

PRE-RELEASE - WORK IN PROGRESS



School Infrastructure Pattern Book: Standardised Designs for Schools

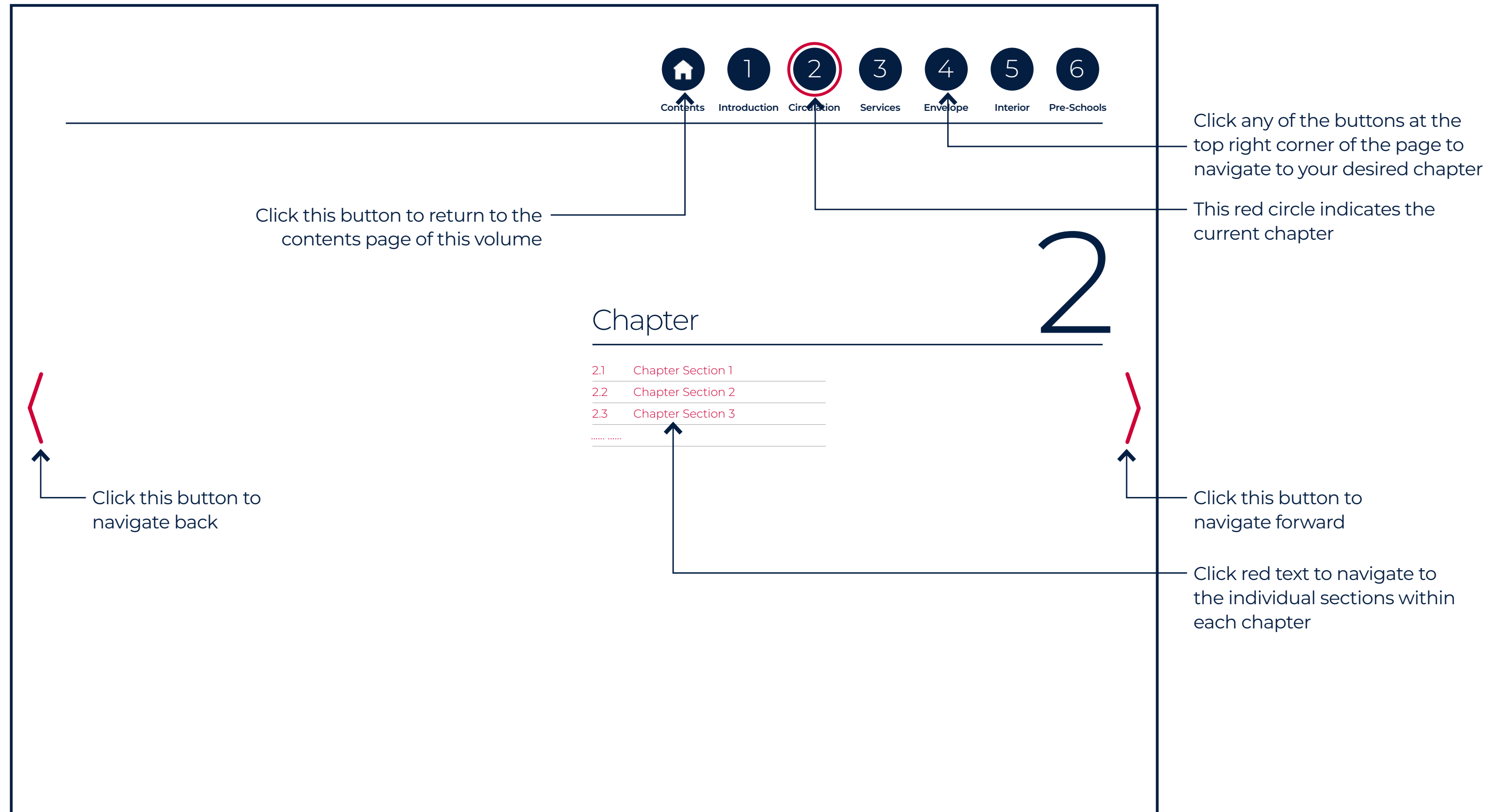
Volume 1

Schedules of Accommodation and School Building Layouts

Revisions

Revision	Date(dd/mm/yy)	Description
1	17/09/24	Draft for internal review
2	19/09/24	Draft for review

How to Navigate the Interactive Pattern Book



The Pattern Book Volumes

Volume 1 - Schedules of Accommodation and School Building Layouts (this volume)

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| 3 | High Schools |
| 4 | SSP |
| 5 | Pre-Schools |

Volume 2 - Building Components

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| 1 | Introduction |
| 2 | Circulation |
| 3 | Services |
| 4 | Envelope |
| 5 | Interior |

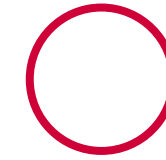
Volume 3 - Room Layouts and Room Data Sheets (separate volume provided in future release)

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| 1 | Room Layout Sheets |
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Volume 4 - Digital Resources

Volume One: Schedules of Accommodation and School Building Layouts - Contents

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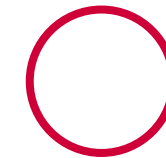


Introduction

[1.1 Introduction](#)

[1.2 School Types](#)

1.1 Introduction



Introduction

The School Infrastructure NSW Pattern Book builds upon the standardised approach to school designs by creating a minimum standard with repeatable design elements and components, which can be applied to new and upgrade schools.

The opportunities of standardisation, certainty and repeatable components supports equity within our schools. It enables the application of either traditional or modern methods of construction, and enables increased industry productivity and product innovation in the design and delivery of schools.

The school building designs in the Pattern Book are intentionally agnostic to structural material. This is to ensure industry can bring best practice and innovation to the design and construction of school infrastructure.

Stakeholder input

The Pattern Book was developed in collaboration with School Infrastructure Delivery, Planning, Cost Planning, Asset Management, Design and Infrastructure Standards, Digital Engineering and Sustainability. It also leveraged external expertise in cost planning, sustainability, building services, construction and buildability, manufacturing and architecture.

The efficacy of the Pattern Book was tested on a dozen projects to evaluate fit for purpose outcomes, and as such, it represents a culmination of effort from numerous external teams. It is the first step in providing a design benchmark and certainty for industry and stakeholders.

The purpose of the Pattern Book baseline model is to encourage industry, which includes consultants, construction contractors, manufacturers and education experts, to innovate in their approach to the design, manufacturing, assembly and construction of school infrastructure.

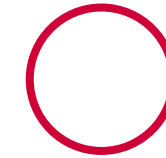
How to use the Pattern Book

The Pattern Book includes standardised templates for school building designs including the expandable Public and High Schools, COLAs, Halls and toilet amenities.

The Pattern Book is both in 2D PDF form and also as Revit models for building types. Users of the Pattern Book can navigate through the book to review designs, understand components, refer to EFSG Design and Technical Requirements for more information on technical standards and performance criteria and also download building envelopes from the EFSG Autodesk Construction Cloud.

The Pattern Book is an essential part of the EFSG, and all the designs and components are EFSG compliant. If there are discrepancies between the Pattern Book and EFSG, the Pattern Book assumes a higher order of precedent over the EFSG. This is in part because the EFSG is undergoing a significant edit of content to bring it up to current standards and it is envisaged this may take a number of years.

1.2 School Types



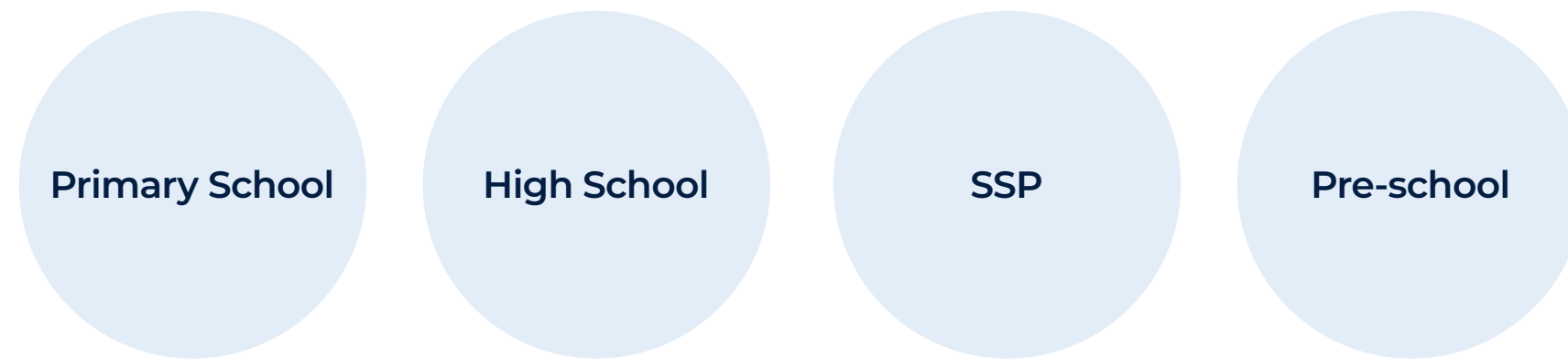
School Types and Layout Types

This section of the Pattern Book contains standard Building Layouts for each of the school types.

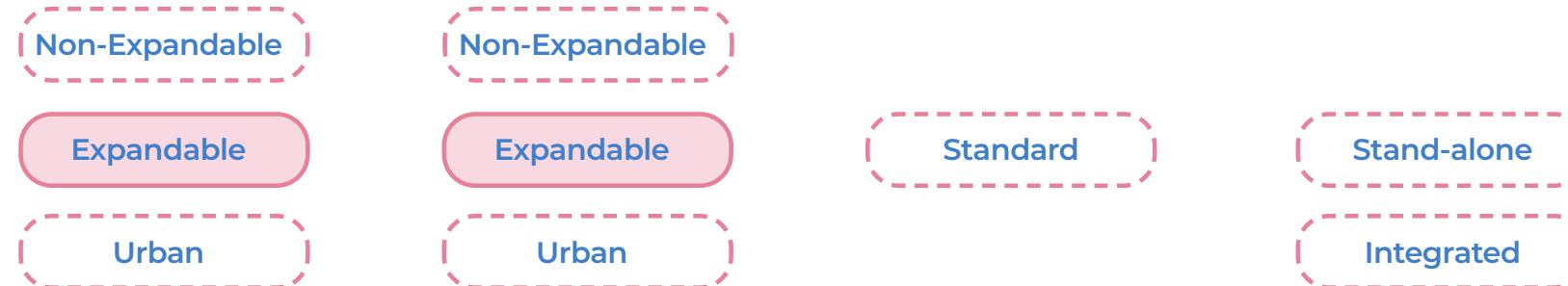
Within each school type there are Layout Types, which describe whether the school is to be Expandable or Urban, or in the case of Pre-Schools, Standalone or Integrated.

Non-Expandable means maximum capacity is reached at day 1 term 1.

School Type

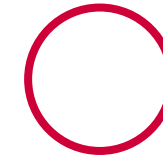


Layout Type



Key



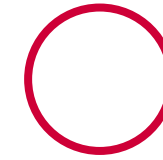


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Public Schools

- 2.1 Schedules of Accommodation
- 2.2 Non-Expandable School Layouts
- 2.3 Expandable School Layouts
- 2.4 Urban School Layouts
- 2.5 Hall Layouts

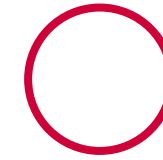
2.1 Schedules of Accommodation



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2.2 Non-Expandable School Layouts



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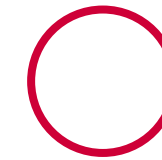
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[Pre-Schools](#)

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2.3 Expandable School Layouts



Expandable Public Schools

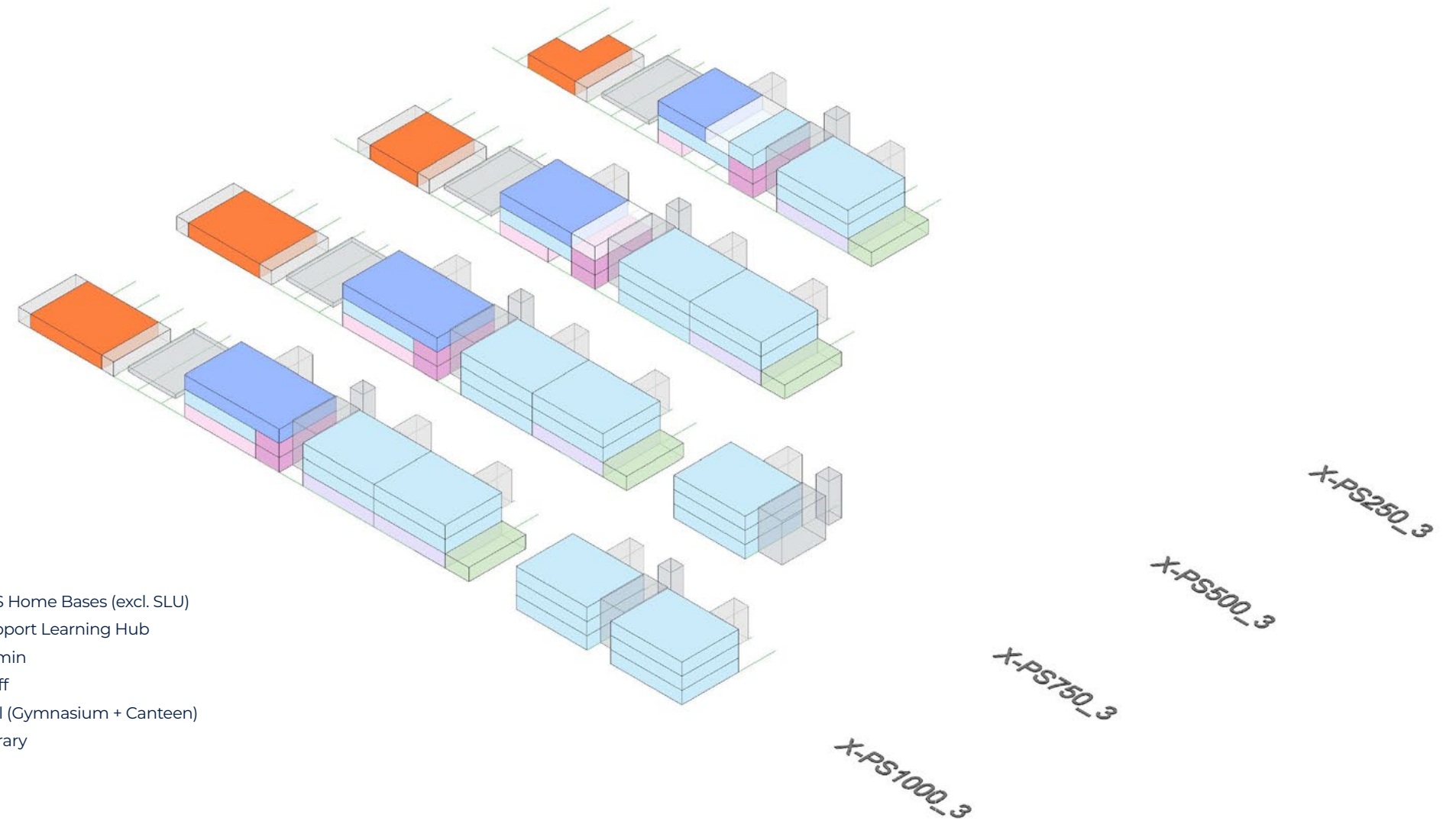
The Expandable Public Schools have been arranged to allow a school project to expand over time. The diagram illustrates how a school may begin with 250 students and expand to a maximum 1000 students by adding buildings.

Typically, buildings are a maximum of 7 grid bays long.

In the example provided, the school is 3 storeys high.

The layouts provided should be followed unless there is a project specific need to vary them to meet site constraints or to fit in with school upgrade strategies in existing school projects.

The table at the bottom shows the GLS count and school student capacity per stage.

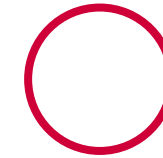


- GLS Home Bases (excl. SLU)
- Support Learning Hub
- Admin
- Staff
- Hall (Gymnasium + Canteen)
- Library

Expandable PS Yield and Capacity Summary

HS Type	GLS	SLU	TOTAL GLS count (excl SLU)	average capacity (23 students/ GLS)	capacity SLU (10 students/ SLU)	TOTAL max capacity (incl SLU)
X-PS₂₅₀_3	14	3	14	322	30	352
X-PS₅₀₀_3	24	3	24	552	30	582
X-PS₇₅₀_3	36	3	36	828	30	858
X-PS₁₀₀₀_3	44	6	44	1012	60	1072

2.3 Expandable School Layouts

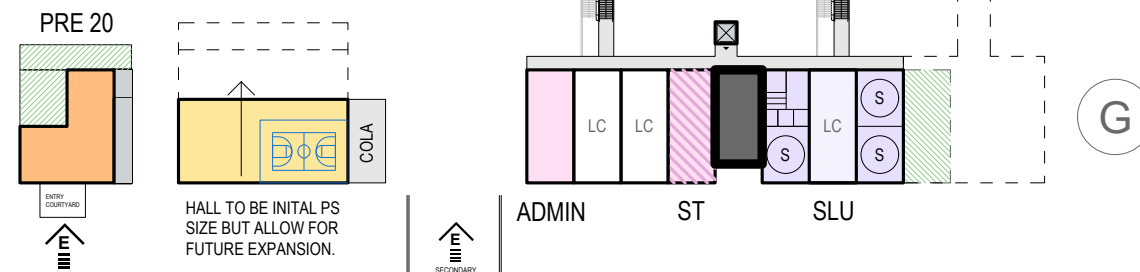
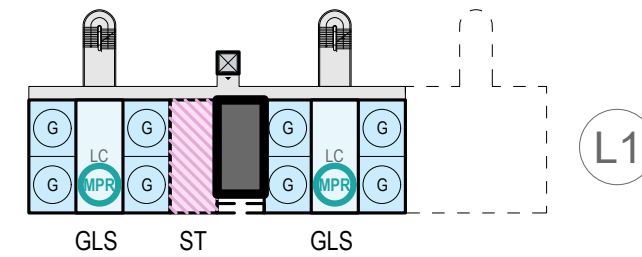
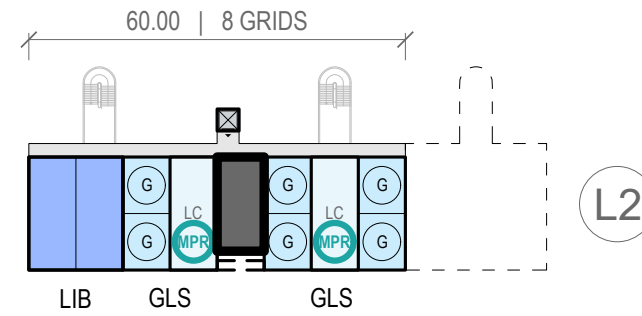


PS250

Expandable Public School

250 student

3 Storey



X-PS 250_3

TS

23 STUDENTS

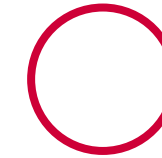
14 +3 SLU

322

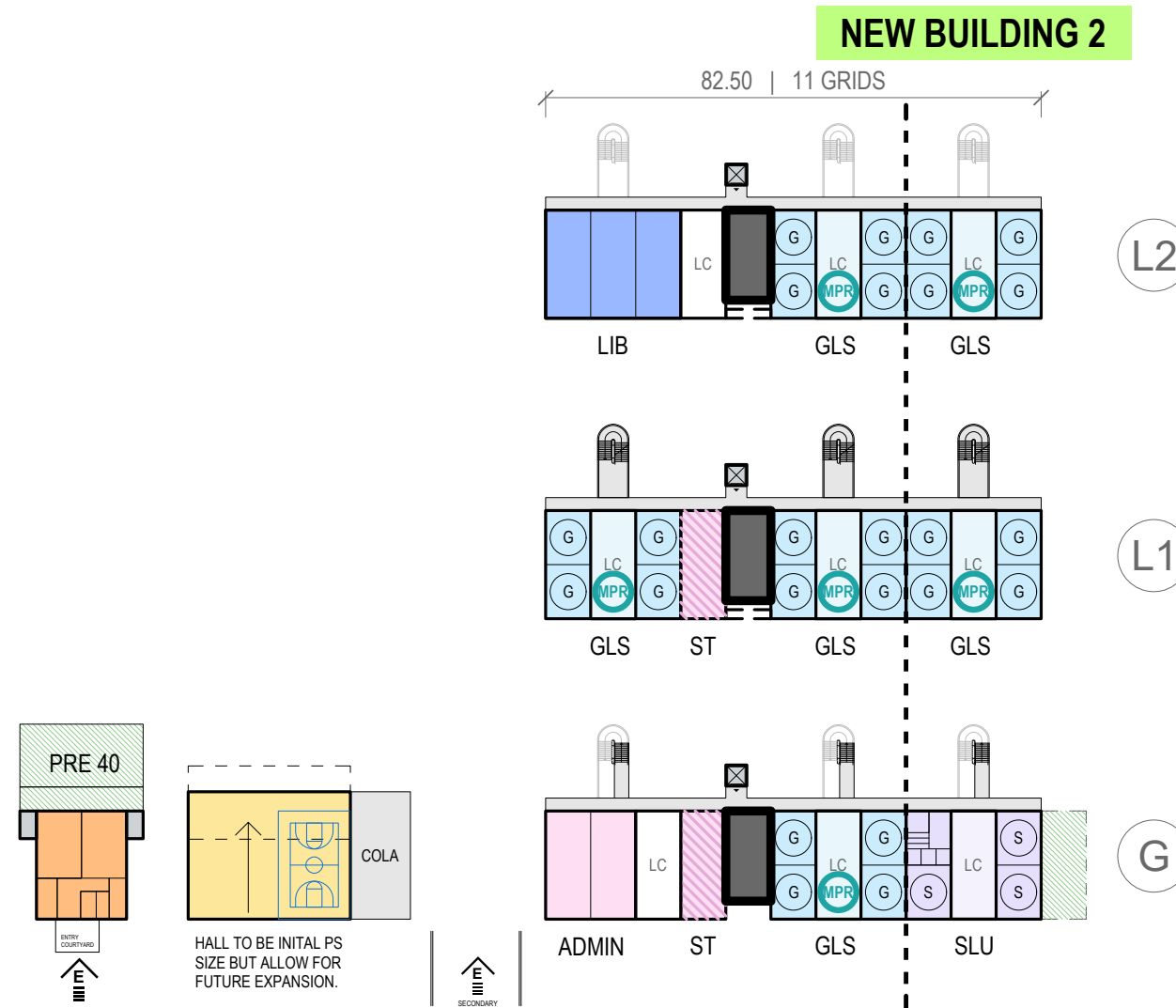
- G GENERAL LEARNING SPACE
- S SUPPORT LEARNING SPACE
- LC LEARNING COMMON (INTERNAL)
- FUTURE MULTIPURPOSE ROOM

DO NOT SCALE OFF DRAWINGS
 EFSG AREAS ROUNDED TO THE CLOSEST 7.5 GRID FOR VERTICAL STACKING
 CONSTRUCTION STAGING + SPATIAL RELATIONSHIPS ONLY
 VERTICAL TRANSPORT, FIRE EGRESS + SERVICE REQUIREMENTS ALL TO BE CONFIRMED
 APPROX 0.4 SQM PER STUDENT SERVICE ALLOWANCE MADE
 SITE TESTING TO BE UNDERTAKEN

2.3 Expandable School Layouts



PS500
 Expandable Public School
 500 student
 3 Storey



X-PS 500_3

TS

23 STUDENTS

24 +3 SLU

552

- G GENERAL LEARNING SPACE
- S SUPPORT LEARNING SPACE
- LC LEARNING COMMON (INTERNAL)
- FUTURE MULTIPURPOSE ROOM

DO NOT SCALE OFF DRAWINGS

EFSG AREAS ROUNDED TO THE CLOSEST 7.5 GRID FOR VERTICAL STACKING

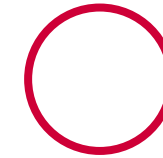
CONSTRUCTION STAGING + SPATIAL RELATIONSHIPS ONLY

VERTICAL TRANSPORT, FIRE EGRESS + SERVICE REQUIREMENTS ALL TO BE CONFIRMED

APPROX 0.4 SQM PER STUDENT SERVICE ALLOWANCE MADE

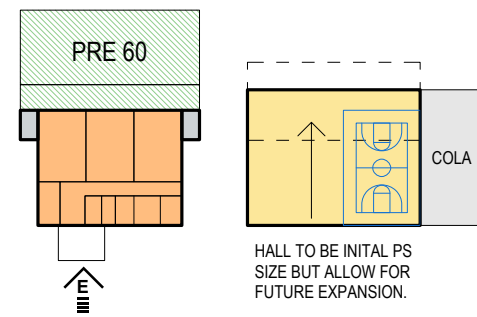
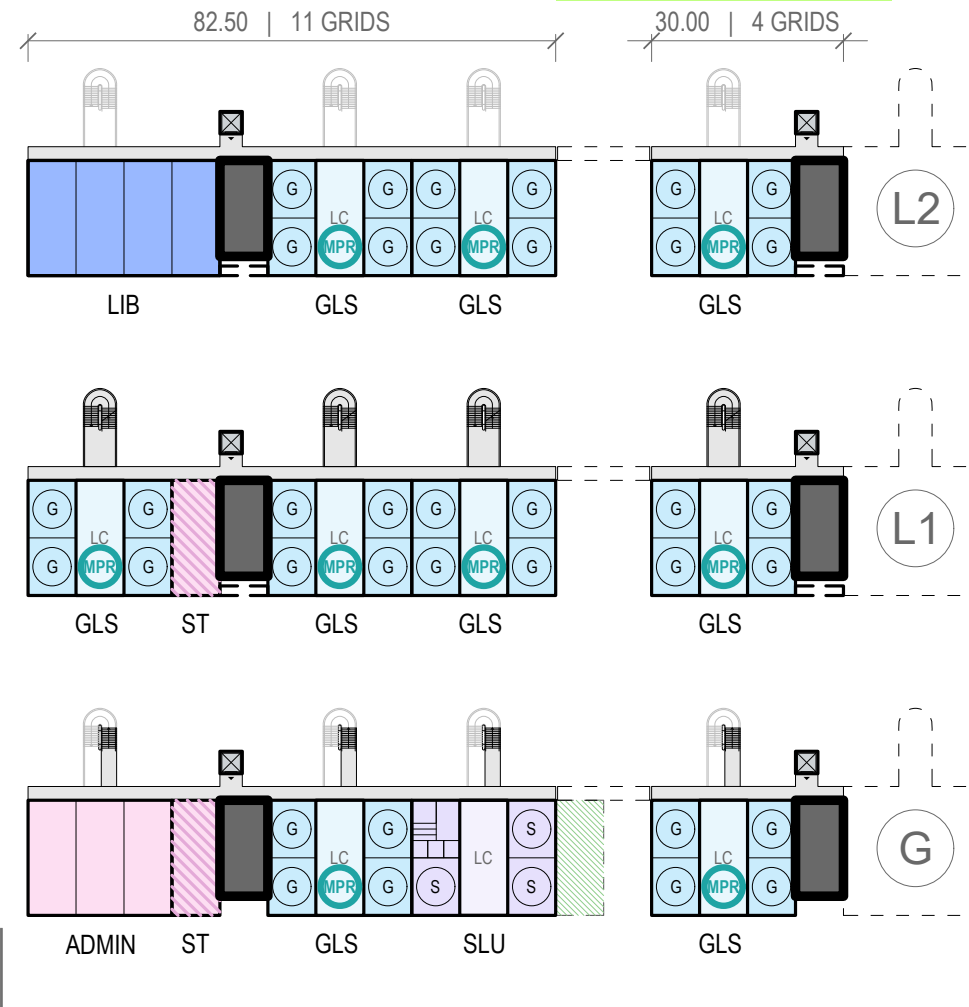
SITE TESTING TO BE UNDERTAKEN

2.3 Expandable School Layouts



PS750
Expandable Public School
750 student
3 Storey

NEW BUILDING 3A



X-PS 750_3

TS

23 STUDENTS

36 +3 SLU

828

- G GENERAL LEARNING SPACE
- S SUPPORT LEARNING SPACE
- LC LEARNING COMMON (INTERNAL)
- FUTURE MULTIPURPOSE ROOM

DO NOT SCALE OFF DRAWINGS

EFSG AREAS ROUNDED TO THE CLOSEST 7.5 GRID FOR VERTICAL STACKING

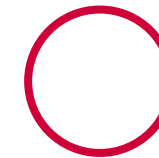
CONSTRUCTION STAGING + SPATIAL RELATIONSHIPS ONLY

VERTICAL TRANSPORT, FIRE EGRESS + SERVICE REQUIREMENTS ALL TO BE CONFIRMED

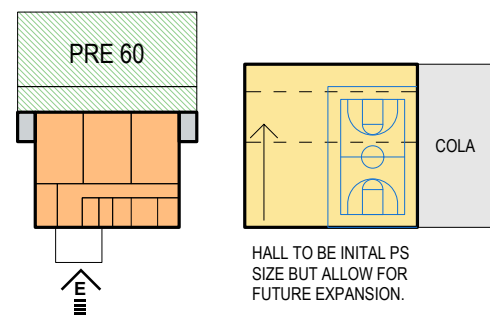
APPROX 0.4 SQM PER STUDENT SERVICE ALLOWANCE MADE

SITE TESTING TO BE UNDERTAKEN

2.3 Expandable School Layouts



PS1000
Expandable Public School
1000 student
3 Storey



X-PS 1000_3

TS

23 STUDENTS

44 +6 SLU

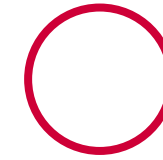
1012

- G GENERAL LEARNING SPACE
- S SUPPORT LEARNING SPACE
- LC LEARNING COMMON (INTERNAL)
- FUTURE MULTIPURPOSE ROOM

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 APPROX 0.4 SQM PER STUDENT SERVICE ALLOWANCE MADE
 SITE TESTING TO BE UNDERTAKEN

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2.4 Urban School Layouts



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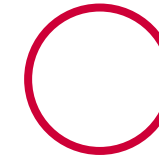
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[SSP](#)

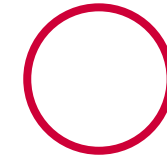
[Pre-Schools](#)

Available in Future Release

2.5 Hall Layouts



Available in Future Release

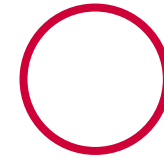


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High Schools

- 3.1 Schedules of Accommodation
- 3.2 Non-Expandable School Layouts
- 3.3 Expandable School Layouts
- 3.4 Urban School Layouts
- 3.5 Hall Layouts

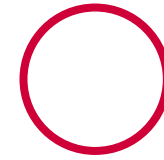
3.1 Schedules of Accommodation



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3.2 Non-Expandable School Layouts



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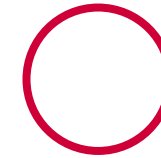
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3.3 Expandable School Layouts



Expandable High Schools

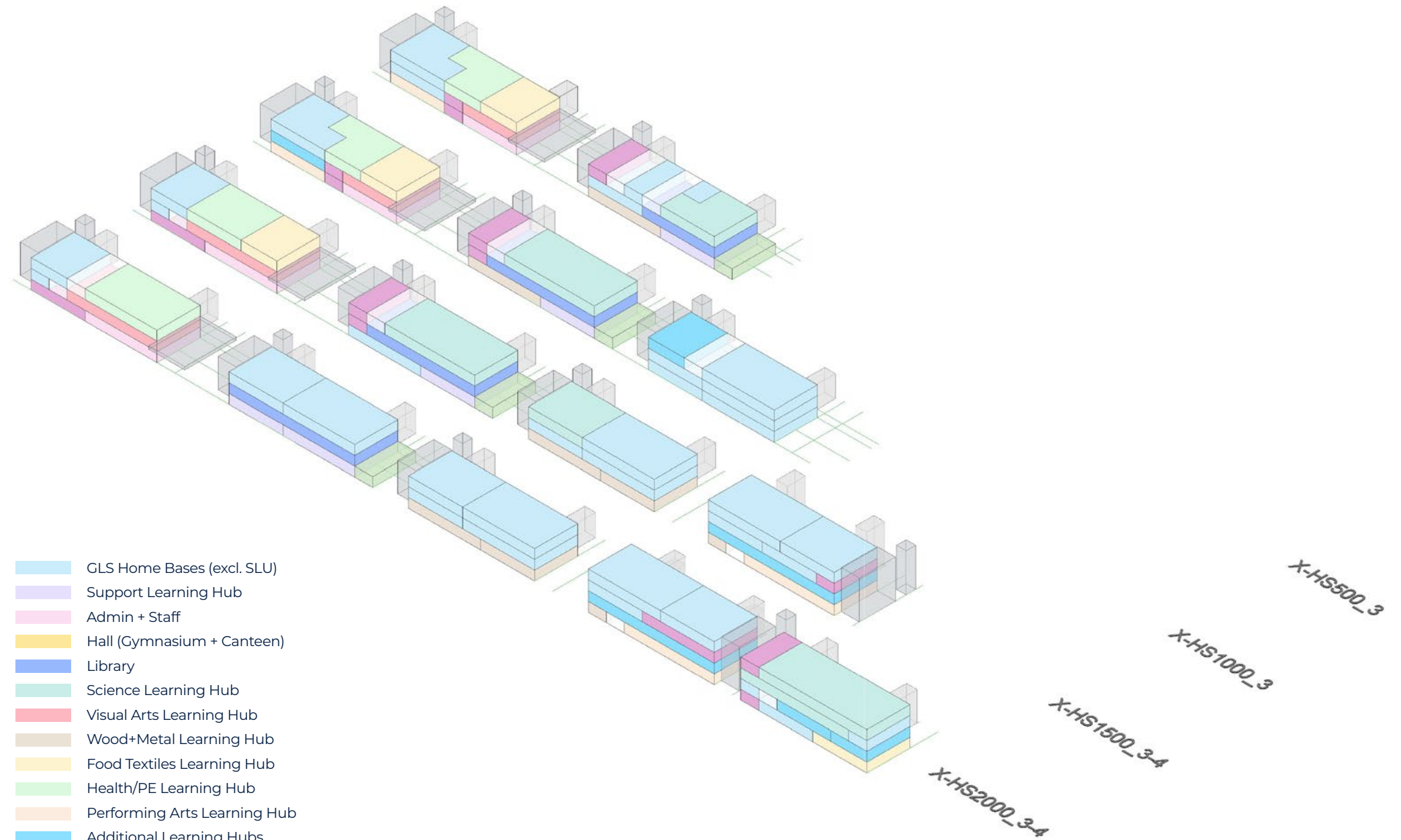
The Expandable High Schools have been arranged to allow a school project to expand over time. The diagram illustrates how a school may begin with 500 students and expand to a maximum 2000 students by adding buildings. As high schools expand over time, they will include refurbishment of pre-existing stages as indicated in the plans.

Typically, buildings are a maximum of 7 grid bays long.

In the example provided, the school is 3-4 storeys high.

The layouts provided should be followed unless there is a project specific need to vary them to meet site constraints, fit in with school upgrade strategies in existing school projects and/or apply Additional Learning Unit selections.

The table at the bottom shows the GLS count and school student capacity per stage.

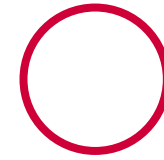


Expandable HS Yield and Capacity Summary

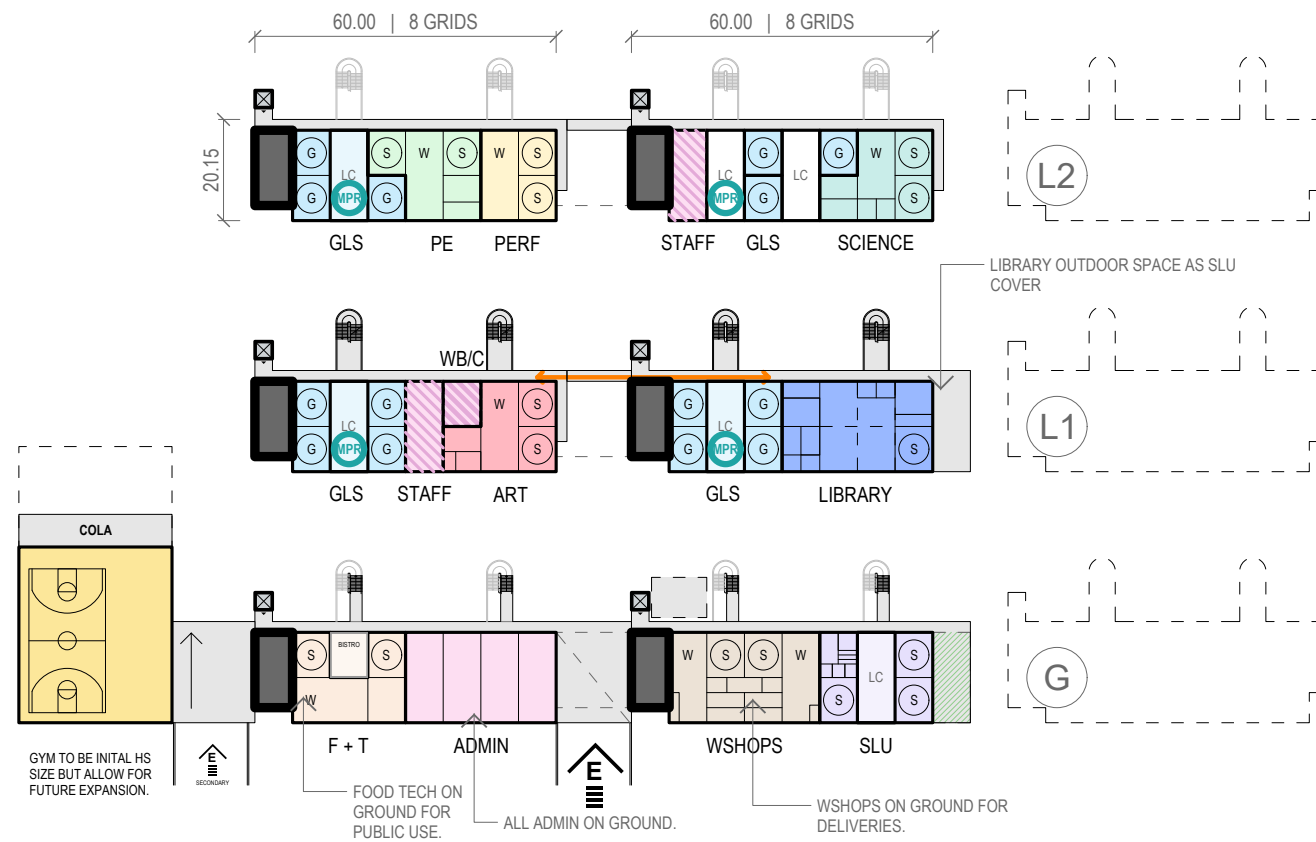
HS Type	GLS	Spec GLS	SLU	TOTAL GLS count (excl SLU)	20	22	10	TOTAL max capacity (incl SLU)	Specialist W/L
					min capacity (20 students/ GLS)	max capacity (22 students/ GLS)	capacity SLU (10 students/ SLU)		
X-HS500_3	14	13	3	27	540	594	30	624	7
X-HS1000_3	29	19	3	48	960	1056	30	1086	10
X-HS1500_3-4	45	32	3	77	1540	1694	30	1724	14
X-HS2000_3-4	59	41	7	100	2000	2200	70	2270	18

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3.3 Expandable School Layouts



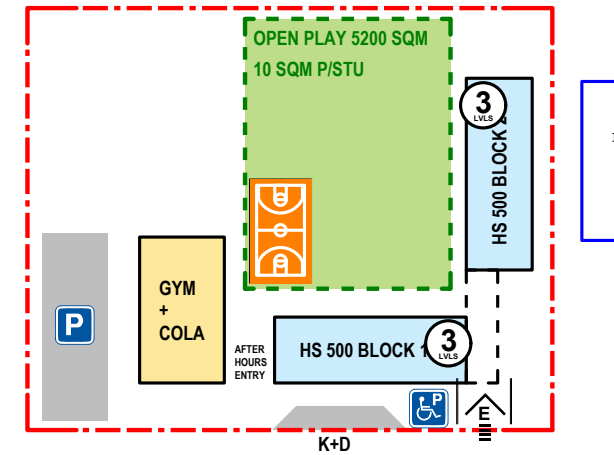
HS500 Expandable High School 500 student 3 Storey



X-HS 0500_3 **TS** **20** STUDENTS
 27 +3 SLU 540

LEGEND

- G GENERAL LEARNING SPACE
- S SPECIALIST TEACHING SPACE
- W WORKSHOP / PRACTICAL LAB - NOT INCLUDED IN TS COUNT.
- LC LEARNING COMMON (INTERNAL)
- POTENTIAL ALU TEACHING SPACE LOCATION DEPENDING ON SCHOOL REQUIREMENT.
- ↔ IDEAL FUNCTIONAL RELATIONSHIPS CONNECTED VIA CORRIDOR LINK.
- MPR FUTURE MULTIPURPOSE ROOM



INDICATIVE SITE PLAN

SITE ASSUMPTIONS:

- FLAT SITE (NO RETAINING, ONLY CAP AND CONTAIN).
- MIN 1 STREET FRONTAGE WITH 10M SETBACK.
- NO DISPOSAL OF MATERIALS.
- BAL (IE BUSHFIRE ALLOWANCES) ARE NOT CONSIDERED AND ARE SITE SPECIFIC.

SITE AREAS BASED ON:

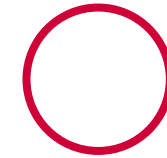
- 10SQM/ STUDENT OPEN SPACE.
- ALLOWANCE FOR CIRCULATION, CAR + BICYCLE PARKING, LOADING + TURNING, WASTE STORAGE.
- ABOVE GROUND PLANT AND SERVICES PROVISIONS ARE NOT CONSIDERED AND SITE SPECIFIC.

GENERAL NOTES

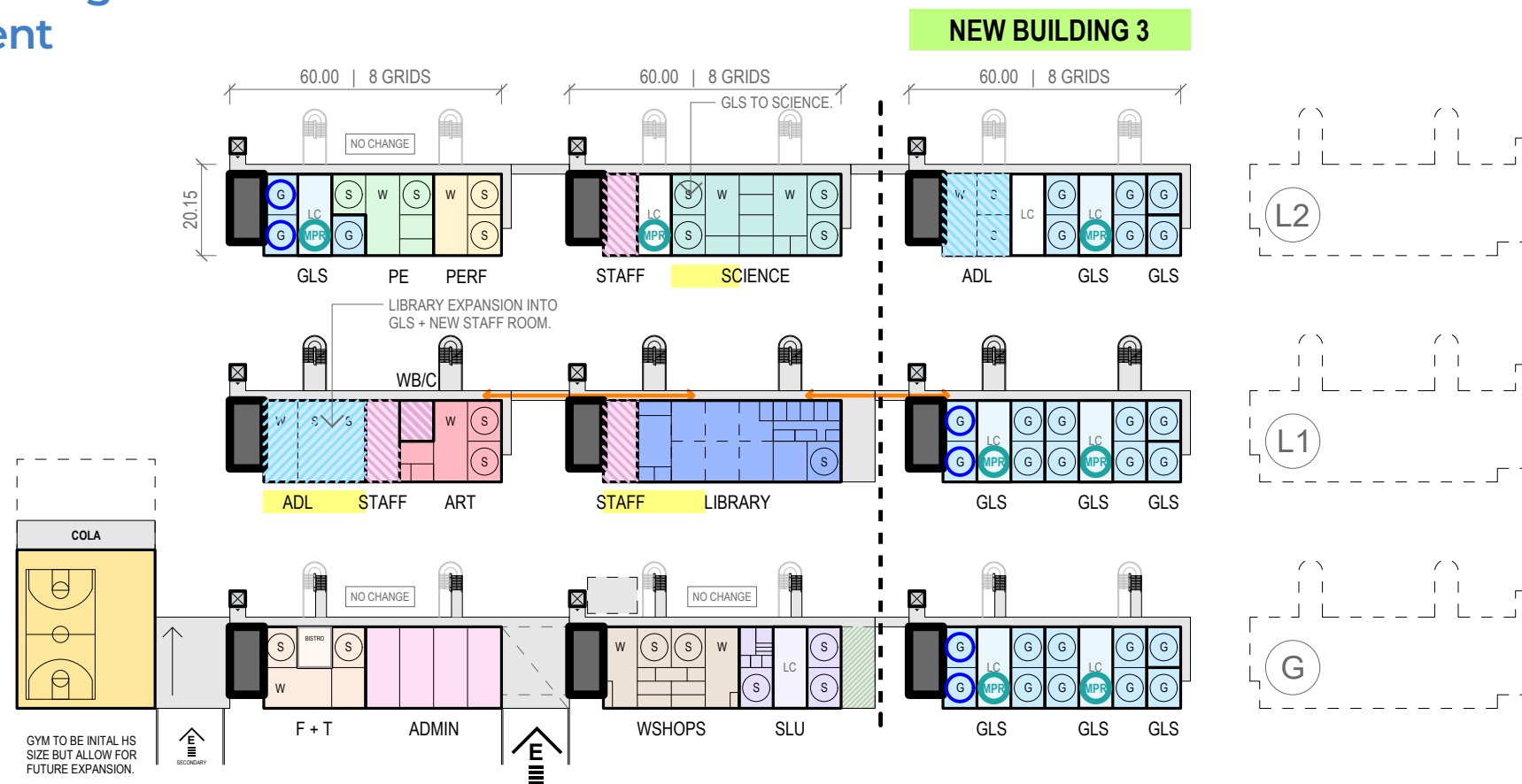
- DO NOT SCALE OFF DRAWINGS.
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- CONSTRUCTION STAGING + SPATIAL RELATIONSHIPS ONLY.
- VERTICAL TRANSPORT, FIRE EGRESS + SERVICE REQUIREMENTS INDICATIVE AND TO BE CONFIRMED BY CONSULTANTS.
- STUDENT AMENITIES, SERVICES AND PLANT ARE SHOWN INDICATIVELY ONLY, FURTHER SITE SPECIFIC CO-ORDINATION WITH SERVICES ENGINEER'S IS REQUIRED.
- SITE TESTING TO BE UNDERTAKEN.

PRE-RELEASE - WORK IN PROGRESS

3.3 Expandable School Layouts



HS1000 Expandable High School 1000 student 3 Storey



X-HS 1000_3 **TS** **21** STUDENTS
 48 +3 SLU 1008

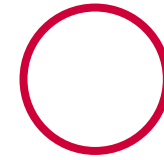
- LEGEND**
- G GENERAL LEARNING SPACE
 - S SPECIALIST TEACHING SPACE
 - W WORKSHOP / PRACTICAL LAB - NOT INCLUDED IN TS COUNT.
 - LC LEARNING COMMON (INTERNAL)
 - POTENTIAL ALU TEACHING SPACE LOCATION DEPENDING ON SCHOOL REQUIREMENT.
 - IDEAL FUNCTIONAL RELATIONSHIPS CONNECTED VIA CORRIDOR LINK.
 - MPR FUTURE MULTIPURPOSE ROOM

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PRE-RELEASE - WORK IN PROGRESS

3.3 Expandable School Layouts



HS1500 Expandable High School 1500 student 3 Storey



X-HS 1500_3.4

TS 20 STUDENTS
77 +3 SLU 1540

LEGEND

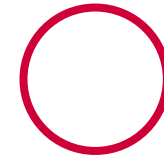
- G GENERAL LEARNING SPACE
- S SPECIALIST TEACHING SPACE
- W WORKSHOP / PRACTICAL LAB - NOT INCLUDED IN TS COUNT.
- LC LEARNING COMMON (INTERNAL)
- POTENTIAL ALU TEACHING SPACE LOCATION DEPENDING ON SCHOOL REQUIREMENT.
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- MPR FUTURE MULTIPURPOSE ROOM

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PRE-RELEASE - WORK IN PROGRESS

3.3 Expandable School Layouts



HS2000 Expandable High School 2000 student 3 Storey



X-HS 2000_3.4

TS 20 STUDENTS
100 +7 SLU 2000

LEGEND

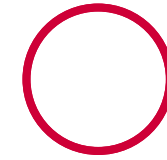
- G GENERAL LEARNING SPACE
- S SPECIALIST TEACHING SPACE
- W WORKSHOP / PRACTICAL LAB - NOT INCLUDED IN TS COUNT.
- LC LEARNING COMMON (INTERNAL)
- POTENTIAL ALU TEACHING SPACE LOCATION DEPENDING ON SCHOOL REQUIREMENT.
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- FUTURE MULTIPURPOSE ROOM

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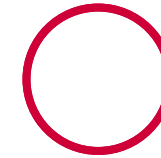
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3.5 Hall Layouts



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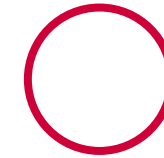
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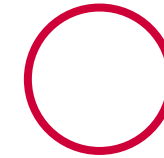


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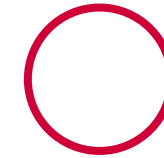
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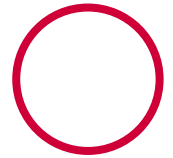


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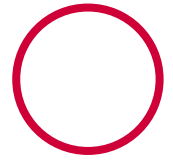
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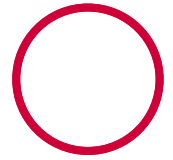
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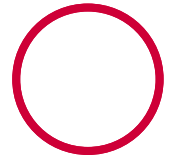
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