISTING 5-STOREY SHOPPING COMPLEX WITH
3 BASEMENT AND A NEW SINGLE-STOREY
EXTENSION ON LOT 03/01/11 WK 10 AT 1 BUKIT
BATOK CENTRAL LINK

OWNER: ABBEY FE LTD

ADDRESS: 24 BITESS PLACE
SINGAPORE 158501

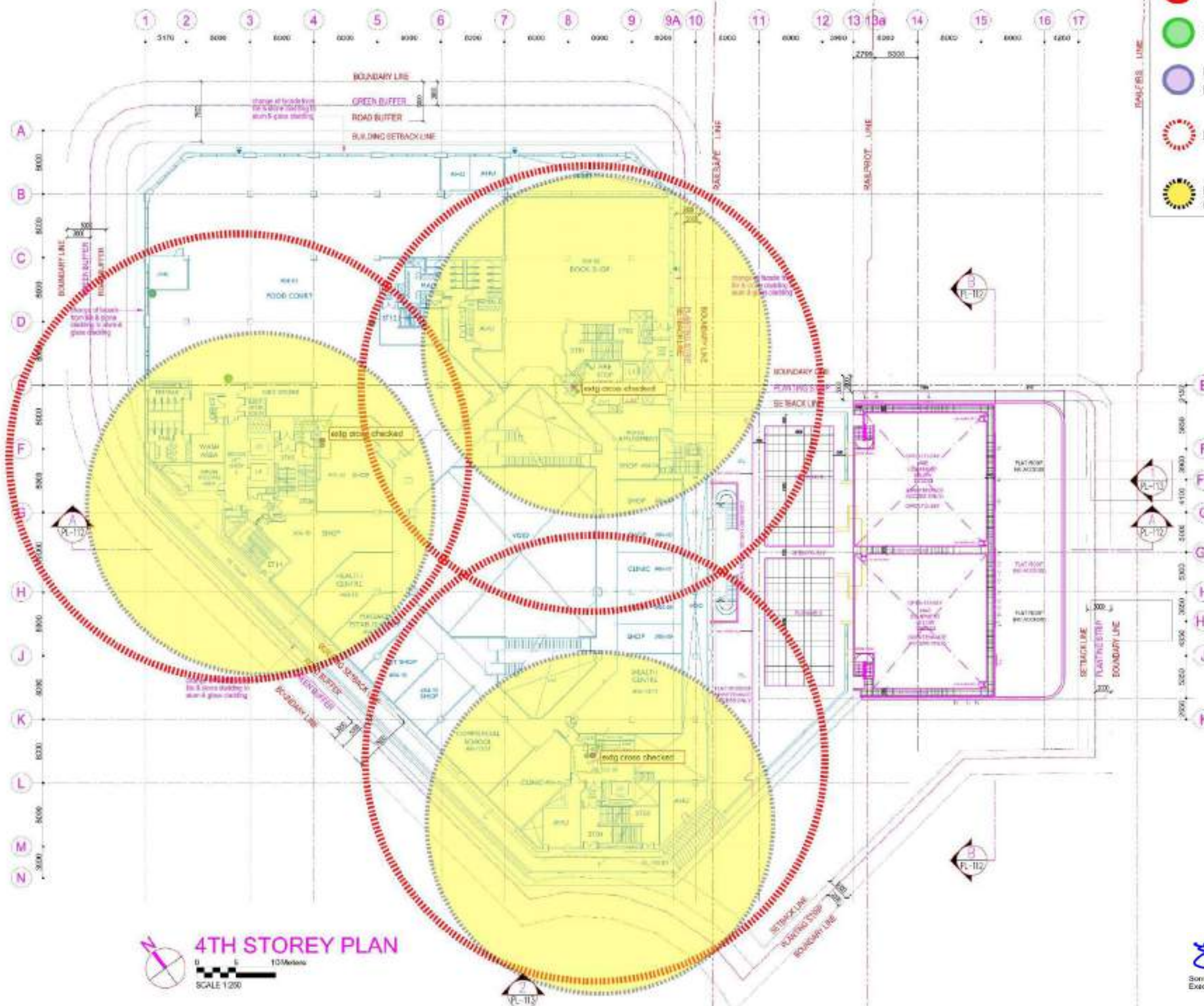
SIGN: TAN TAN CHONG

REMARKS: -

RSP

SOFT: Client's Title Block
RSP (RSP)
RSP (RSP)

RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD
110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000, 1002, 1004, 1006, 1008, 1010, 1012, 1014, 1016, 1018, 1020, 1022, 1024, 1026, 1028, 1030, 1032, 1034, 1036, 1038, 1040, 1042, 1044, 1046, 1048, 1050, 1052, 1054, 1056, 1058, 1060, 1062, 1064, 1066, 1068, 1070, 1072, 1074, 1076, 1078, 1080, 1082, 1084, 1086, 1088, 1090, 1092, 1094, 1096, 1098, 1100, 1102, 1104, 1106, 1108, 1110, 1112, 1114, 1116, 1118, 1120, 1122, 1124, 1126, 1128, 1130, 1132, 1134, 1136, 1138, 1140, 1142, 1144, 1146, 1148, 1150, 1152, 1154, 1156, 1158, 1160, 1162, 1164, 1166, 1168, 1170, 1172, 1174, 1176, 1178, 1180, 1182, 1184, 1186, 1188, 1190, 1192, 1194, 1196, 1198, 1200, 1202, 1204, 1206, 1208, 1210, 1212, 1214, 1216, 1218, 1220, 1222, 1224, 1226, 1228, 1230, 1232, 1234, 1236, 1238, 1240, 1242, 1244, 1246, 1248, 1250, 1252, 1254, 1256, 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3250, 3252, 3254, 3256, 3258, 3260, 3262, 3264, 3266, 3268, 3270, 3272, 3274, 3276, 3278, 3280, 3282, 3284, 3286, 3288, 3290, 3292, 3294, 3296, 3298, 3300, 3302, 3304, 3306, 3308, 3310, 3312, 3314, 3316, 3318, 3320, 3322, 3324, 3326, 3328, 3330, 3332, 3334, 3336, 3338, 3340, 3342, 3344, 3346, 3348, 3350, 3352, 3354, 3356, 3358, 3360, 3362, 3364, 3366, 3368, 3370, 3372, 3374, 3376, 3378, 3380, 3382, 3384, 3386, 3388, 3390, 3392, 3394, 3396, 3398, 3400, 3402, 3404, 3406, 3408, 3410, 3412, 3414, 3416, 3418, 3420, 3422, 3424, 3426, 3428, 3430, 3432, 3434, 3436, 3438, 3440, 3442, 3444, 3446, 3448, 3450, 3452, 3454, 3456, 3458, 3460, 3462, 3464, 3466, 3468, 3470, 3472, 3474, 3476, 3478, 3480, 3482, 3484, 3486, 3488, 3490, 3492, 3494, 3496, 3498, 3500, 3502, 3504, 3506, 3508, 3510, 3512, 3514, 3516, 3518, 3520, 3522, 3524, 3526, 3528, 3530, 3532, 3534, 3536, 3538, 3540, 3542, 3544, 3546, 3548, 3550, 3552, 3554, 3556, 3558, 3560, 3562, 3564, 3566, 3568, 3570, 3572, 3574, 3576, 3578, 3580, 3582, 3584, 3586, 3588, 3590, 3592, 3594, 3596, 3598, 3600, 3602, 3604, 3606, 3608, 3610, 3612, 3614, 3616, 3618, 3620, 3622, 3624, 3626, 3628, 3630, 3632, 3634, 3636, 3638, 3640, 3642, 3644, 3646, 3648, 3650, 3652, 3654, 3656, 3658, 3660, 3662, 3664, 3666, 3668, 3670, 3672, 3674, 3676, 3678, 3680, 3682, 3684, 3686, 3688, 3690, 3692, 3694, 3696, 3698, 3700, 3702, 3704, 3706, 3708, 3710, 3712, 3714, 3716, 3718, 3720, 3722, 3724, 3726, 3728, 3730, 3732, 3734, 3736, 3738, 3740, 3742, 3744, 3746, 3748, 3750, 3752, 3754, 3756, 3758, 3760, 3762, 3764, 3766, 3768, 3770, 3772, 3774, 3776, 3778, 3780, 3782, 3784, 3786, 3788, 3790, 3792, 3794, 3796, 3798, 3800, 3802, 3804, 3806, 3808, 3810, 3812, 3814, 3816, 3818, 3820, 3822, 3824, 3826, 3828, 3830, 3832, 3834, 3836, 3838, 3840, 3842, 3844, 3846, 3848, 3850, 3852, 3854, 3856, 3858, 3860, 3862, 3864, 3866, 3868, 3870, 3872, 3874, 3876, 3878, 3880, 3882, 3884, 3886, 3888, 3890, 3892, 3894, 3896, 3898, 3900, 3902, 3904, 3906, 3908, 3910, 3912, 3914, 3916, 3918, 3920, 3922, 3924, 3926, 3928, 3930, 3932, 3934, 3936, 3938, 3940, 3942, 3944, 3946, 3948, 3950, 3952, 3954, 395



- HOSE REEL
- FIRE EXTINGUISHER
- FIRE ALARM AND MANUAL CALL POINT
- LIFT COVERAGE
- ESCAPE STAIRCASE COVERAGE

NOTES:

1. Coverage shall meet the minimum distance of 10m from the nearest fire escape exit.
2. All fire escape exits shall be covered by the fire escape exit.
3. Fire escape exits shall be covered by the fire escape exit.
4. Fire escape exits shall be covered by the fire escape exit.
5. Fire escape exits shall be covered by the fire escape exit.
6. Fire escape exits shall be covered by the fire escape exit.
7. Fire escape exits shall be covered by the fire escape exit.
8. Fire escape exits shall be covered by the fire escape exit.
9. Fire escape exits shall be covered by the fire escape exit.
10. Fire escape exits shall be covered by the fire escape exit.
11. Fire escape exits shall be covered by the fire escape exit.
12. Fire escape exits shall be covered by the fire escape exit.
13. Fire escape exits shall be covered by the fire escape exit.
14. Fire escape exits shall be covered by the fire escape exit.
15. Fire escape exits shall be covered by the fire escape exit.
16. Fire escape exits shall be covered by the fire escape exit.
17. Fire escape exits shall be covered by the fire escape exit.

PRELIMINARY TENDER DRAWING

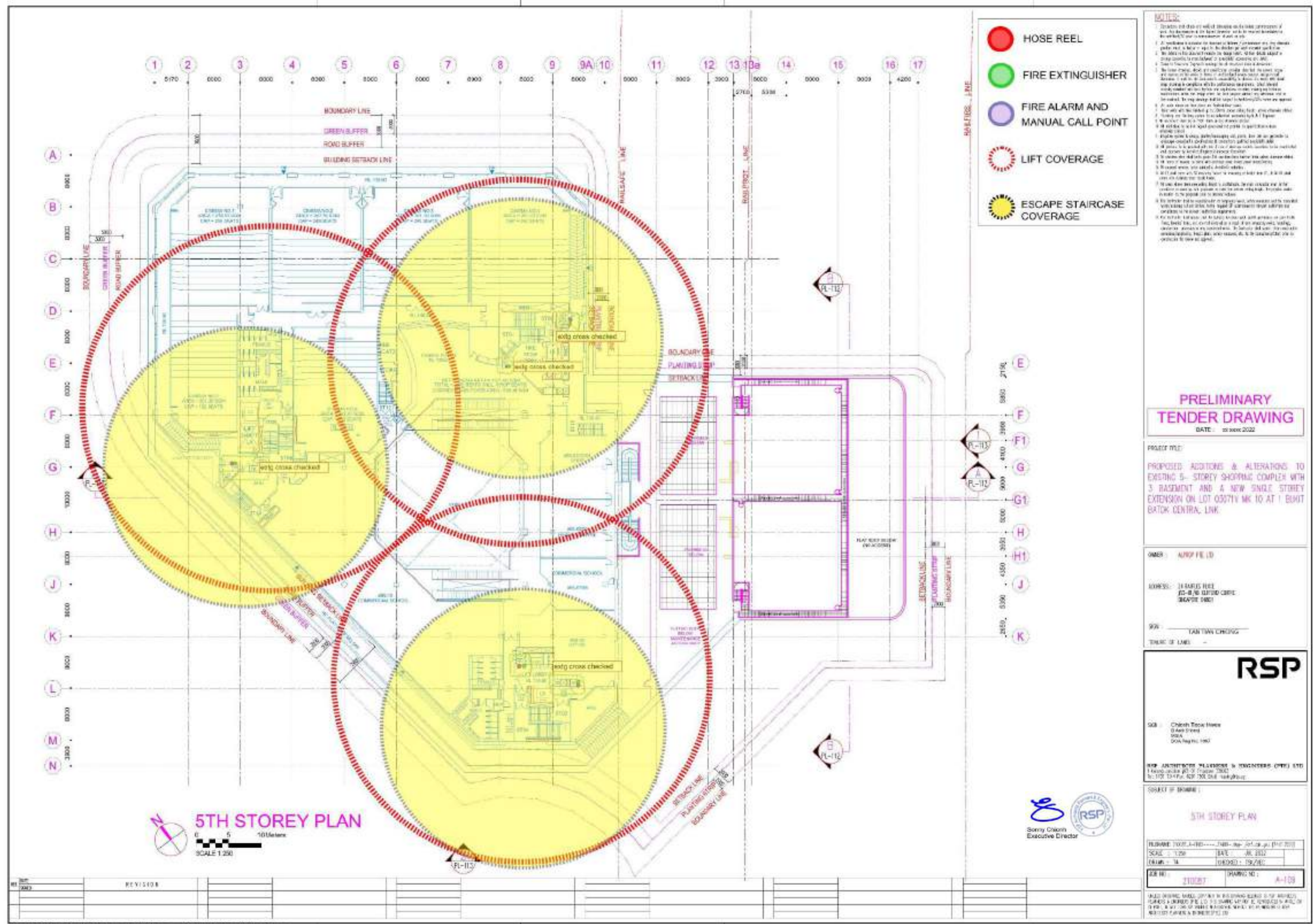
DATE: 10 DEC 2022

PROJECT TITLE:
PROPOSED ADDITIONS & ALTERATIONS TO EXISTING 5-STOREY SHOPPING COMPLEX WITH 3 BASEMENT AND A NEW SINGLE STOREY EXTENSION ON LOT 030717 WK TO AT 1 BUNT BAY CENTRAL LINK

OWNER: A/PROF. LEE
ADDRESS: 31 BUNT BAY CENTRAL LINK, SINGAPORE 09001
SEA: TAN YUAN CHENG
SCALE OF LAYOUT:

RSP

SEA: Cheong Tzeong Hoon
31 Bunt Bay Central Link
SINGAPORE 09001
RSP ARCHITECTS PLANNERS & ENGINEERS (PTE) LTD
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 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- HOSE REEL
- FIRE EXTINGUISHER
- FIRE ALARM AND MANUAL CALL POINT
- LIFT COVERAGE
- ESCAPE STAIRCASE COVERAGE

NOTES:

1. Fire alarm and manual call points shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
2. Fire extinguishers shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
3. Fire alarm and manual call points shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
4. Fire extinguishers shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
5. Fire alarm and manual call points shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
6. Fire extinguishers shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
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8. Fire extinguishers shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
9. Fire alarm and manual call points shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
10. Fire extinguishers shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
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12. Fire extinguishers shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
13. Fire alarm and manual call points shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
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16. Fire extinguishers shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).
17. Fire alarm and manual call points shall be provided in accordance with the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC) and the Fire Protection Code of Practice (FPPC).

PRELIMINARY TENDER DRAWING

DATE: 01 DEC 2022

PROJECT TITLE:
PROPOSED ADDITIONS & ALTERATIONS TO EXISTING 5-STOREY SHOPPING COMPLEX WITH 3 BASEMENT AND A NEW SINGLE STOREY EXTENSION ON LOT 03/07V MK TO AT 1 BUILT BATCH CENTRAL LINK

OWNER: AUPP FIELD

ADDRESS: 11 HANUS HILL RD-8/16 LOT 03/07V MK TO AT 1 BUILT BATCH CENTRAL LINK

SEA: TAN TOW CHONG

THEIR OF LINE:

RSP

SEA: Chong Tiew Hoon
SEA: 01/01/2022
SEA: 01/01/2022

SEA: 01/01/2022
SEA: 01/01/2022
SEA: 01/01/2022

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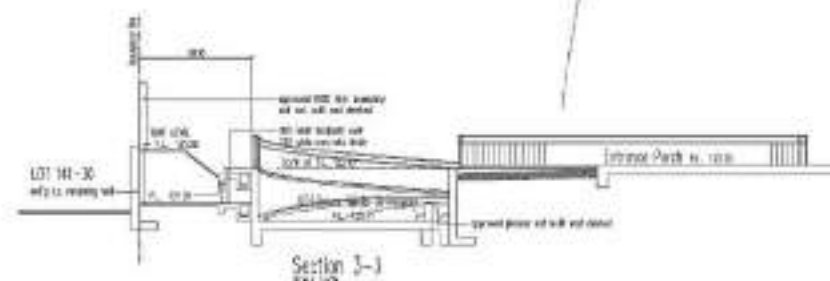
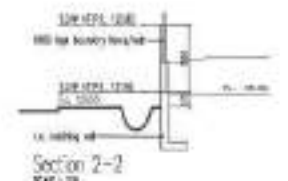
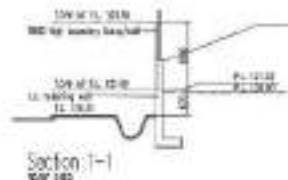
SEA: 01/01/2022
SEA: 01/01/2022
SEA: 01/01/2022

— 26 Victoria Park —

To work on the construction drawing of the proposed Additions and Alterations to 2-storey detached dwelling house with a basement and attic (new pavilion) on Lot 9900 MK 2 at 26 Victoria Park Road.

[illegible][illegible][illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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TOTAL SGFA = 48.25 sqm.

BCA

BUILDING AND CONSTRUCTION AUTHORITY
APPROVED UNDER SECTION 5 / SECTION 5A OF THE
BUILDING CONTROL ACT (CHAPTER 28)



PROJECT FILE:
PROPOSED ADDITIONS AND ALTERATIONS
TO 2-STORY DETACHED DWELLING
HOUSE WITH A BASEMENT AND ATTIC
(NEW PAVILION) ON LOT 99005C MN. 2
AT 26 VICTORIA PARK ROAD

DATE: _____

ADDRESS : 25 HUTTENBERG ROAD
SINGAPORE 268955

Volume 10, Number 1, 2007

2024 7 Ng Beng Sui

BSA ARCHITECTS' PLANNERS & ENGINEERS (PTE) LTD
1 Nanyang Avenue #5-08 Singapore 20000
Tel: 6321 2542 Fax: 6321 3880 E-mail: enquiry@bsa.com.sg

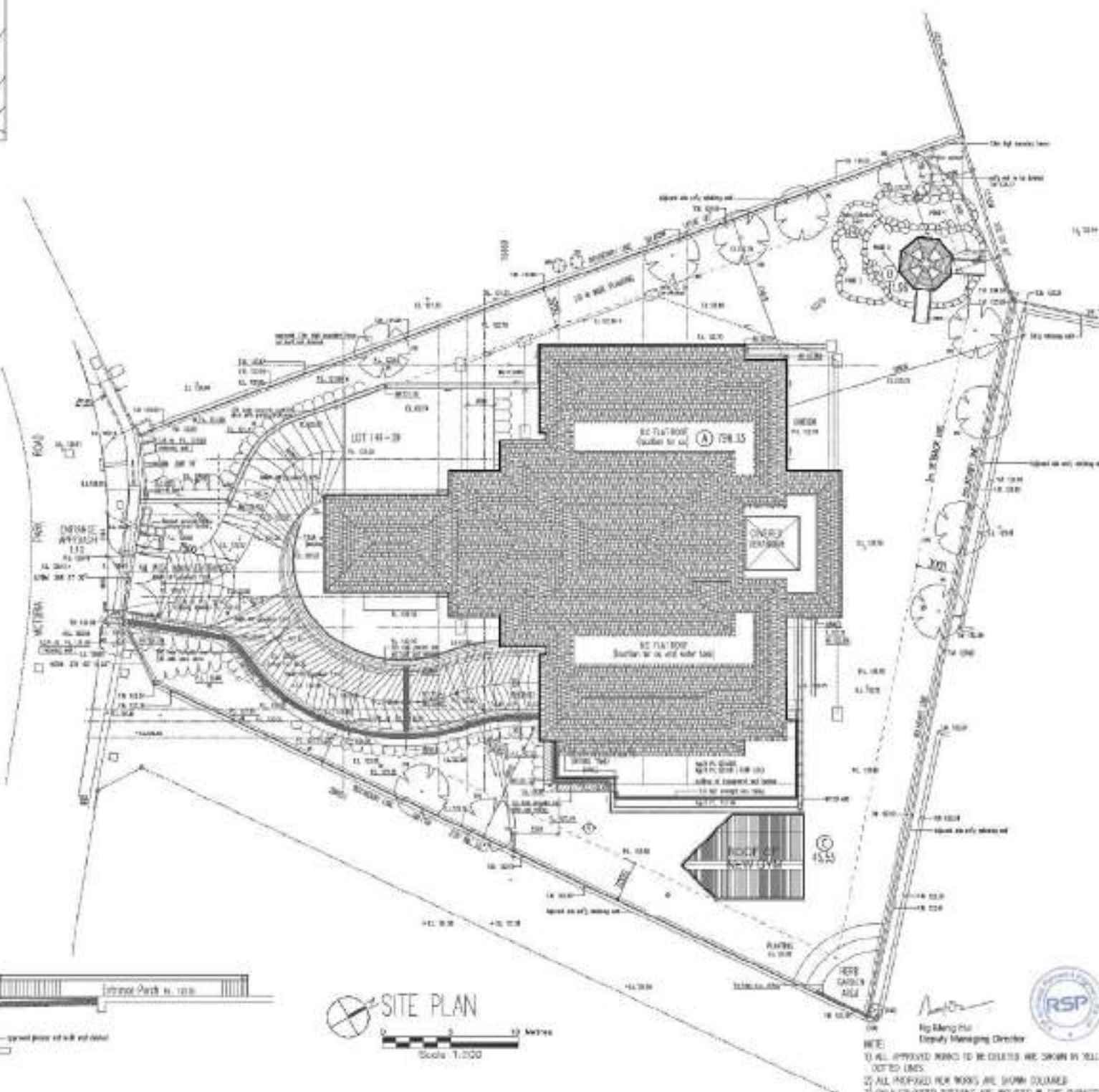
SUBJECT OF DRAWING :

SITE PLAN & LOCATION PLAN

[illegible]

SCALE : 1:200 1:100	DWG : SEP-2022
BRAND : TI	CHANGING : T2000

REF NO	0221054	TRANS NO	BA-101
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[illegible]

LEGEND:

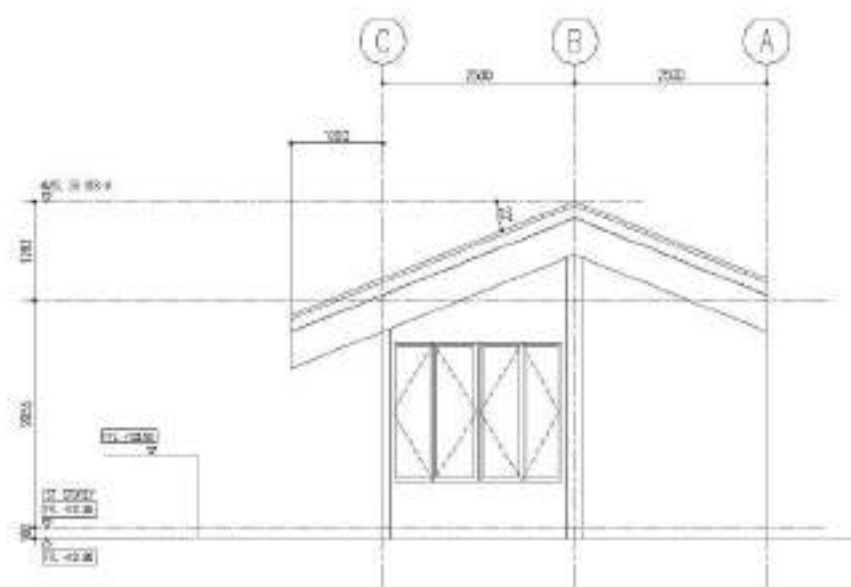
- EXISTING WORK
- PROPOSED NEW WORK
- EXISTING WORK TO BE REMOVED
- SHOWN FOR ACCESS ROUTE

PROJECT TITLE:
PROPOSED ADDITIONS AND ALTERATIONS
TO 2-STORY DETACHED DWELLING
HOUSE WITH A BASEMENT AND ATTIC
(NEW PAVILION) ON LOT 9000SC MK 2
AT 26 VICTORIA PARK ROAD

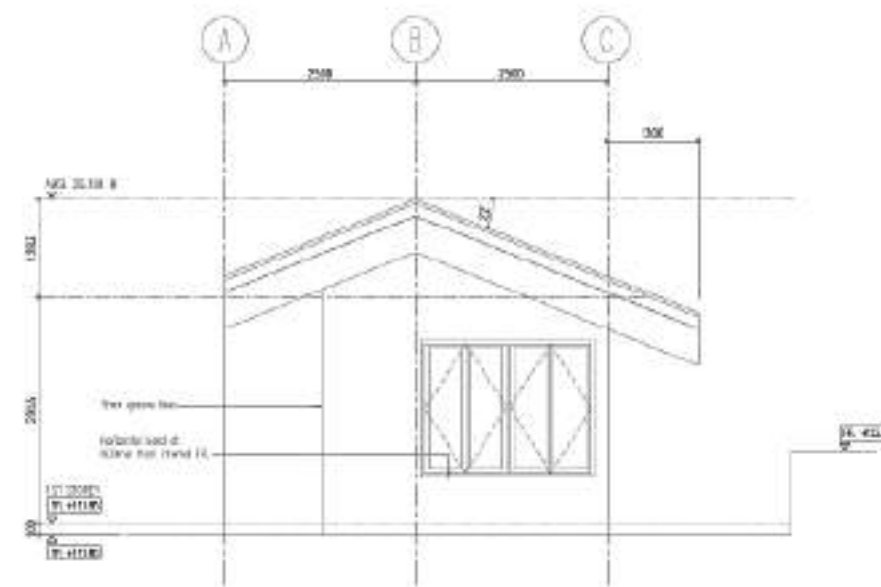
OWNER: KUK KUN KWONG
ADDRESS: 26 VICTORIA PARK ROAD
SINGAPORE 29055

SCALE OF LINES: DETAILS

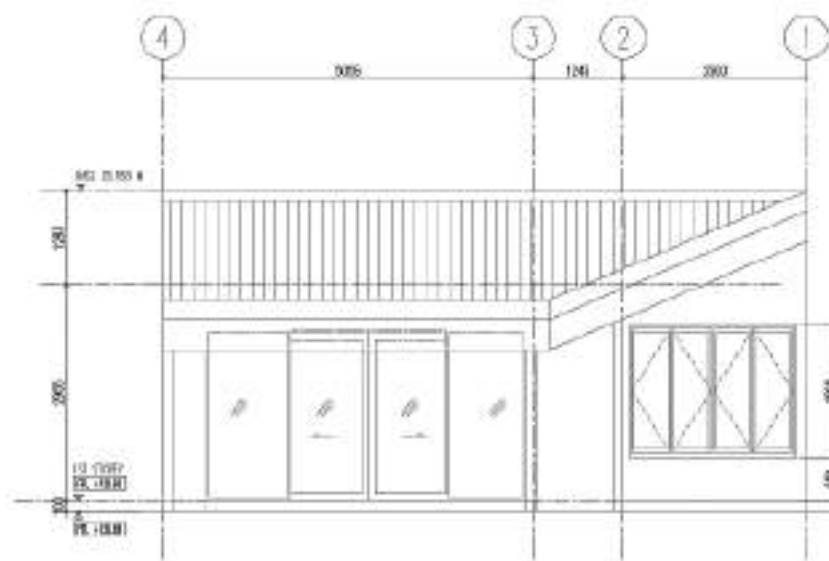
RSP
1. THE ARCHITECT'S PLANS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE BUILDING ACT AND BUILDING REGULATIONS.
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10. THE ARCHITECT'S PLANS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE BUILDING ACT AND BUILDING REGULATIONS.
DATE: 10/08/2014
BY: Ng Meng Hui
FOR: RSP ARCHITECTS PLANNERS & ENGINEERS (P) LTD
100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 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2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168



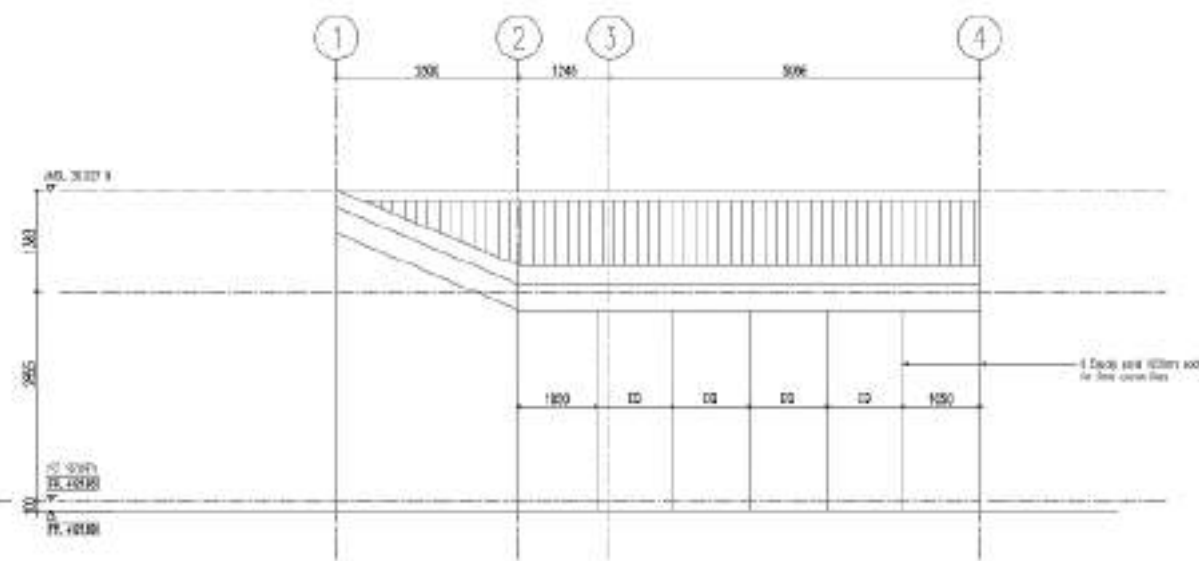
ELEVATION 2



ELEVATION 4



ELEVATION 1



ELEVATION 3

LEGEND:
 - EXISTING WORK
 - PROPOSED NEW WORK
 - EXISTING WORK TO BE DEMOLISHED
 - EXISTING FREE ACCESS ROUTE

PROJECT TITLE:
 PROPOSED ADDITIONS AND ALTERATIONS
 TO 2-STORY DETACHED DWELLING
 HOUSE WITH A BASEMENT AND ATTIC
 (NEW PAVILION) ON LOT 900050 MK 2
 AT 26 VICTORIA PARK ROAD

OWNER: KUSK OOI EWEK

ADDRESS: 26 VICTORIA PARK ROAD
 SINGAPORE 29025

SCALE OF PLAN: 1:100

RSP

1. I, the undersigned, hereby certify that the above-mentioned plans and specifications are true and correct copies of the original plans and specifications submitted to the Building Control Department for approval.

SIGN: Ng Meng Hui

2. I, the undersigned, hereby certify that the above-mentioned plans and specifications are true and correct copies of the original plans and specifications submitted to the Building Control Department for approval.

RSP ARCHITECTS & PLANNERS (SINGAPORE) PTE. LTD.
 1. Building Services (P) Licence No. 12345
 Tel: 010 234 567 890 Fax: 010 234 567 890 Email: rsp@rsp.com.sg

SUBJECT OF DRAWING:

ELEVATIONS 1, 2, 3 & 4

FILE NAME: BCS-A-101-BA-100-2003-001-000
SCALE: 1:50 **DATE:** 10/01/2023
DRAWN: T1 **CHECKED:** T2, RSP
JOB NO.: B221054 **PROJECT NO.:** BA-104

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SITE PHOTOS



EXTENSION ACTIVITIES AND EVENTS



RECOGNITION ON YOUTH'S DAY



EXPERTISEVISIONOUR STORYPEOPLEMEDIACONTACT US



Intergenerational Solidarity: Creating a World for All Ages

12 August 2022

"The objective of International Youth Day 2022 is to amplify the message that action is needed across all generations to achieve the Sustainable Development Goals (SDGs) and leave no one behind." – The United Nations, 2022

So how do we as Architects of today, integrate all generations and work as a collective towards **sustainability** and net-zero energy buildings? Let's hear from our youths!



How can you as a future Architect address this issue?

Anushree Ramanathan (20)
Architectural Assistant, RSP Singapore

"Attending seminars or being aware of Climate Change is no longer enough. Compared to previous years, the climate and its behavioural patterns have changed drastically. Incorporating greenery into our architecture will not replace the rapid loss of our forests and natural environment.

Firstly, I would advise that green building moves away from just being an aesthetic, into a functional growing procedure such as an Urban Farm in Funan Mall.

Secondly, it is the amount of energy we consume that affects climate change. As technology and society progresses, we spend an expansive amount of energy of our mother earth; and that's where the terminology – Sustainability – pops up! As skyscrapers are now the most common form of buildings, choosing the right material is significant in lowering the carbon footprint.

The future of Architecture is to adopt minimalistic forms, reducing the use of unsustainable materials, opening the land space between buildings to reduce retained heat, and bringing architecture back to its golden days.

I believe that there is potential in researching a method to recycle construction wastes such as those from building demolition or discarded materials from renovation projects."

<https://rsp.sg/perspective/international-youth-day-2022/>

CRITICAL OVERVIEW



With its headquarters in Singapore and a talented staff of architects and engineers, RSP Architects Planners and Engineers is a substantial, expanding architecture design organization.

I had a fantastic opportunity as an intern to continue my education through practical application, as they welcomed young architects and gave them access to information on office cultures, etc.

Being a part of the project management team increased my exposure to the architecture life cycle while working with a talented, established, and up-and-coming team.

Every design is an expression of an architectural language that emphasizes the spatial experience, modern and tropical architectural construction.

By collaborating on a variety of large-scale projects and utilizing multiple modes of practice involvement, RSP aims to create and improve user-specific and client-specific designs.

Being a part of RSP was a huge honor.

ANUSHREE RAMANATHAN