

UNIVERSITY OF WASHINGTON BOTHELL

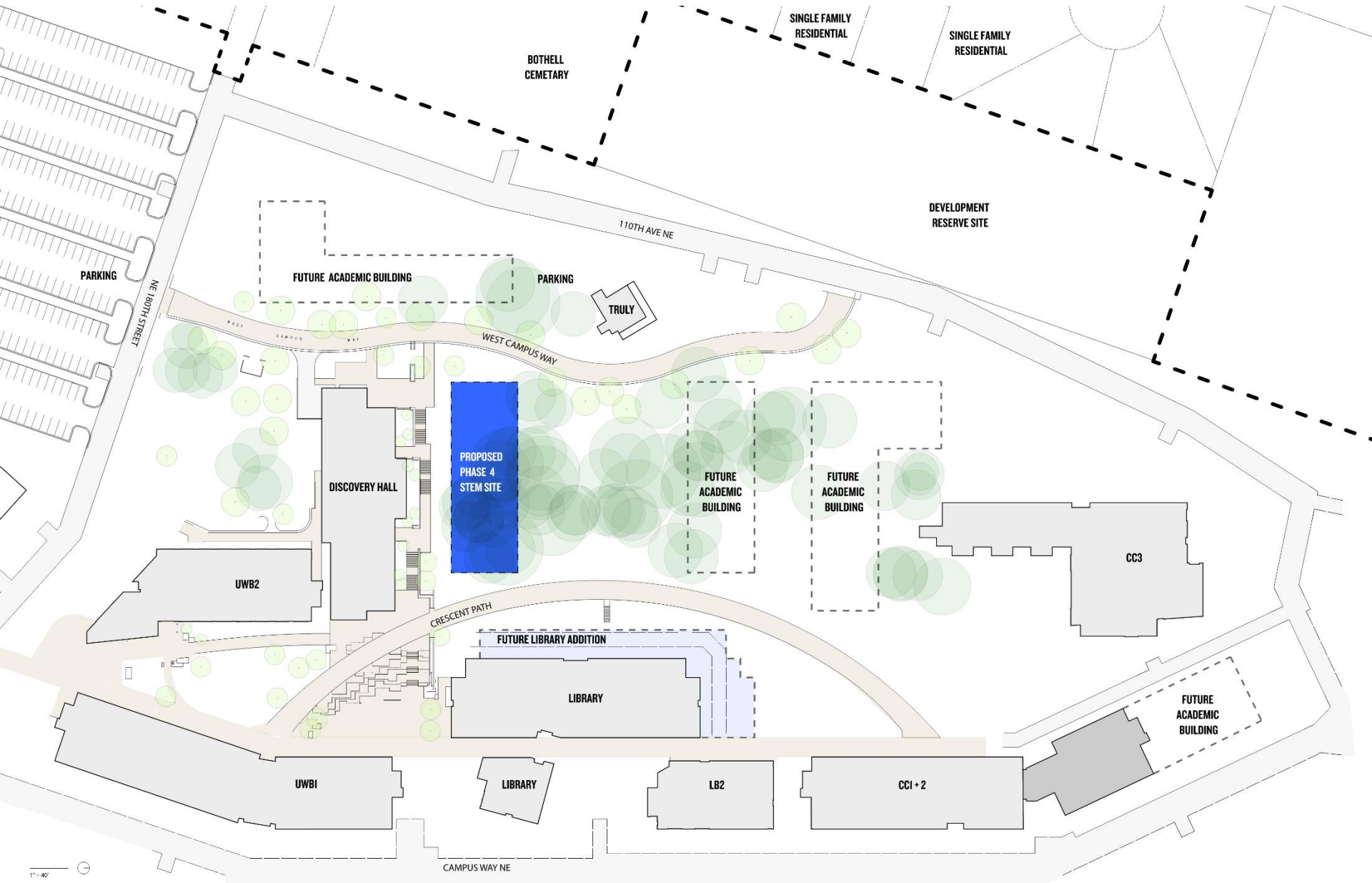
phase 4 PREDESIGN

Architecture Commission June 17, 2016



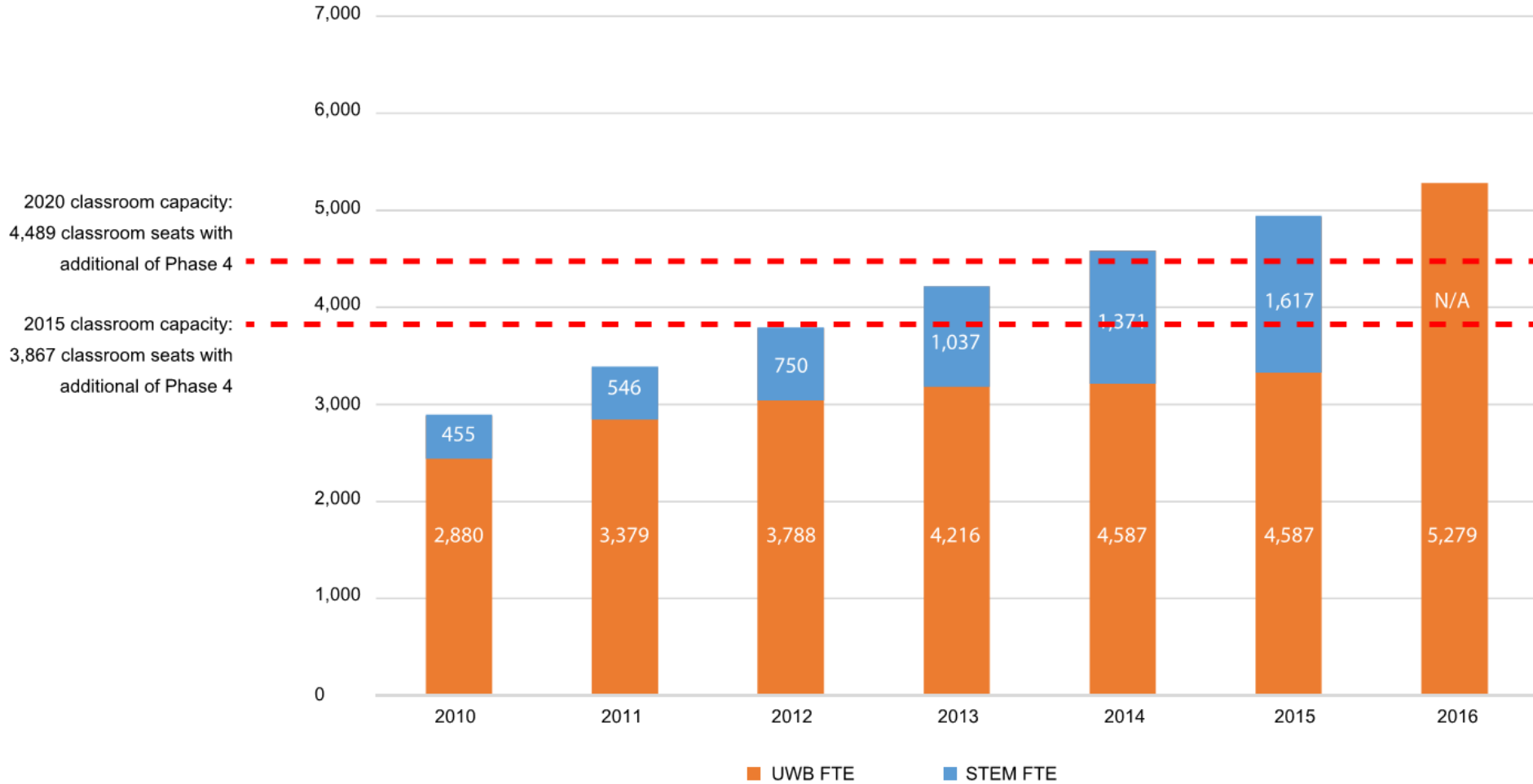
CONTEXT

SHARED CAMPUS



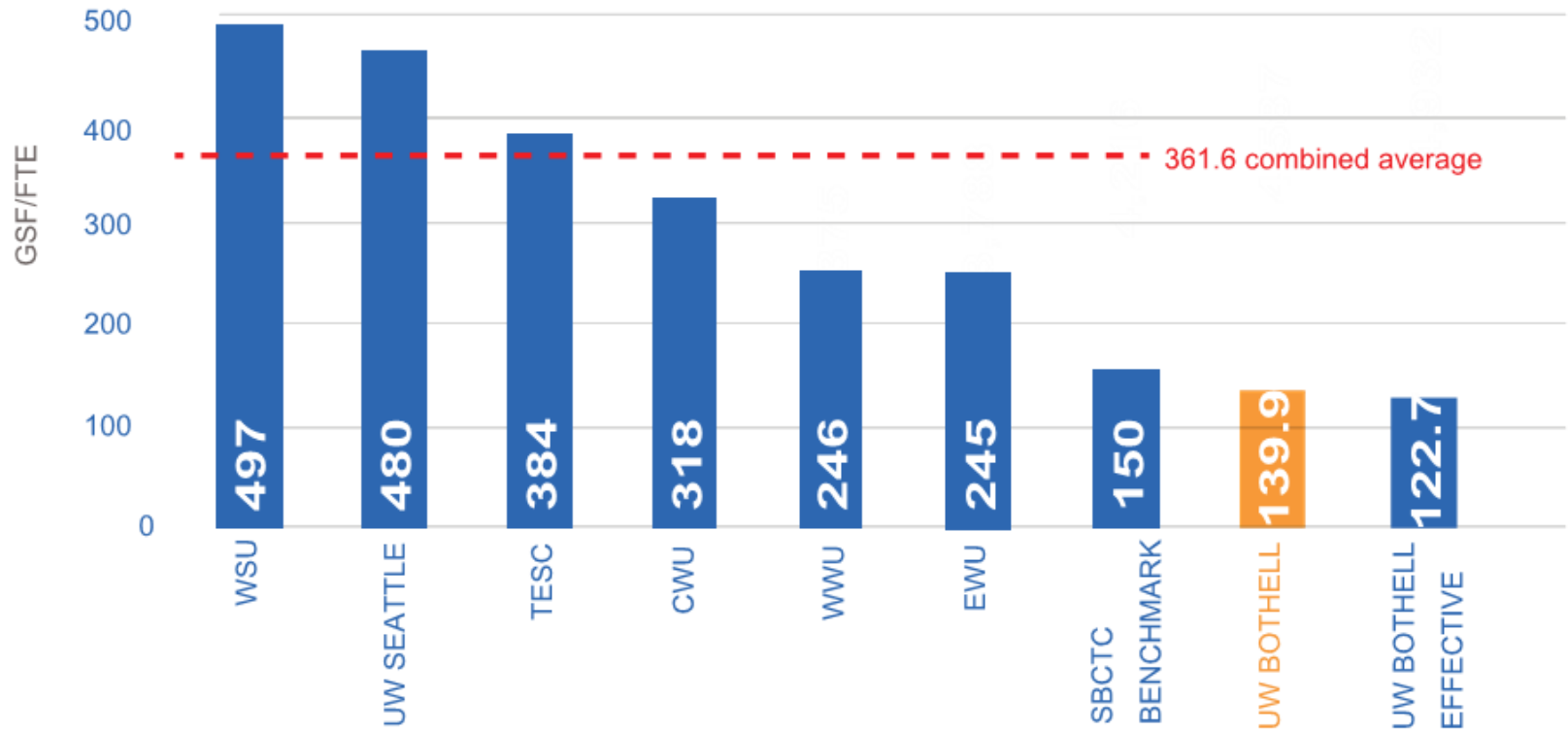
EXPONENTIAL GROWTH

**UW Bothell Growth
and Classroom Seat Capacity**



CAPACITY CONCERNS

Peer Institution Space Per FTE



PROBLEM STATEMENT

**CONTRIBUTE TO MEETING THE FOLLOWING GROWTH
DEMANDS PROJECTED BY 2020.**

- **ACCOMODATE 1,000 NEW FULL TIME EQUIVELENT (FTE) STUDENTS IN THE SCHOOL OF STEM.**
- **INCREASE GRADUATE IN THE SCHOOL OF STEM BY 500 FTE, OF WHICH 300 FTE WILL BE ENGINEERING AND COMPUTER SCIENCE MAJORS.**

ALTERNATIVES

PROJECT ALTERNATIVES

1

**NO
BUILD**

2

**LEASE
SPACE**

3

ACQUISITION

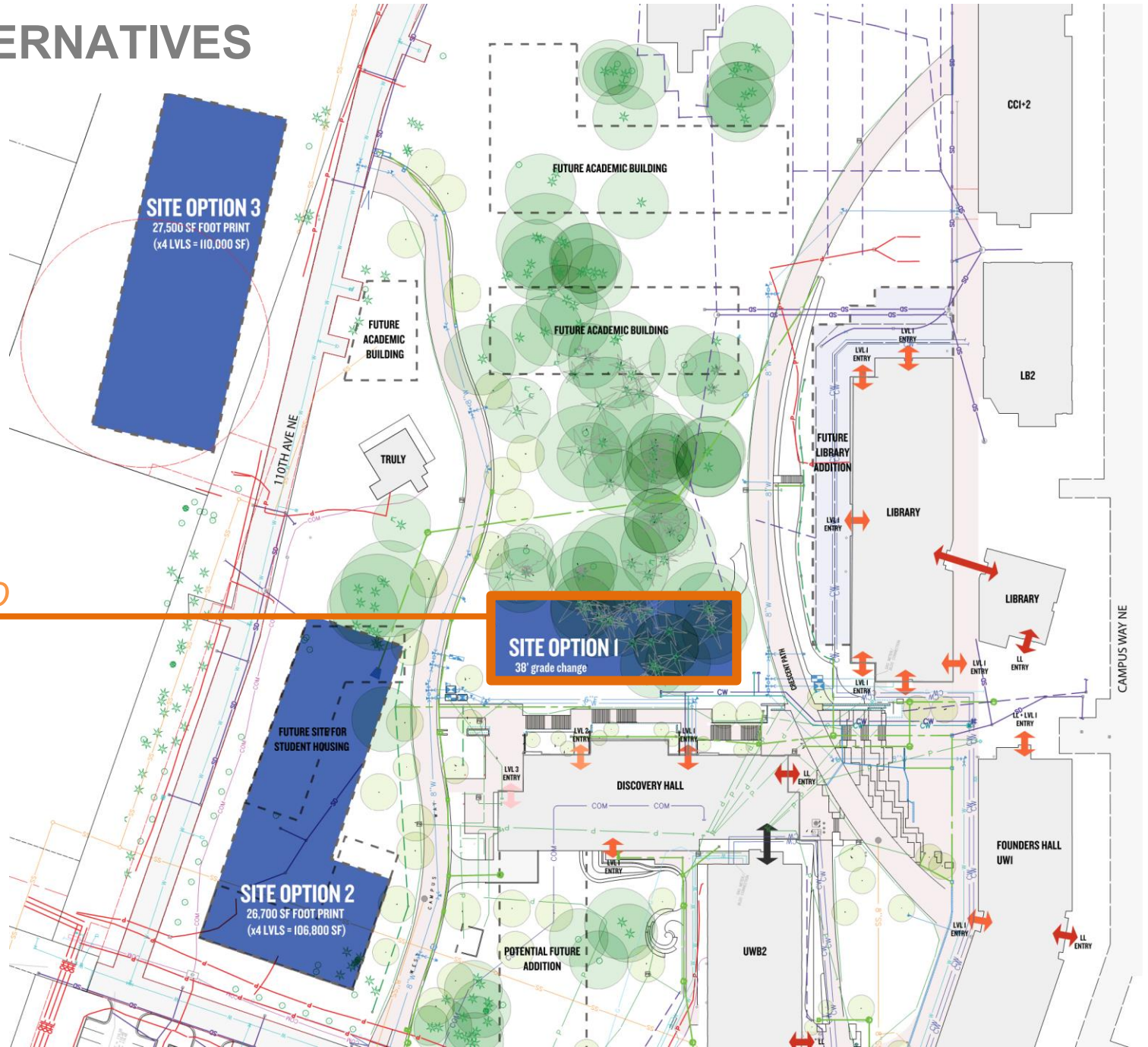
4

**NEW
CONSTRUCTION**

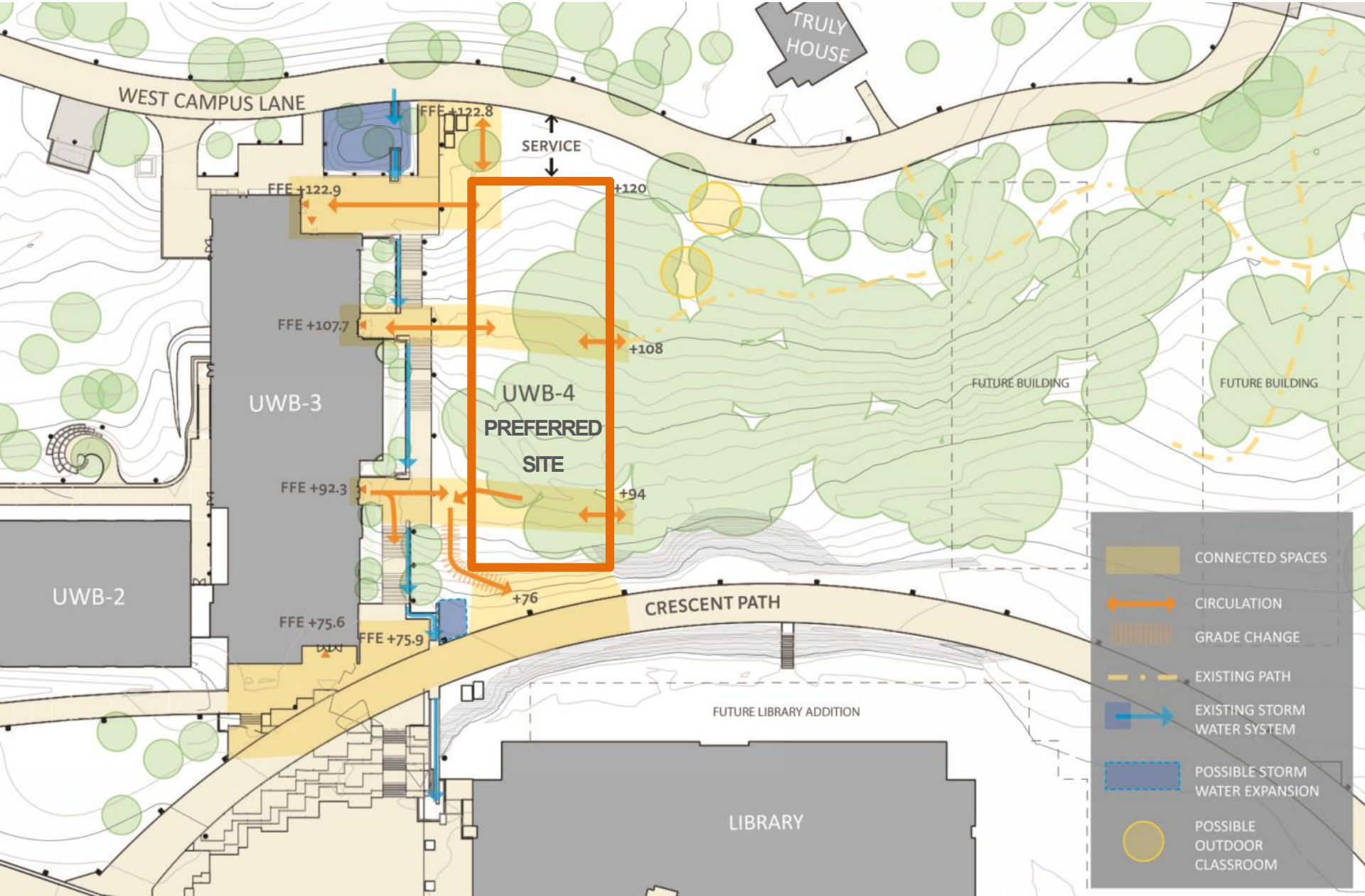
PREFERRED

SITE ALTERNATIVES

PREFERRED



SITE



- CONNECTED SPACES
- CIRCULATION
- GRADE CHANGE
- EXISTING PATH
- EXISTING STORM WATER SYSTEM
- POSSIBLE STORM WATER EXPANSION
- POSSIBLE OUTDOOR CLASSROOM

SITE + SUSTAINABILITY PRIORITIES

Achieve **LEED Gold** using energy-efficient mechanical and electrical systems, energy and resource-efficient material and envelope strategies

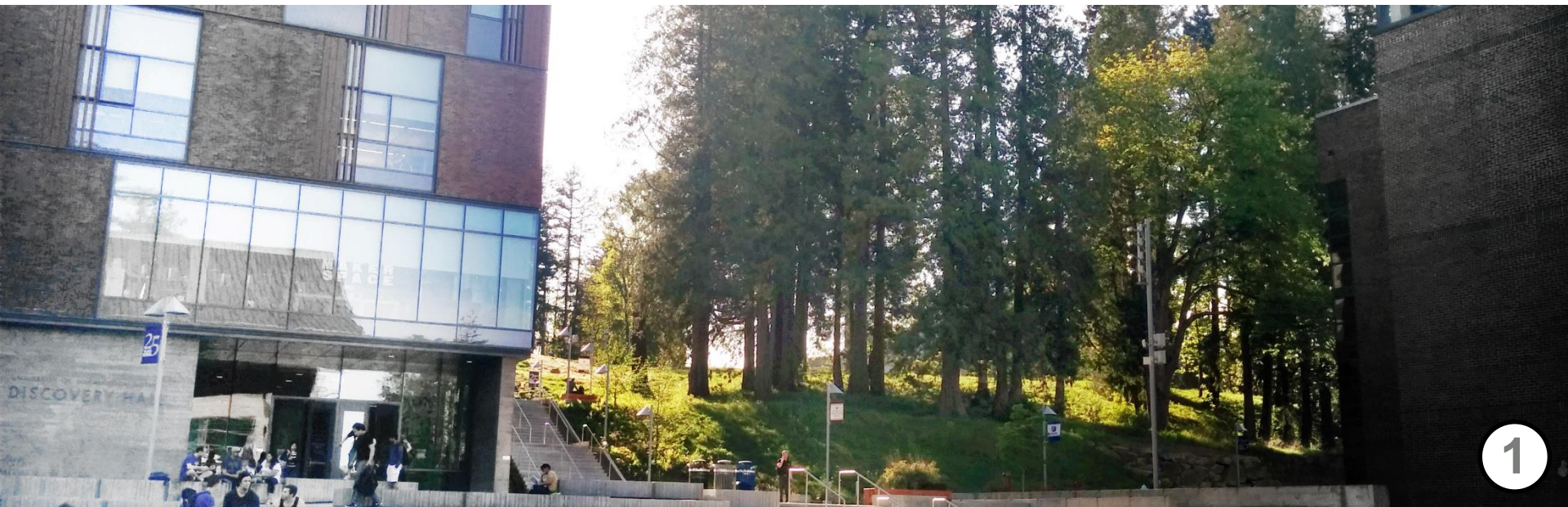
Preserve **existing trees** where possible and incorporate felled trees in a meaningful way

Develop **landscape and building** to work together, share systems, and complement each other spatially + functionally

Incorporate **building materials** that reduce negative environmental impact of the project

BENCHMARKING

BENCHMARKING PROCESS



**UW Bothell
Discovery Hall**

**WSU NPSE
University Center**

**Bellevue College
Health Sciences**

Uniformat Category	MACC ESTIMATE	MACC ESTIMATE	MACC ESTIMATE	LOW	AVERAGE	HIGH	TARGET VALUE BUDGET
	STEM BUILDING 1 (SLOPED SITE)	STEM BUILDING 2 (FLAT SITE)	STEM BUILDING 3 (FLAT SITE)				PHASE 4 STEM BUILDING (SLOPED SITE)
Foundations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Basement Construction	\$ 14.82	\$ -	\$ -	\$ -	\$ 4.94	\$ 14.82	\$ 14.82
Superstructure	\$ 91.74	\$ 73.80	\$ 61.26	\$ 61.26	\$ 75.60	\$ 91.74	\$ 75.00
Exterior Enclosure	\$ 76.47	\$ 66.58	\$ 56.05	\$ 56.05	\$ 66.37	\$ 76.47	\$ 66.37
Roofing	\$ 6.39	\$ 7.04	\$ 5.93	\$ 5.93	\$ 6.45	\$ 7.04	\$ 6.39
Interior construction	\$ 41.34	\$ 15.16	\$ 10.07	\$ 10.07	\$ 22.19	\$ 41.34	\$ 26.00
Stairs	\$ 7.98	\$ 1.87	\$ 0.25	\$ 0.25	\$ 3.37	\$ 7.98	\$ 5.00
Interior finishes	\$ 19.87	\$ 21.61	\$ 29.99	\$ 19.87	\$ 23.82	\$ 29.99	\$ 26.00
Conveying	\$ 8.39	\$ 5.27	\$ 4.40	\$ 4.40	\$ 6.02	\$ 8.39	\$ 4.00
Plumbing	\$ 29.58	\$ 11.62	\$ 10.24	\$ 10.24	\$ 17.15	\$ 29.58	\$ 21.00
HVAC	\$ 101.28	\$ 47.67	\$ 48.61	\$ 47.67	\$ 65.85	\$ 101.28	\$ 81.00
Fire protection	\$ 5.67	\$ 5.11	\$ 3.37	\$ 3.37	\$ 4.72	\$ 5.67	\$ 4.72
Electrical	\$ 77.84	\$ 49.68	\$ 61.80	\$ 49.68	\$ 63.11	\$ 77.84	\$ 60.00
Equipment	\$ 20.13	\$ 10.28	\$ 11.41	\$ 10.28	\$ 13.94	\$ 20.13	\$ 28.00
Site prep	\$ 14.13	\$ 5.68	\$ 5.57	\$ 5.57	\$ 8.46	\$ 14.13	\$ 14.00
Site improvements	\$ 44.52	\$ 11.17	\$ 7.18	\$ 7.18	\$ 20.96	\$ 44.52	\$ 19.97
Site utilities	\$ 22.53	\$ 4.02	\$ 8.89	\$ 4.02	\$ 11.81	\$ 22.53	\$ 11.81
Escalation, per annum							
Midpoint of construction	\$ 116.19	\$ 67.11	\$ 64.81	\$ 58.99	\$ 82.70	\$ 118.34	\$ 93
Subtotal for Direct Subcontract Work	\$ 699	\$ 404	\$ 390	\$ 355	\$ 497	\$ 712	\$ 557
TCC plus Preconstruction Services	\$ 849	\$ 491	\$ 474	\$ 431	\$ 605	\$ 865	\$ 676
<i>1.42 multiplier to capture consultant and project management fees, contingencies to get to total project cost below</i>							
Total Project Cost	\$ 1,205	\$ 696	\$ 672	\$ 612	\$ 857	\$ 1,227	\$ 959

PROGRAM DEVELOPMENT

PROGRAM PRIORITIES

Provide **flexible** spaces that can accommodate growth + change in systems, pedagogy, and purpose

Reinforce **cross-disciplinary** opportunities between STEM divisions and other UW Bothell schools

Provide variety of spaces for **informal and formal learning**

Support **diverse** student body in all space types

INNOVATE



INTERACT



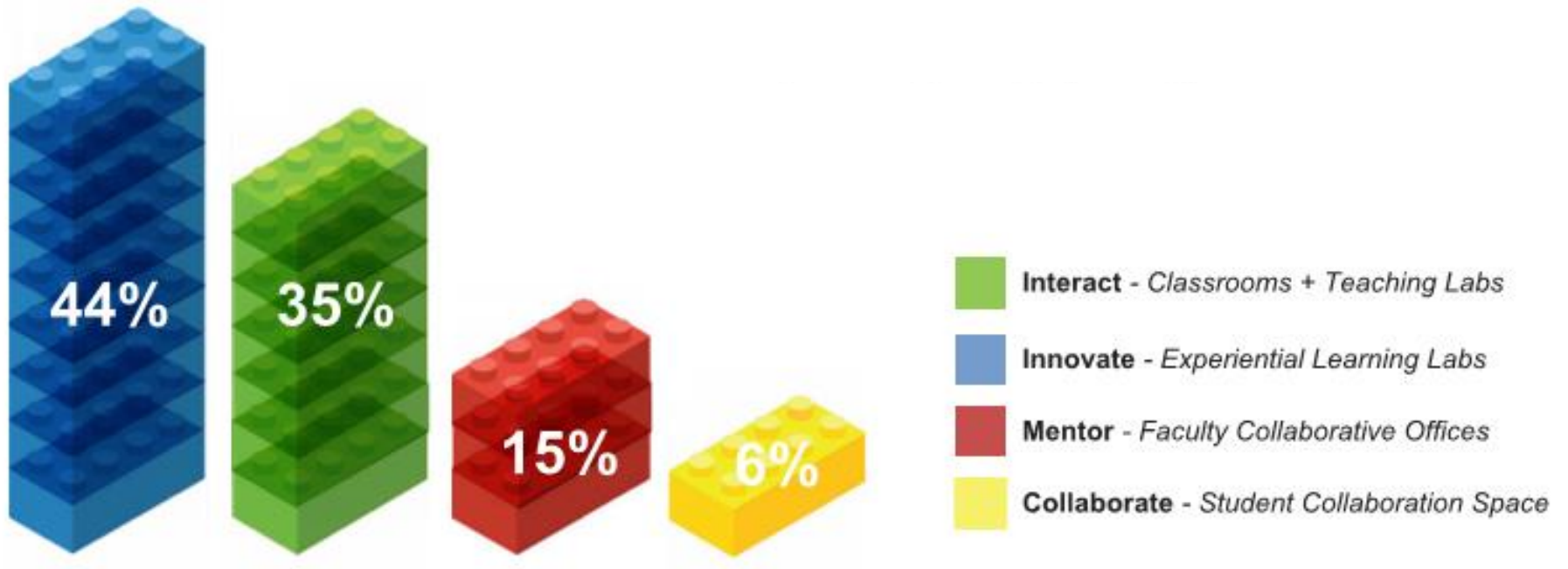
MENTOR



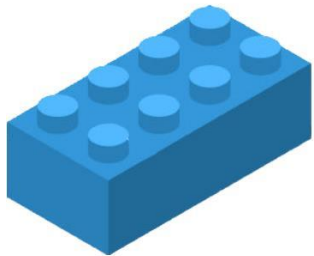
COLLABORATE



PROGRAM SUMMARY



PROGRAM SUMMARY



INNOVATE

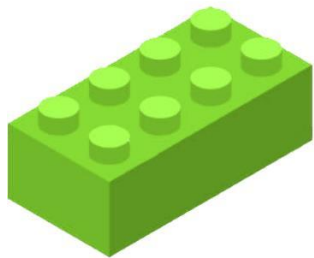
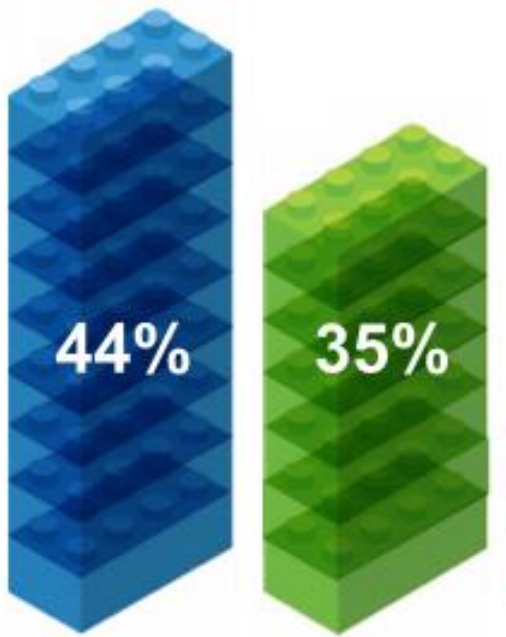
SPACE = 33,508 GSF

FTE SUPPORTED = 435 CSS + M/E

COST = \$1,444/GSF

TOTAL = \$39,677,583

PROGRAM SUMMARY



INTERACT

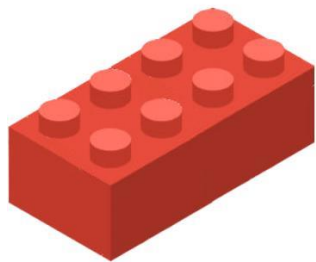
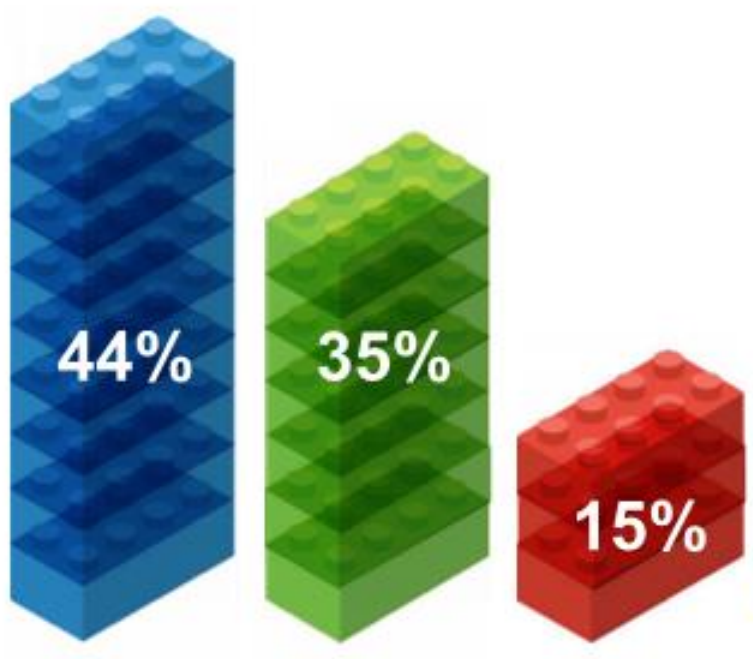
SPACE = 26,613 GSF

FTE SUPPORTED = 1,009 school of STEM

COST = \$817/GSF

TOTAL = \$21,476,053

PROGRAM SUMMARY



MENTOR

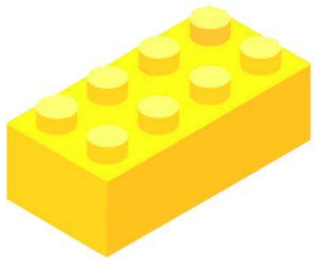
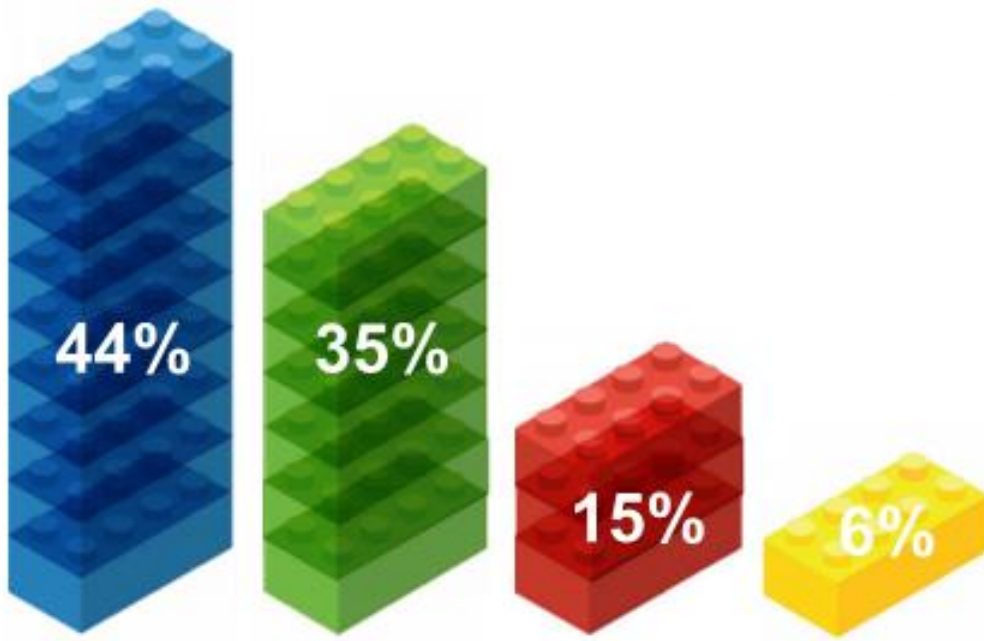
SPACE = 11,228 GSF

FTE SUPPORTED = 1,479 CSS + M/E

COST = \$827/GSF

TOTAL = \$9,572,910

PROGRAM SUMMARY



COLLABORATE

SPACE = 5,319 GSF

FTE SUPPORTED = 591 school of STEM

COST = \$787/GSF

TOTAL = \$4,185,856

PROGRAM SUMMARY

UW BOTHELL - PHASE 4 - PREFERRED SCENARIO						
Description	% of overall program	% of overall cost	TOTAL FTE SUPPORTED BY TYPE OF SPACE	TOTAL GSF	PROJECT COST (\$/GSF) FOR TYPE OF SPACE	COST
INTERACT	INTERACT	35%	29%			
	Classrooms + Teaching Labs				26,613	
	INTERACT space subtotal			1,009	26,613	\$ 817 \$ 21,476,053
INNOVATE	INNOVATE	44%	53%			
	Experiential Learning Labs - Small Group				15,875	
	Experiential Learning Labs - Projects				17,633	
INNOVATE spaces subtotal			435	33,508	\$ 1,444 \$ 39,677,583	
MENTOR	MENTOR	15%	13%			
	Collaborative Office - Single Offices				11,040	
	Hoteling / Touchdown Stations				188	
MENTOR spaces subtotal			1,479	11,228	\$ 827 \$ 9,572,910	
COLLABORATE	COLLABORATE	7%	6%			
	Student Collaboration Space				5,319	
	COLLABORATE spaces subtotals			591	5,319	\$ 787 \$ 4,185,856
GSF TOTAL				76,668		
COST TOTAL (2019 funding)					\$	74,912,403

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Architecture Commission June 17, 2016

