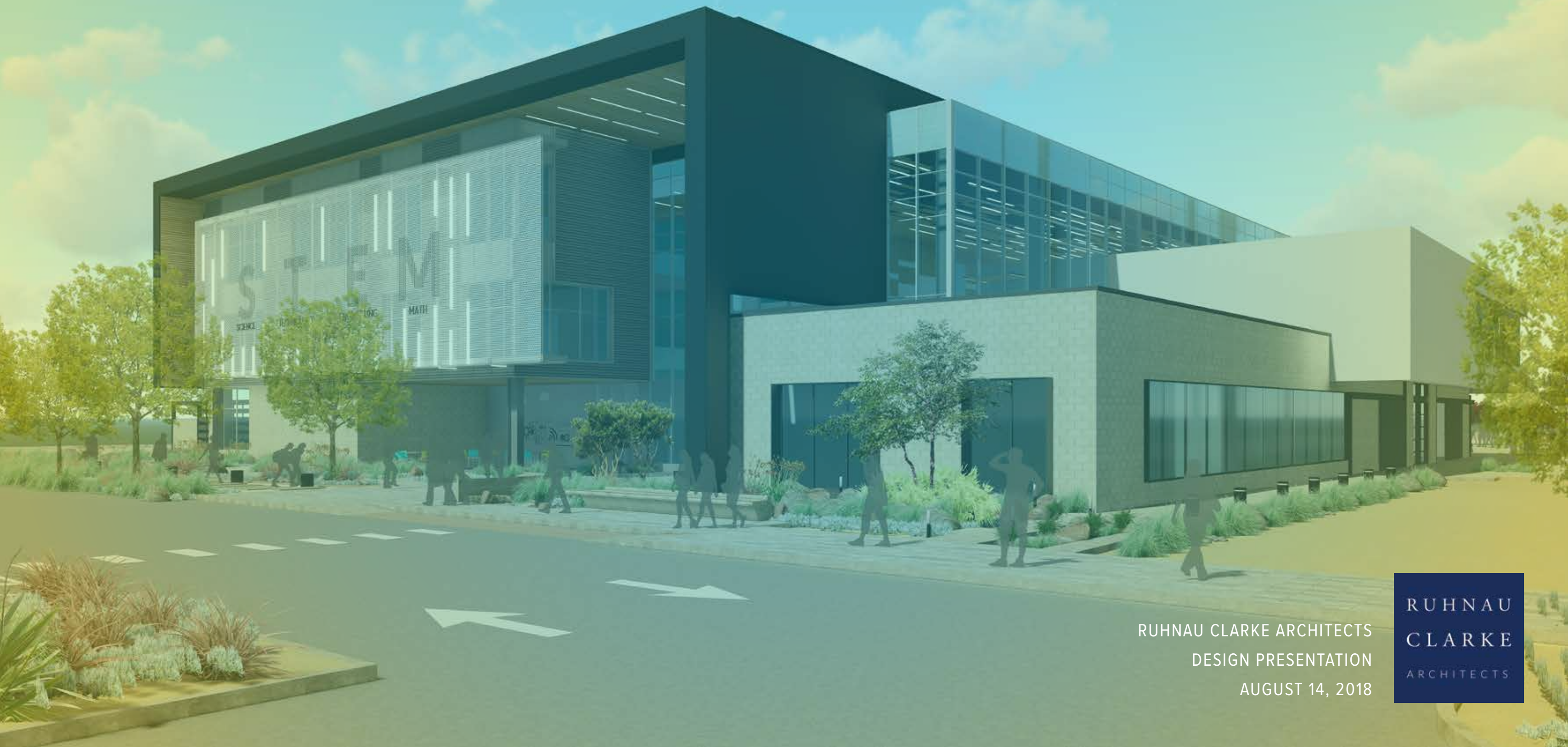


# STEM

High School

Riverside Unified School District



RUHNAU CLARKE ARCHITECTS  
DESIGN PRESENTATION  
AUGUST 14, 2018

RUHNAU  
CLARKE  
ARCHITECTS

# PATHWAYS

4 DISTINCT PATHWAYS INFORM THE DESIGN

Career-focused learning to prepare students for the 21st Century.  
The facility is designed to serve.....



ENGINEERING AND ADVANCED  
MANUFACTURING



BIO-MEDICAL / ALLIED  
HEALTH



ENVIRONMENTAL /  
AGRICULTURAL SCIENCE



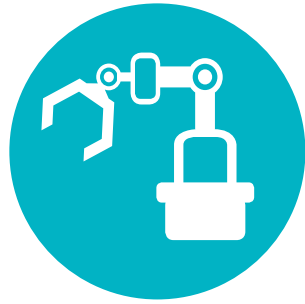
COMPUTER SCIENCE

# DECISIONS



## DIRECTION REQUIRED FROM DISTRICT

- Allocation of students - 800 FT, or 400 FT and 800 PT (impacts transportation, master schedule, lab/CR distribution)
- Approach to parking (student, staff, visitor, neighboring schools?)
- State preference on site access options
- Level of safety and security (fencing/open campus)
- Approval to continue with CD's prior to CEQA approval or have an additional 12 month delay in schedule
- Configuration/size and cost of the facility
- STEAM v. STEM

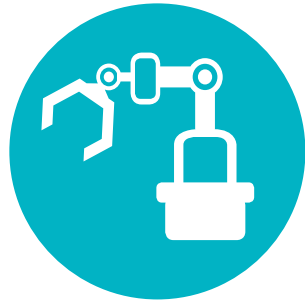


# CONTEXT DIAGRAM



## SITE KEY

- PEDESTRIAN PATH 1
- PEDESTRIAN PATH 2
- PEDESTRIAN PATH 3



# SITE OPTION 1

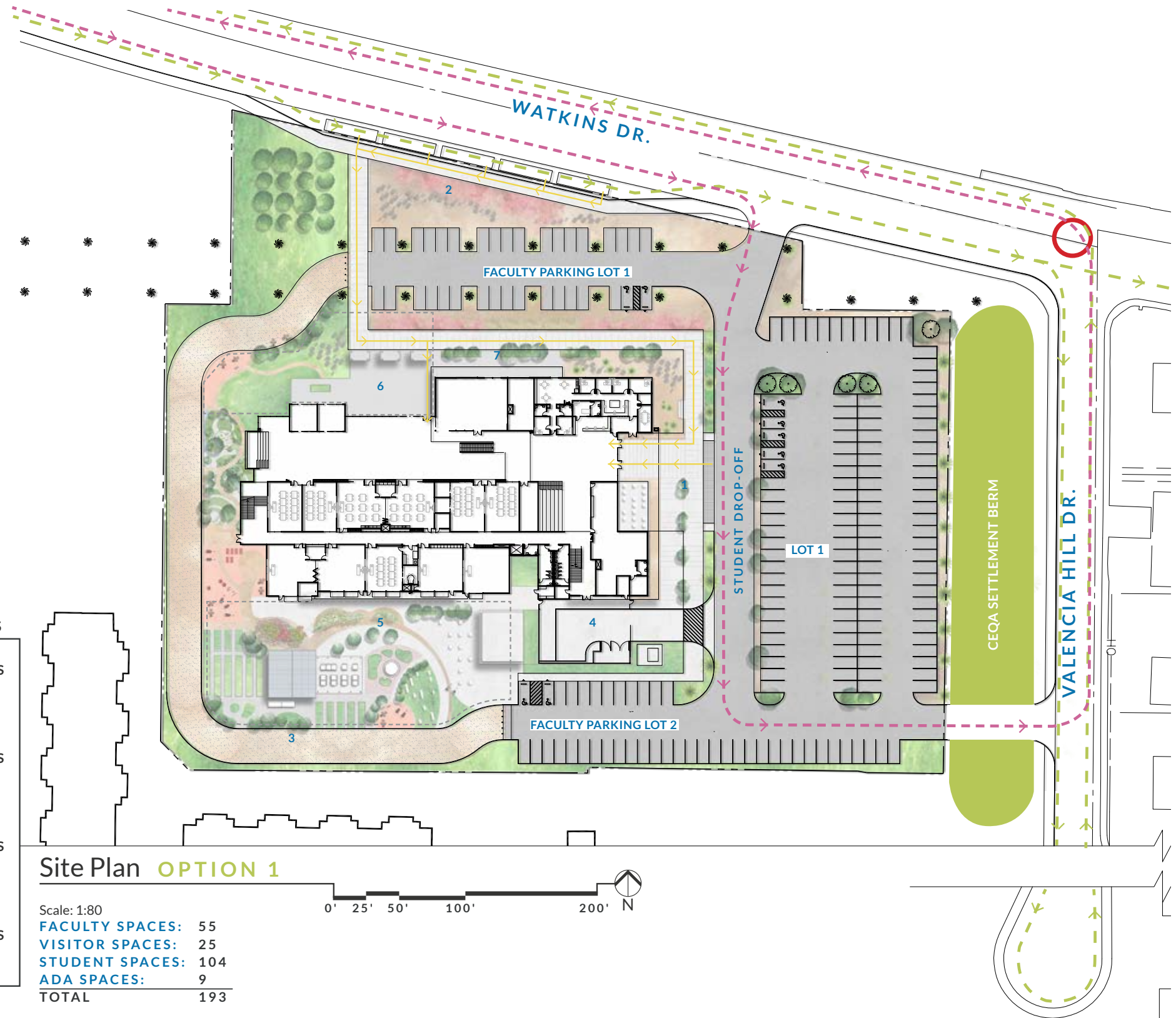
## PROS

- 1 THE BUS DROP-OFF IS LOCATED ON WATKINS DR., ELIMINATING CONGESTION BETWEEN PARENT DROP-OFF TRAFFIC AND BUS TRAFFIC.
- 2 THE PARENT DROP-OFF TRAFFIC IS EFFICIENT WITH MINIMAL CONGESTION IN THE PARKING LOT.
- 3 MOST OF THE FIRE LANE IS DG ALLOWING FOR OPPURTUNITIES FOR FITNESS INTEGRATION AND OUTDOOR LEARNING.
- 4 NO TRAFFIC ADDED TO LINDEN ST.
- 5 A FACULTY PARKING LOT WITH 35 SPACES IS PROVIDED ON THE NORTH SIDE OF THE BUILDING.

## CONS

- 1 ADDITIONAL TRAFFIC ON VALENCIA HILL DR. WILL REQUIRE A NEW TRAFFIC LIGHT AT THE INTERSECTION WITH WATKINS DR.
- 2 ADDITIONAL TRAFFIC ON VALENCIA HILL DR. COULD GET PUSH BACK FROM NEIGHBORS.
- 3 BUS TRAFFIC MERGES WITH PARENT DROP-OFF TRAFFIC AT ENTRANCE TO PARKING LOT.
- 4 BUSES MAY GET DELAYED BY PARENT TRAFFIC.

SITE KEY		PARKING ANALYSIS	
	PARENT DROP-OFF CIRCULATION	<b>LOT 1:</b>	
	BUS DROP-OFF CIRCULATION	129 PUBLIC SPACES	
	STUDENT / PEDESTRIAN CIRCULATION	5 ADA	
	POSSIBLE TRAFFIC LIGHT LOCATION	136 TOTAL	
1	PARENT DROP-OFF LOCATION	<b>FACULTY LOT 1:</b>	
2	BUS DROP-OFF LOCATION	33 PUBLIC SPACES	
3	FIRE LANE	2 ADA	
4	SERVICE YARD	35 TOTAL	
5	AGRICULTURE GARDENS	<b>FACULTY LOT 2:</b>	
6	OUTDOOR TESTING SPACE	22 PUBLIC SPACES	
7	MATERIAL DROP-OFF	2 ADA	
		24 TOTAL	
		<b>TOTAL</b>	
		184 PUBLIC SPACES	
		9 ADA	
		193 TOTAL	





# SITE OPTION 2

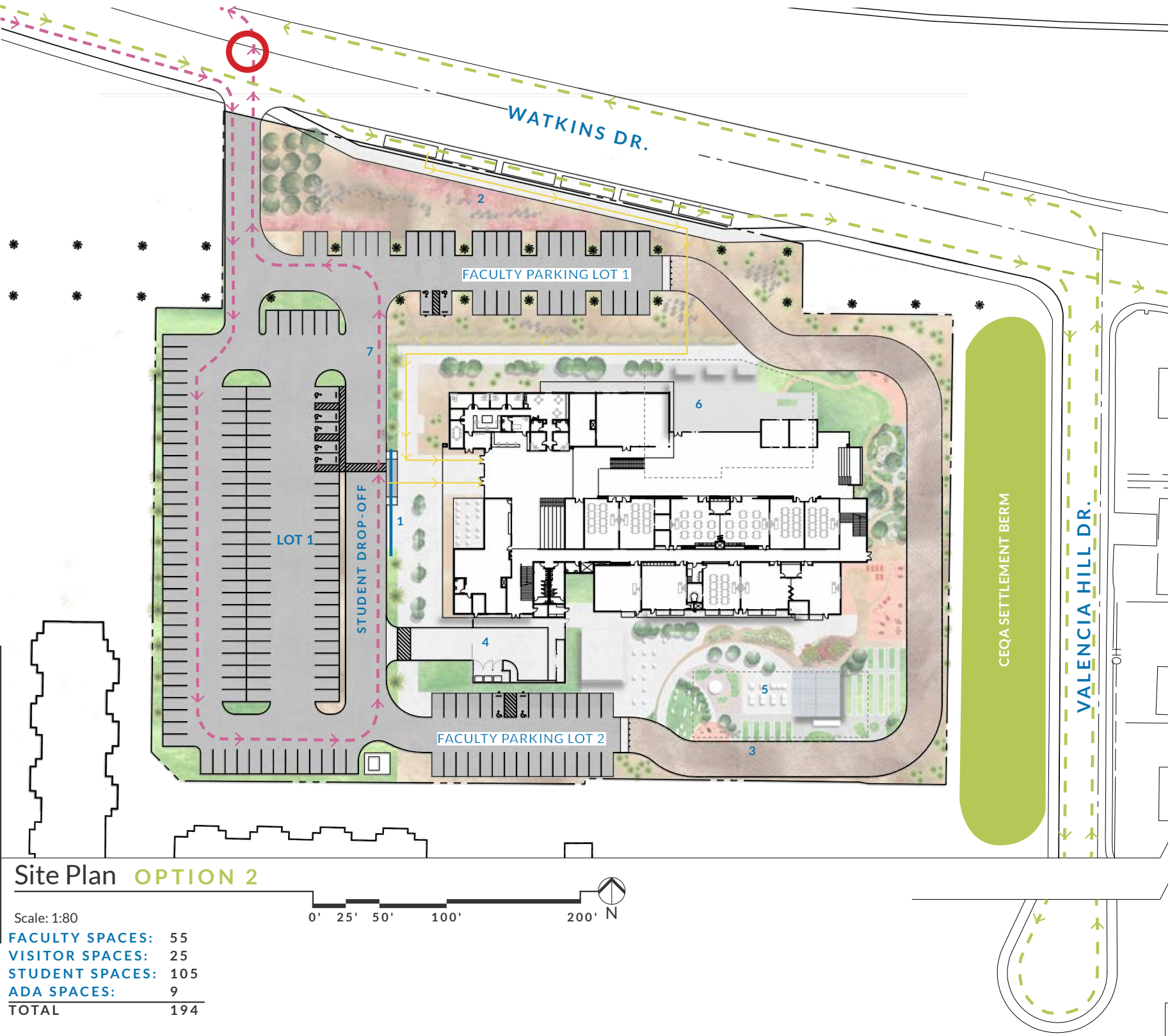
**PROS**

- 1 A FACULTY PARKING LOT WITH 36 SPACES IS PROVIDED ON THE NORTH SIDE OF THE BUILDING.
- 2 AN ADDITIONAL PARKING LOT WITH 29 SPACES IS PROVIDED ON THE SOUTH SIDE OF THE BUILDING.
- 3 THE BUS DROP-OFF IS LOCATED ON WATKINS, ELIMINATING THE ON-SITE CONGESTION BETWEEN PARENT DROP-OFF TRAFFIC AND BUS TRAFFIC.
- 4 NO SIGNIFICANT TRAFFIC INCREASE ON VALENCIA HILL DR.
- 5 MOST OF THE FIRE LANE IS DG ALLOWING FOR OPPURTUNITIES FOR FITNESS INTEGRATION AND OUTDOOR LEARNING.

**CONS**

- 1 AFTER PARENTS DROP-OFF STUDENTS, THEY MERGE WITH BUS TRAFFIC ONTO WATKINS.
- 2 ONE TRAFFIC LIGHT MAY BE REQUIRED ON WATKINS DR.
- 3 BUS DROP-OFF TIMES HAVE TO BE STAGGERED.

SITE KEY		PARKING ANALYSIS	
	PARENT DROP-OFF CIRCULATION	<b>LOT 1:</b>	
	BUS DROP-OFF CIRCULATION	124	PUBLIC SPACES
	STUDENT / PEDESTRIAN CIRCULATION	5	ADA
	POSSIBLE TRAFFIC LIGHT LOCATION	129	TOTAL
1	PARENT DROP-OFF LOCATION	<b>FACULTY LOT 1:</b>	
2	BUS DROP-OFF LOCATION	34	PUBLIC SPACES
3	FIRE LANE	2	ADA
4	SERVICE YARD	36	TOTAL
5	AGRICULTURE GARDENS	<b>FACULTY LOT 2:</b>	
6	OUTDOOR TESTING SPACE	27	PARKING SPACES
7	MATERIAL DROP-OFF	2	ADA
		29	TOTAL
		<b>TOTAL</b>	
		185	PUBLIC SPACES
		9	ADA
		194	





# SITE OPTION 3

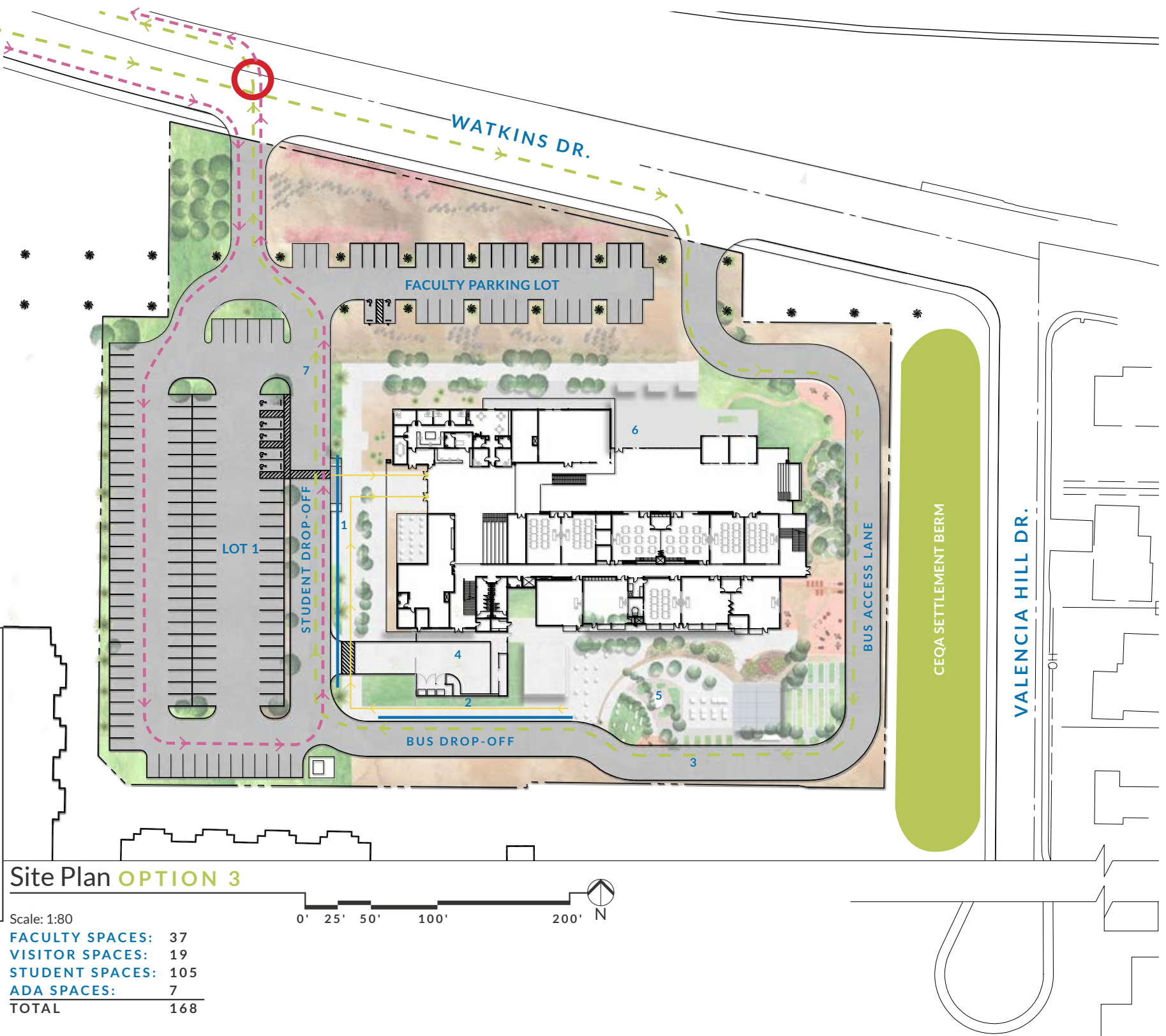
## PROS

- 1 ALL VEHICULAR ENTRANCES ARE FROM WATKINS DR.
- 2 FACULTY PARKING LOT WITH 39 SPACES IS PROVIDED ON THE NORTH SIDE OF THE BUILDING.
- 3 ALTHOUGH THE BUS AND PARENT VEHICLE ENTRANCES ARE ON WATKINS, THEY ARE SEPARATED BY 275 FT.
- 4 THE PARENT DROP-OFF (1) IS SEPARATED FROM THE BUS DROP-OFF (2) LOCATION TO AVOID CONGESTION.
- 5 NO TRAFFIC INCREASE ON VALENCIA HILL DR.

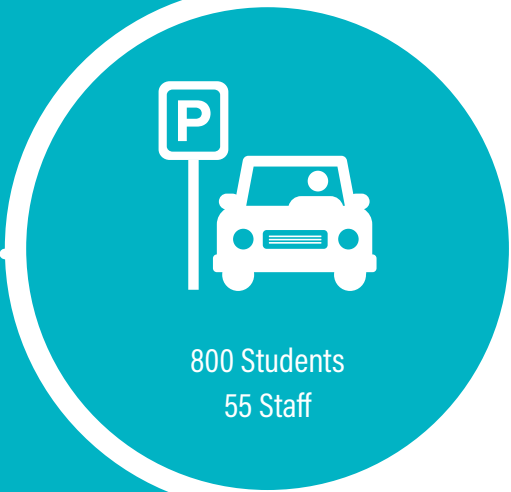
## CONS

- 1 ALL BUSES MERGE WITH PARENT DROP-OFF TRAFFIC AT SOUTH WEST CORNER. THIS COULD BE A SOURCE OF TRAFFIC CONGESTION.
- 2 ONE OR TWO TRAFFIC LIGHTS MAY BE REQUIRED ON WATKINS DR.
- 3 THE ENTIRE FIRE LANE IS PAVED RATHER THAN A DG PATH FOR OUTDOOR FITNESS AND LEARNING.
- 4 PARENT TRAFFIC CAN BLOCK BUSES FROM DROP-OFF.

SITE KEY		PARKING ANALYSIS	
	PARENT DROP-OFF CIRCULATION	<b>LOT 1:</b>	
	BUS DROP-OFF CIRCULATION	124 PUBLIC SPACES	
	STUDENT / PEDESTRIAN CIRCULATION	5 ADA	
	POSSIBLE TRAFFIC LIGHT LOCATION	129 TOTAL	
1	PARENT DROP-OFF LOCATION	<b>FACULTY PARKING LOT:</b>	
2	BUS DROP-OFF LOCATION	37 PUBLIC SPACES	
3	FIRE LANE	2 ADA	
4	SERVICE YARD	39 TOTAL	
5	AGRICULTURE GARDENS	<b>TOTAL</b>	
6	OUTDOOR TESTING SPACE	161 PUBLIC SPACES	
7	MATERIAL DROP-OFF	7 ADA	
		168 TOTAL	



# PARKING



## OPTIONS (Direction Required from District)



- Limited/Lottery Student Parking
- RTA Bus Stop
- District Bussing (PT, FT) & Cost
- Shared Parking Agreement for nights/weekends
- Neighborhood Permits
- Off-Site Event Shuttles
- Build Parking Structure
- Share Parking Structure
- Surplus Parking @ Highland Elementary School, University Heights Middle School or North High School during events



# PARKING CASE STUDY: ORANGE COUNTY SCHOOL OF THE ARTS



- 1 STUDENT DROP-OFF
- 2 SECURITY FENCE
- 3 ENTRY COURTYARD
- 4 PUBLIC BUS STOP
- 5 PUBLIC ENTRANCE

-  OCSA BUILDING
-  STUDENT DROP-OFF

## OCSA STATS

- 60,000 Square Feet
- (8) Science Classrooms
- (2) Chemistry Labs
- (3) Rehearsal Halls
- (16) Practice Rooms
- (14) Dance Studios
- Central Courtyard
- (0) Parking Spaces



PUBLIC ENTRANCE: JSFA ARCHITECTS



CENTRAL COURTYARD: ORANGE COUNTY REGISTER



EAST FACADE: JSFA ARCHITECTS

# BUILDING OPTION 1

**\$49.9**  
MILLION

## HIGHLIGHTS

- 2 story
- 23 classrooms, 4 pathways\*
- Loading at 36 students/classroom (828 student capacity @ one time)\*
- Decreased number of laboratories and program spaces to reduce cost
- Elimination of rooftop project area
- Outdoor, non-conditioned discovery lab
- Overall project cost \$49.9M

\*Requires teachers to move out of classrooms during free period (if any).  
All classrooms are occupied during all periods.

# OPTION 1 - COST



OPTION 1	
Building	\$26,500,000
LEED Silver Requirements	\$1,350,000
Site Improvements	\$3,800,000
Utilities	\$950,000
Design Contingency	\$3,500,000
Total Construction Cost	\$36,100,000
Escalation	\$2,888,000
Total Construction	\$38,988,000
Soft Costs	
CM Fees	\$1,805,000
GC	\$1,805,000
DSA Fees	\$438,180
CDE Fees	\$32,000
A/E Fees	\$2,234,000
Tests and Inspection	\$750,000
FF&E	\$2,000,000
Survey	\$35,000
CEQA	\$150,000
Geotechnical	\$40,000
Legal	\$200,000
UCR Fees	\$300,000
Contingency	\$1,200,000
Total Soft Costs	\$10,989,180
Total Project Cost	\$49,977,180

# FIRST FLOOR

\$49M

TOTAL LABS: 14  
TOTAL CLASSROOMS: 8  
FITNESS LAB 1  
TOTAL: 23\*

TOTAL LOADING @ 36 STUDENTS 828 STUDENTS  
PER TEACHING STATION

1ST FLOOR 35,375 SF  
2ND FLOOR 30,750 SF  
TOTAL AREA: 66,125 SF

\*REQUIRES EVERY CLASSROOM BE LOADED FOR EVERY PERIOD



# SECOND FLOOR

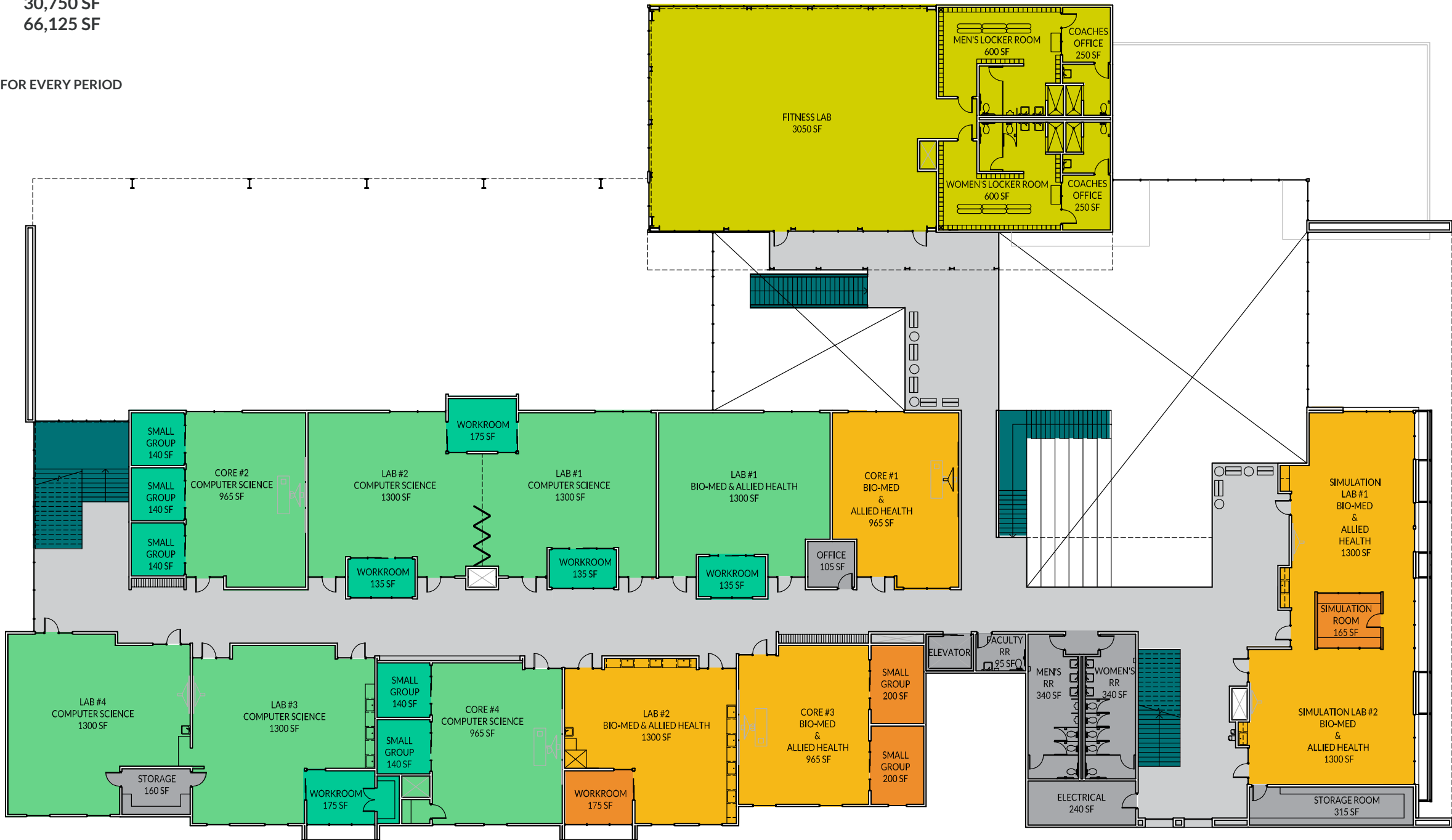
\$49M

TOTAL LABS: 14  
TOTAL CLASSROOMS: 8  
FITNESS LAB 1  
TOTAL: 23\*

TOTAL LOADING @ 36 STUDENTS 828 STUDENTS  
PER TEACHING STATION

1ST FLOOR 35,375 SF  
2ND FLOOR 30,750 SF  
TOTAL AREA: 66,125 SF

\*REQUIRES EVERY CLASSROOM BE LOADED FOR EVERY PERIOD



# BUILDING OPTION 2

**\$54.4**  
MILLION

## HIGHLIGHTS

- 2 story
- 23 classrooms, 4 pathways\*
- Loading at 36 students/classroom (828 student capacity @ one time)
- Conditioned discovery lab
- Inclusion of test labs and lecture #2
- Decreased number of laboratories and program spaces to reduce cost
- Elimination of rooftop project area
- Overall project cost \$54.4M

\*Requires teachers to move out of classrooms during free period (if any).  
All classrooms are occupied during all periods.

# OPTION 2 - COST



Option 2	
Building	\$29,800,000
LEED Silver Requirements	\$1,490,000
Site Improvements	\$3,800,000
Utilities	\$950,000
Design Contingency	\$3,500,000
Total Construction Cost	\$39,540,000
Escalation	\$3,163,200
Total Construction	\$42,703,200
Soft Costs	
CM Fees	\$2,050,000
GC	\$2,050,000
DSA Fees	\$513,000
CDE Fees	\$34,000
A/E Fees	\$2,472,660
Tests and Inspection	\$750,000
FF&E	\$2,000,000
Survey	\$35,000
CEQA	\$150,000
Geotechnical	\$40,000
Legal	\$200,000
UCR Fees	\$300,000
Contingency	\$1,200,000
Total Soft Costs	\$11,794,660
Total Project Cost	\$54,497,860

# FIRST FLOOR

**\$54M**

TOTAL LABS:	14
TOTAL CLASSROOMS:	8
FITNESS LAB	1
TOTAL:	23*

**TOTAL LOADING @ 36 STUDENTS PER TEACHING STATION**      828 STUDENTS

1ST FLOOR:	43,125 SF
2ND FLOOR:	28,675 SF
TOTAL:	71,800 SF

**\*REQUIRES EVERY CLASSROOM BE LOADED FOR EVERY PERIOD**



# SECOND FLOOR

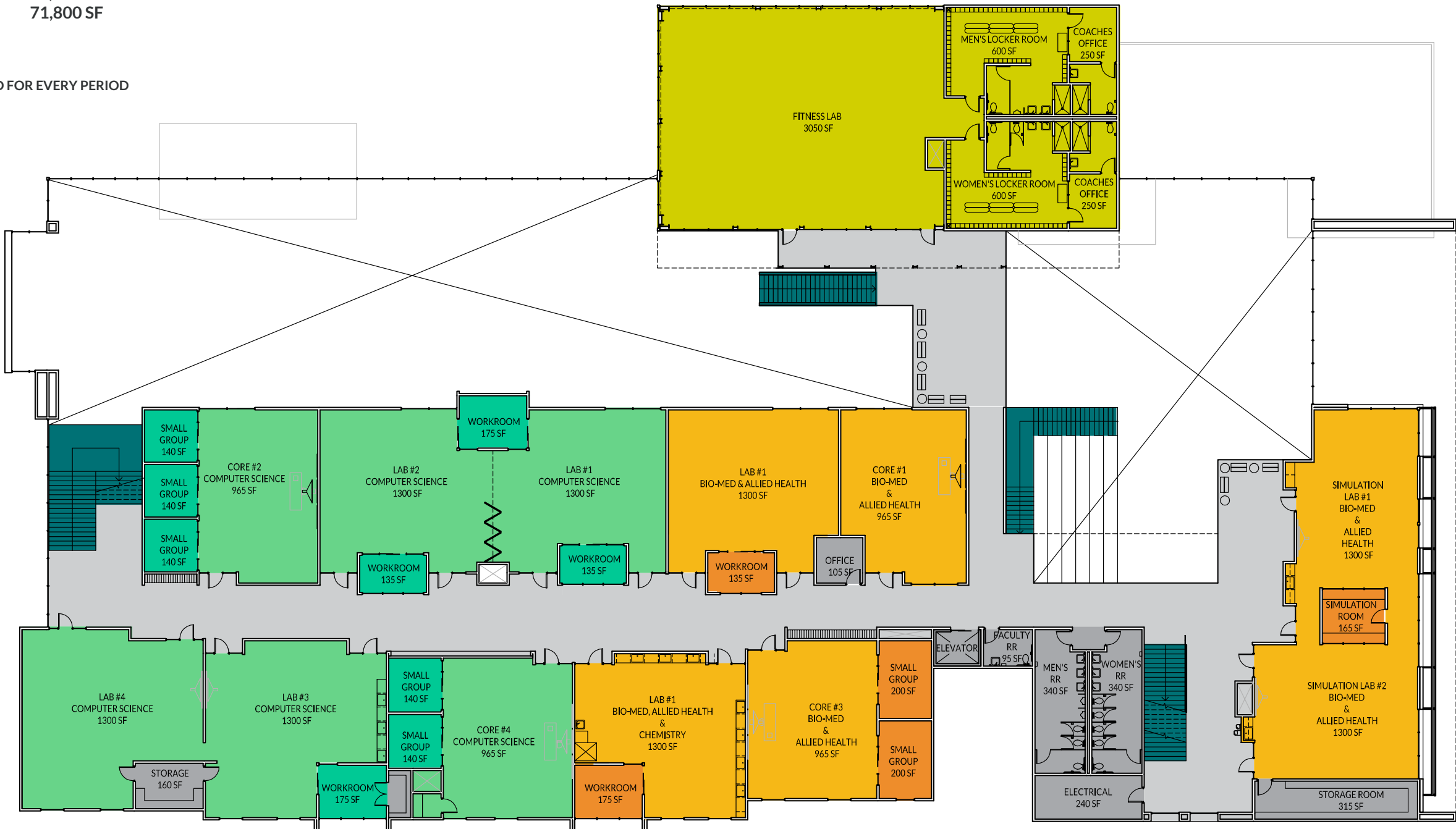
\$54M

TOTAL LABS: 14  
TOTAL CLASSROOMS: 8  
FITNESS LAB 1  
TOTAL: 23\*

TOTAL LOADING @ 36 STUDENTS PER TEACHING STATION 828 STUDENTS

1ST FLOOR: 43,125 SF  
2ND FLOOR: 28,675 SF  
TOTAL: 71,800 SF

\*REQUIRES EVERY CLASSROOM BE LOADED FOR EVERY PERIOD

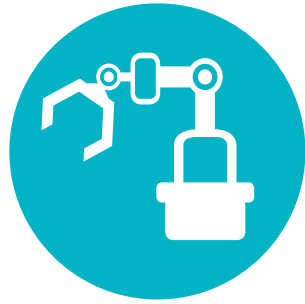


# BUILDING OPTION 3A

**\$64.0**  
MILLION

## HIGHLIGHTS

- 3 story
- 32 classrooms, 4 pathways
- Additional lab, classroom, small group instruction areas, and rooftop project area
- Conditioned discovery lab
- Test labs
- Overall project cost \$64.0M



# SITE PLAN



SITE AREA:	250,130 SF
	5.74 ACRES
BUILDING FOOTPRINT:	43,130 SF
LANDSCAPE:	83,000 SF
HARDSCAPE:	43,000 SF
ASPHALT:	81,000 SF

# OPTION 3A - COST



Option 3A	
Building	\$36,272,700
LEED Silver Requirements	\$1,813,635
Site Improvements	\$3,800,000
Utilities	\$950,000
Design Contingency	\$4,000,000
Total Construction Cost	\$46,836,335
Escalation	\$3,746,900
Total Construction	\$50,583,235
Soft Costs	
CM Fees	\$2,430,000
GC	\$2,430,000
DSA Fees	\$602,000
CDE Fees	\$36,500
A/E Fees	\$2,866,000
Tests and Inspection	\$850,000
FF&E	\$2,300,000
Survey	\$35,000
CEQA	\$150,000
Geotechnical	\$40,000
Legal	\$200,000
UCR Fees	\$300,000
Contingency	\$1,200,000
Total Soft Costs	\$13,439,500
Total Project Cost	\$64,022,735

# FIRST FLOOR

\$64M

TOTAL LABS:	18
TOTAL CLASSROOMS:	14
TOTAL:	32
FITNESS CENTER	1

TOTAL LOADING @ 27 STUDENTS PER TEACHING STATION 864 STUDENTS

1ST FLOOR:	43,145 SF
2ND FLOOR:	28,775 SF
3RD FLOOR:	16,550 SF
TOTAL:	88,470 SF

\*ALLOWS FLEXIBILITY FOR PLANNING PERIODS



## SECOND FLOOR

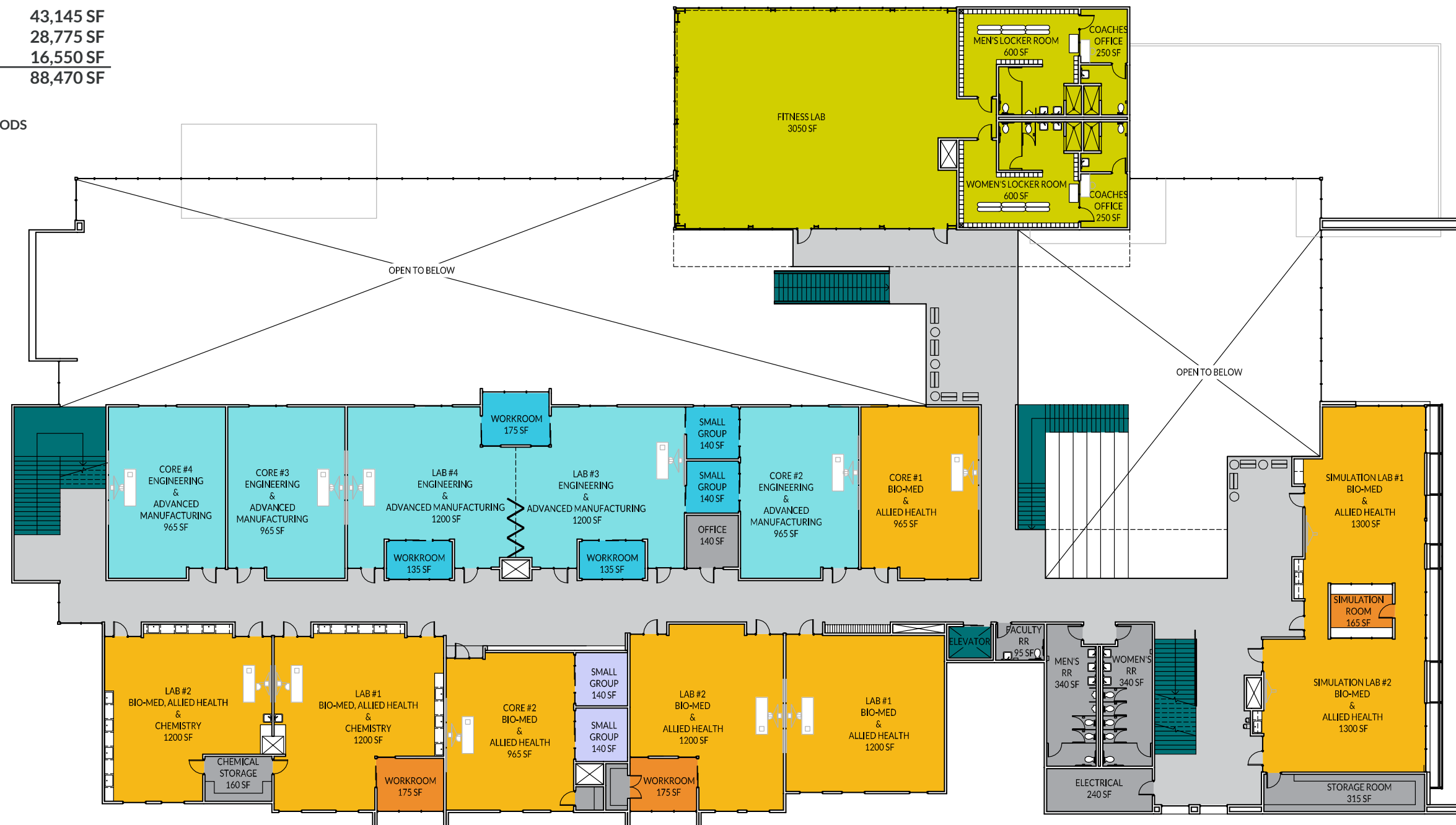
**\$64M**

TOTAL LABS:	18
<u>TOTAL CLASSROOMS:</u>	<u>14</u>
TOTAL:	32
FITNESS CENTER	1

**TOTAL LOADING @ 27 STUDENTS PER TEACHING STATION**    864 STUDENTS

1ST FLOOR:	43,145 SF
2ND FLOOR:	28,775 SF
3RD FLOOR:	16,550 SF
<b>TOTAL:</b>	<b>88,470 SF</b>

**\*ALLOWS FLEXIBILITY FOR PLANNING PERIODS**



# THIRD FLOOR

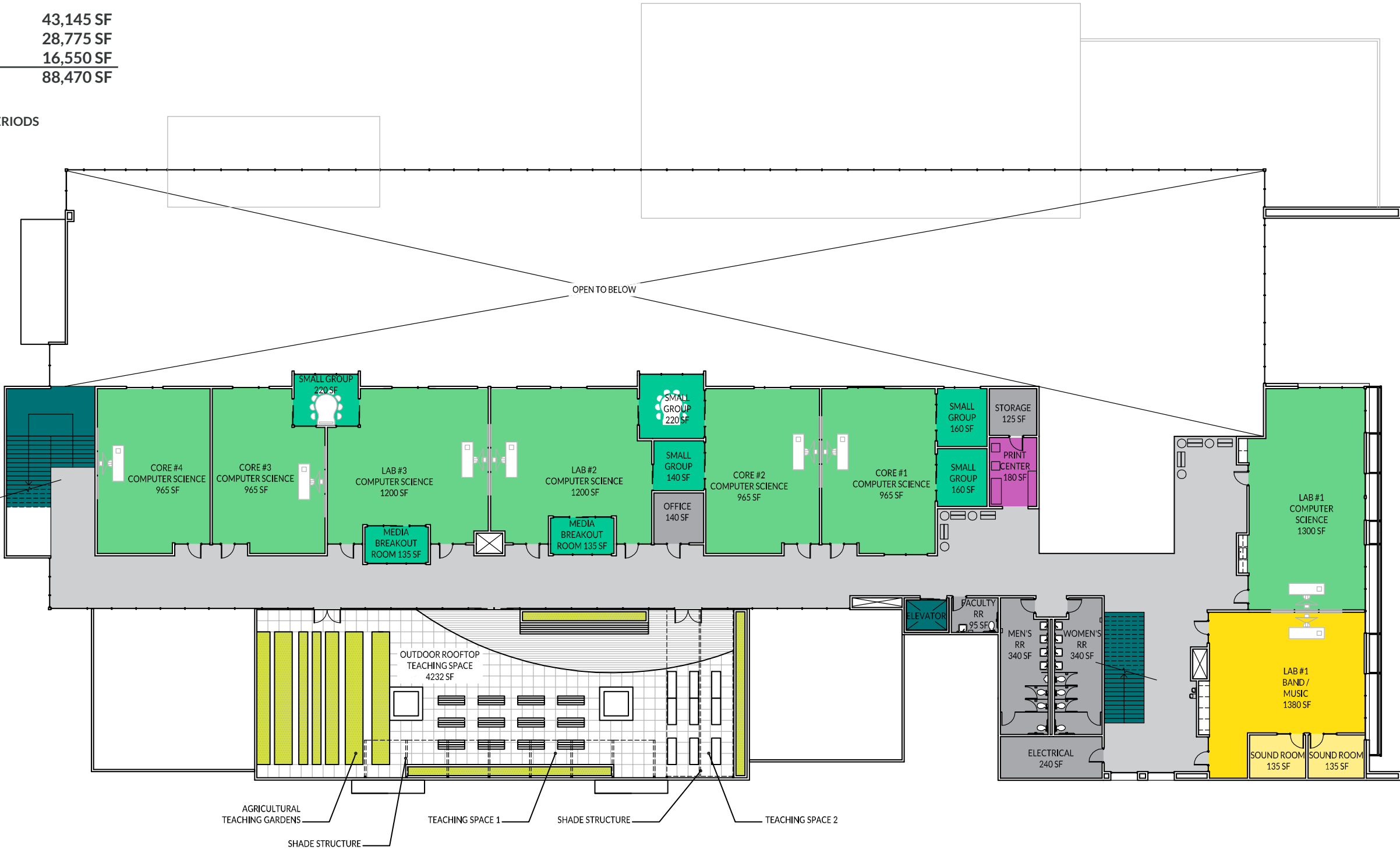
\$64M

TOTAL LABS:	18
TOTAL CLASSROOMS:	14
TOTAL:	32
FITNESS CENTER	1

TOTAL LOADING @ 27 STUDENTS PER TEACHING STATION 864 STUDENTS

1ST FLOOR:	43,145 SF
2ND FLOOR:	28,775 SF
3RD FLOOR:	16,550 SF
TOTAL:	88,470 SF

\*ALLOWS FLEXIBILITY FOR PLANNING PERIODS



# BUILDING OPTION 3B

**\$59.7**  
MILLION

## HIGHLIGHTS

- 3 story
- First 2 stories occupied, 3rd story vacant shell to reduce cost
- 24 classrooms, 4 Areas of Study
- Decreased number of labs and program space to reduce cost.
- Loading at 36 students/classroom (864 student capacity at one time.
- Conditioned discovery lab
- Test labs
- Overall project cost \$59.7M

\*Requires teachers to move out of classrooms during free period (if any).  
All classrooms are occupied during all periods.

# OPTION 3B - COST



Option 3B	
Building	\$32,800,000
LEED Silver Requirements	\$1,640,000
Site Improvements	\$3,800,000
Utilities	\$950,000
Design Contingency	\$4,000,000
Total Construction Cost	\$43,190,000
Escalation	\$3,450,000
Total Construction	\$46,640,000
Soft Costs	
CM Fees	\$2,332,000
GC	\$2,332,000
DSA Fees	\$558,000
CDE Fees	\$35,000
A/E Fees	\$2,612,780
Tests and Inspection	\$850,000
FF&E	\$2,500,000
Survey	\$35,000
CEQA	\$150,000
Geotechnical	\$40,000
Legal	\$200,000
UCR Fees	\$300,000
Contingency	\$1,200,000
Total Soft Costs	\$13,144,780
Total Project Cost	\$59,784,780

# FIRST FLOOR

# \$60M

TOTAL LABS:	14
TOTAL CLASSROOMS:	10
TOTAL:	24
FITNESS CENTER	1

**TOTAL LOADING @ 36 STUDENTS PER TEACHING STATION**    864 STUDENTS

1ST FLOOR:	43,145 SF
2ND FLOOR:	28,775 SF
3RD FLOOR:	16,550 SF
<b>TOTAL:</b>	<b>88,470 SF</b>

**\*REQUIRES EVERY CLASSROOM BE LOADED FOR EVERY PERIOD**



# SECOND FLOOR

\$60M

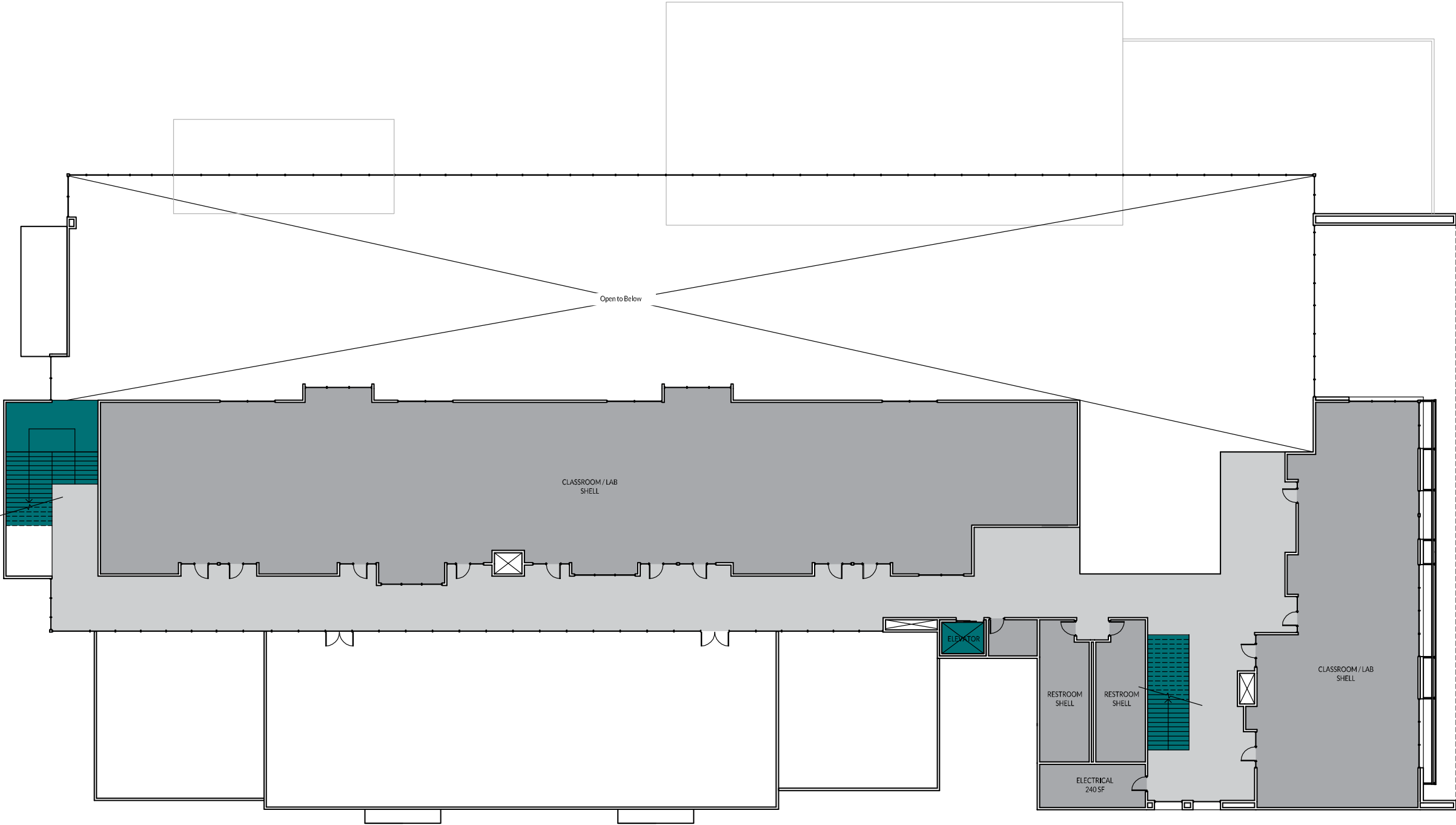
TOTAL LABS:	14
TOTAL CLASSROOMS:	10
TOTAL:	24
FITNESS CENTER	1

TOTAL LOADING @ 36 STUDENTS PER TEACHING STATION 864 STUDENTS

1ST FLOOR:	43,145 SF
2ND FLOOR:	28,775 SF
3RD FLOOR:	16,550 SF
TOTAL:	88,470 SF

\*REQUIRES EVERY CLASSROOM BE LOADED FOR EVERY PERIOD





# FUNDING



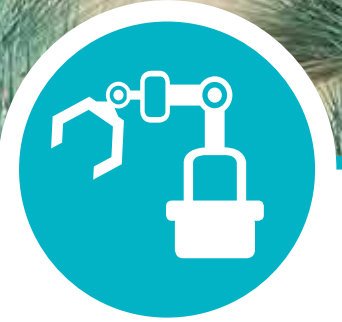
## SOURCES

• General Obligation Bond Funds	\$35,000,000
• State CTE Grant(s) - Could apply for \$3 million per Areas of Study	\$12,000,000*
• State - New Construction Grants	\$15,000,000
• STEM Foundation	TBD
• Business Partnerships/Donors	TBD
• Line Item in Governor’s Budget	TBD
• Total	TBD

\*Requires separate grant application for each of the 4 pathways.



## EXTERIOR RENDERING



## EXTERIOR RENDERING



## EXTERIOR RENDERING



## INTERIOR RENDERING



## INTERIOR RENDERING

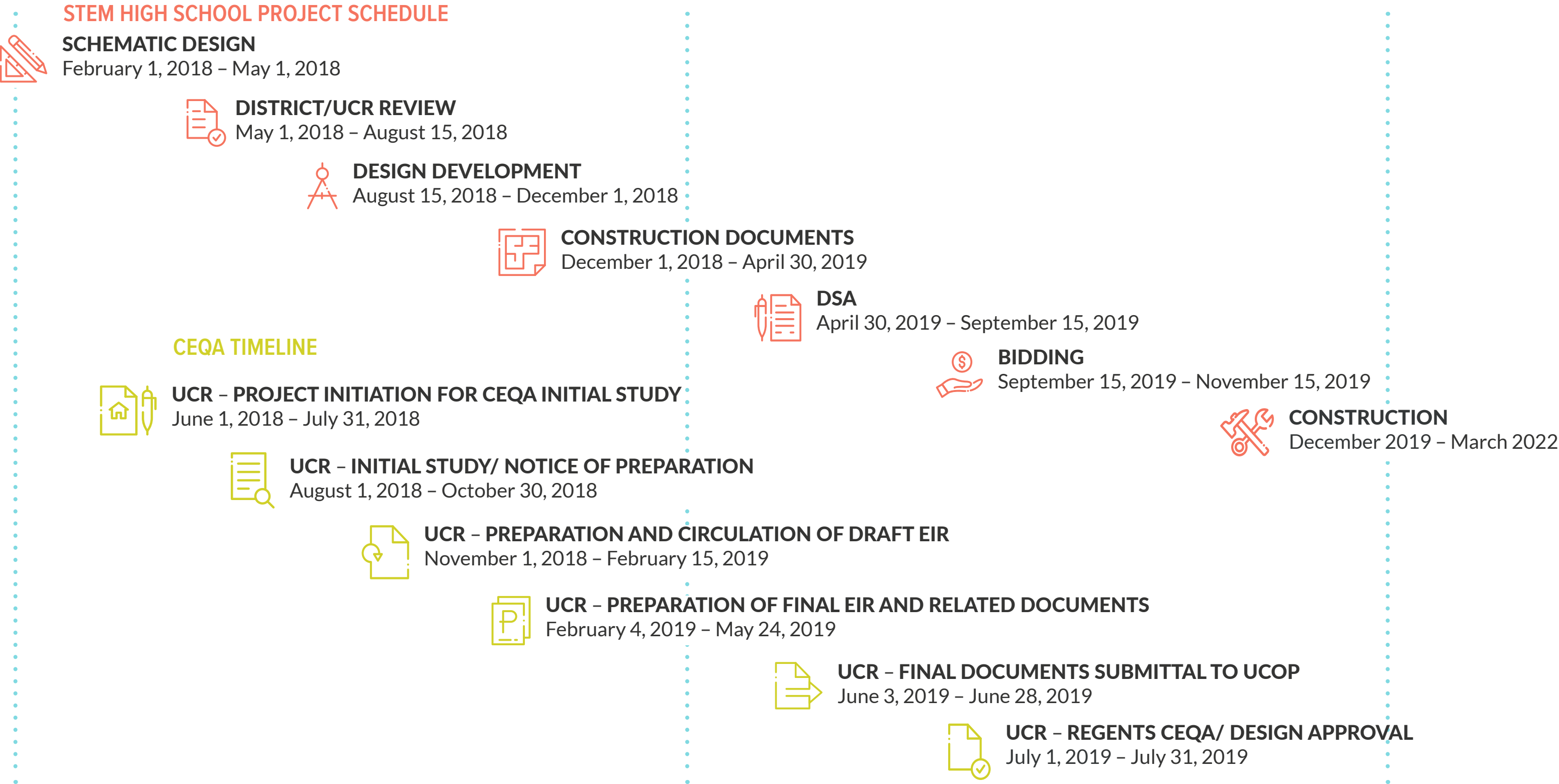
# PROJECT SCHEDULE



2018

2019

2020-2022



# DECISIONS



## DIRECTION REQUIRED FROM DISTRICT

- Allocation of students - 800 FT, or 400 FT and 800 PT (impacts transportation, master schedule, lab/CR distribution)
- Approach to parking (student, staff, visitor, neighboring schools?)
- State preference on site access options
- Level of safety and security (fencing/open campus)
- Approval to continue with CD's prior to CEQA approval or have an additional 12 month delay in schedule
- Configuration/size and cost of the facility
- STEAM v. STEM