

Developing Districtwide Educational Specifications and Customizing Curriculum Specific Versions



A4LE Southern Regional Conference April 3, 2017
Clay Clayton & Sue Robertson



Or ... how we learned to herd cats in Texas.



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Agenda

Overview of Houston ISD Program

Development of Districtwide Ed Spec

Consensus Building

Capacity Model

Customized Ed Spec

Charrette

Presentations

Questions & Answers



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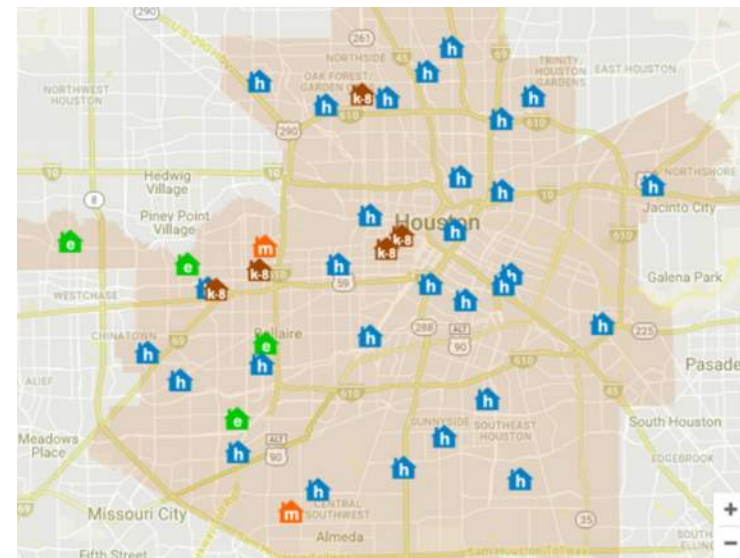
Overview of HISD

In 2012, voters approved \$1.89B Bond to repair and replace 40 schools, including 29 high schools.

Projects were allocated into (4) Groups to prevent over-stressing Contractor community

By Fall 2017, (5) projects will be complete, and all others will be in construction – except for one

By Summer 2020, ALL projects will be substantially complete – except for one



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Development of District Ed Spec

District-Wide Ed Spec

Expresses a District-Wide educational program approach
Provides parameters

Site-Specific Ed Spec

Specialized information tailored to a particular school



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Consensus Building/Stakeholders



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Capacity Model



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Capacity Model

Teaching station: Any place where a full-sized class would be scheduled.

Percentage of utilization: The percentage of utilization reflects the proportion of the day that a particular teaching station is available to be scheduled.

Students per teaching station: The number of students typically scheduled for that subject or grade level class.



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Capacity Model

Building capacity: Number of students that can be accommodated at a single point in time (for example, first period) if every seat in every teaching station is filled.

Program capacity: Number of students who can be accommodated based on a specific program delivery model or schedule. Influenced by educational program, delivery model, schedule

Core capacity: The number of students who can be accommodated in the dining area and in the learning commons/media center/library at one time.



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Capacity Model

Teacher	Room #	Subject	Number of Students						
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
Adams	200	English	25	28	0	26	26	24	26
Carol	201	Math	24	0	23	26	28	22	24
Easton	202	Math	26	28	22	0	27	23	22
Jones	203	Science	20	18	24	22	0	0	20
Smith	600	Phys Ed	43	44	36	42	38	35	0
ETC.									

Teacher	Room #	Subject	Average Class Size	% Utilization	Average Core Academic Utilization
Adams	200	English	26	86%	86%
Carol	201	Math	25	86%	
Easton	202	Math	25	86%	
Jones	203	Science	20	71%	
Smith	600	Phys Ed	40	86%	



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Capacity Model

Teacher	Room #	Subject	Number of Students			
			Period 1	Period 2	Period 3	Period 4
Adams	200	English	25	28	0	26
Carol	201	Math	24	0	23	24
Easton	202	Math	26	28	22	0
Jones	203	Science	0	18	24	20
Smith	600	Phys Ed	43	44	36	0
ETC.						

Teacher	Room #	Subject	Average Class Size	% Utilization	Average Core Academic Utilization
Adams	200	English	26	75%	75%
Carol	201	Math	24	75%	
Easton	202	Math	25	75%	
Jones	203	Science	21	75%	
Smith	600	Phys Ed	41	75%	



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Capacity Model

Program Capacity Calculation					
School A	# Teaching Stations	Students per Teaching Station	Building Capacity	% Utilization	Program Capacity
Core Academic Classroom (English, Math, Social Studies, World Language, ESOL, Health)	37	25	925	85%	786
Science Classroom/Lab	11	25	275	85%	234
Life Skills Classroom	2	12	24	85%	20
BED/LD Self-Contained Classroom	1	12	12	85%	10
Visual Arts Classroom	1	25	25	85%	21
Band Room	1	30	30	85%	26
Choir Room	1	25	25	85%	21
Gym	2	30	60	85%	51
Auxiliary Gym	1	30	30	85%	26
Teaching Stations Specific to Program	13	25	325	85%	276
Total	70		1,731		1,471



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Capacity Model

Program Capacity Calculation					
School A	# Teaching Stations	Students per Teaching Station	Building Capacity	% Utilization	Program Capacity
Core Academic Classroom (English, Math, Social Studies, World Language, ESOL, Health)	37	25	925	75%	694
Science Classroom/Lab	11	25	275	75%	206
Life Skills Classroom	2	12	24	75%	18
BED/LD Self-Contained Classroom	1	12	12	75%	9
Visual Arts Classroom	1	25	25	75%	19
Band Room	1	30	30	75%	23
Choir Room	1	25	25	75%	19
Gym	2	30	60	75%	45
Auxiliary Gym	1	30	30	75%	23
Teaching Stations Specific to Program	13	25	325	75%	244
Total	70		1,731		1,298



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Customizing the Ed Spec

Possible Schedule

Meet with Staff to discuss past work and establish a work plan.	Week 1
Facilitate Workshop #1 with the Planning Committee –Work at each school level and in a blended group –Explore educational program delivery –Develop spatial relationships	Week 3
Develop Draft 1	Weeks 4 - 5
Conduct Workshop #2 with Planning Committee –Develop space needs –Refine and add further detail	Week 6
Develop Draft 2	Weeks 7 - 8
Distribute Draft 2 electronically to Planning Committee for review	Week 9
Develop Final Draft	Weeks 11 - 12
Submit Final Draft	Week 13



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Customizing the Ed Spec



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Customizing the Ed Spec

	# Teaching Stations	Students per Teaching Station	Building Capacity	% Utilization	Program Capacity
Core Academic Learning Center (English, Math, Social Studies, World Language, ESOL, Health)	37	28	1036	85%	881
Science WetLab	10	28	280	85%	238
Special Education Learning Center A (Structured Learning)	2	18	36	85%	31
Special Education Learning Center B (Life Skills)	2	10	20	85%	17
Special Education Learning Center C (Behavioral Adjustment Class)	1	8	8	85%	7
CTE - Aviation - Airframe					
Aviation Hangar	1	28	28	85%	24
Welding	1	28	28	85%	24
Aviation Design/Engineering	1	28	28	85%	24
CTE - Aviation - Power Plant					
Aviation Learning Center (Electrical/HVAC)	1	28	28	85%	24
Aviation Learning Center (Engines)	2	28	56	85%	24
CTE - Aviation - Operations					
Futures Academy/Logistics	1	28	28	85%	24
Aviation Learning Center (Simulator Room)	1	28	28	85%	24
CTE - Auto Technology	1	28	28	85%	24
JROTC (Navy)	2	28	56	85%	48
Visual Arts Wet Lab	2	28	56	85%	48
Instrumental Music Learning Center (Band)	1	28	28	85%	24
Drama / Theatre / Black Box Learning Center	1	28	28	85%	24
Dance Learning Center	1	28	28	85%	24
Vocal Learning Center	1	28	28	85%	24
Gymnasium (Main Gymnasium counts as 2 teaching stations)	2	32	64	85%	54
Auxiliary Gymnasium	1	32	32	85%	27
Total	72		1,952		1,635

HISD EDUCATIONAL SPECIFICATIONS
STERLING HIGH SCHOOL (DRAFT)

HISD Sterling High School Capacity Model

	# Teaching Stations	Students per Teaching Station	Building Capacity	% Utilization	Program Capacity
Core Academic Learning Center (English, Math, Social Studies, World Language, ESOL, Health)	37	28	1036	85%	881
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Aviation Design/Engineering	1	28	28	85%	24
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HISD EDUCATIONAL SPECIFICATIONS
CONSTRUCTION AND FACILITY SERVICES PLANNING - AUGUST 01, 2015
www.hisd.net/ed/spec/sterling/2015



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Customizing the Ed Spec

HISD Sterling High School Space Requirements Summary		
	Teaching Stations	Total
Core Academic Area	52	69,686
Space Allocation Specific to Program	9	22,400
Visual Arts	2	2,730
Performing Arts	3	18,565
Physical Education/Athletics	4	35,537
Welcome Center/Administration Space Requirements		10,190
Junior ROTC	2	3,120
Food Service Space Requirements		13,215
Custodial/Maintenance Space Requirements		1,475
Total Net	72	176,918
Building Support	38%	67,229
Total Gross		244,147

HISD EDUCATIONAL SPECIFICATIONS
STERLING HIGH SCHOOL (DRAFT)

HISD Sterling High School Space Requirements Summary		
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Food Service Space Requirements		13,215
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Total Net	72	176,918
Building Support	38%	67,229
Total Gross		244,147

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Houston Independent School District
CONSTRUCTION AND FACILITY SERVICES FACILITY PLANNING - AUGUST 01, 2014
hisdconstruction.org/sterling2015



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Customizing the Ed Spec

Neighborhoods	Teaching Station(s)	Quantity	Square Feet	Net Area
Learning Center	37	37	850	31,450
Science Learning Center/Wet Lab	10	10	1,650	16,500
Wet Lab Storage		5	150	750
Flex Lab (Grad Lab)		1	950	950
Learning Commons/Information Center				
Learning Commons-Reading/Instructional Area		1	2,297	2,297
Learning Commons - Circulation		1	3,445	3,445
Learning Commons/Information Center Ancillary & Storage		1	1,914	1,914
Lecture Hall (150 seats)	0	2	2,000	4,000
Stage/Lectern		2	400	800
Control Room		2	150	300
Storage		2	150	300
Special Education - Structured Learning Center	2	2	850	1,700
Special Education - Life Skills Learning Center	2	2	900	1,800
Kitchen/Restroom/Changing Room/Storage		2	450	900
Special Education - Behavioral Adjustment Learning Center	1	1	850	850
Kitchen/Restroom/Changing Room/Storage		1	450	450
Small Group Room		4	120	480
Storage		4	200	800
Total	52			69,686

HISD EDUCATIONAL SPECIFICATIONS STERLING HIGH SCHOOL (DRAFT)				
HISD Sterling High School Space Requirements Detail				
Neighborhoods	Teaching Station(s)	Quantity	Square Feet	Net Area
Learning Center	37	37	850	31,450
Science Learning Center/Wet Lab	10	10	1,650	16,500
Wet Lab Storage		5	150	750
Flex Lab (Grad Lab)		1	950	950
Learning Commons/Information Center				
Learning Commons-Reading/Instructional Area		1	2,297	2,297
Learning Commons - Circulation		1	3,445	3,445
Learning Commons/Information Center Ancillary & Storage		1	1,914	1,914
Lecture Hall (150 seats)	0	2	2,000	4,000
Stage/Lectern		2	400	800
Control Room		2	150	300
Storage		2	150	300
Special Education - Structured Learning Center	2	2	850	1,700
Special Education - Life Skills Learning Center	2	2	900	1,800
Kitchen/Restroom/Changing Room/Storage		2	450	900
Special Education - Behavioral Adjustment Learning Center	1	1	850	850
Kitchen/Restroom/Changing Room/Storage		1	450	450
Small Group Room		4	120	480
Storage		4	200	800
Total	52			69,686



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Customizing the Ed Spec

Career and Technical Education - Transportation, Distribution, and Logistics	Teaching Station(s)	Quantity	Square Feet	Net Area
CTE - Aviation Airframe				
Aviation Hangar	1	1	10,000	10,000
Aviation Welding	1	1	1,400	1,400
Storage		1	200	200
Aviation Design/Engineering Learning Center	1	1	1,200	1,200
Aviation Design Storage		1	200	200
CTE - Aviation Power Plant				
Aviation Learning Center (HVAC/Electrical)	1	1	1,400	1,400
Storage		1	200	200
Aviation Learning Center (Engines)	1	1	1,400	1,400
Storage		1	200	200
CTE - Aviation Operations				
Futures Academy/Logistics	2	2	1,400	2,800
Storage		1	200	200
Aviation Learning Center (Simulator Room)	1	1	1,400	1,400
Storage		1	200	200
CTE - Auto Technology	1	1	1,400	1,400
Storage		1	200	200
Total	9			22,400

HISD EDUCATIONAL SPECIFICATIONS STERLING HIGH SCHOOL (DRAFT)				
Career and Technical Education - Transportation, Distribution, and Logistics	Teaching Station(s)	Quantity	Square Feet	Net Area
CTE - Aviation Airframe				
Aviation Hangar	1	1	10,000	10,000
Aviation Welding	1	1	1,400	1,400
Storage		1	200	200
Aviation Design/Engineering Learning Center	1	1	1,200	1,200
Aviation Design Storage		1	200	200
CTE - Aviation Power Plant				
Aviation Learning Center (HVAC/Electrical)	1	1	1,400	1,400
Storage		1	200	200
Aviation Learning Center (Engines)	1	1	1,400	1,400
Storage		1	200	200
CTE - Aviation Operations				
Futures Academy/Logistics	2	2	1,400	2,800
Storage		1	200	200
Aviation Learning Center (Simulator Room)	1	1	1,400	1,400
Storage		1	200	200
CTE - Auto Technology	1	1	1,400	1,400
Storage		1	200	200
Total	9			22,400
Visual Arts				
Visual Arts Wet Lab	2	2	1,200	2,400
Art Room	1	1	90	90
Storage Room		1	250	250
Total	3			3,740

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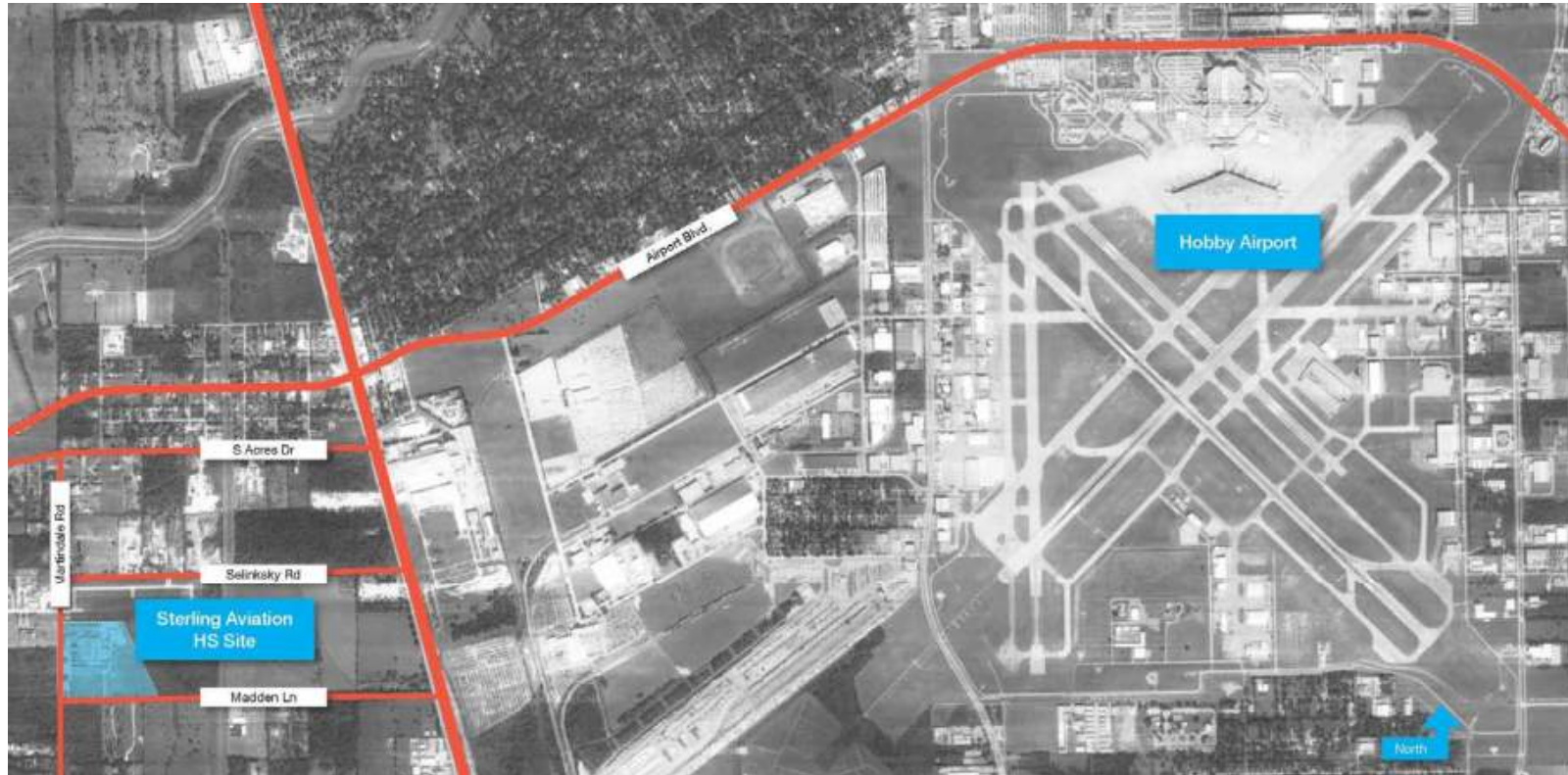
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Small Group Charrette



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Small Group Charrette



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Small Group Charrette



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Small Group Presentations



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The Actual Result



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The Actual Result



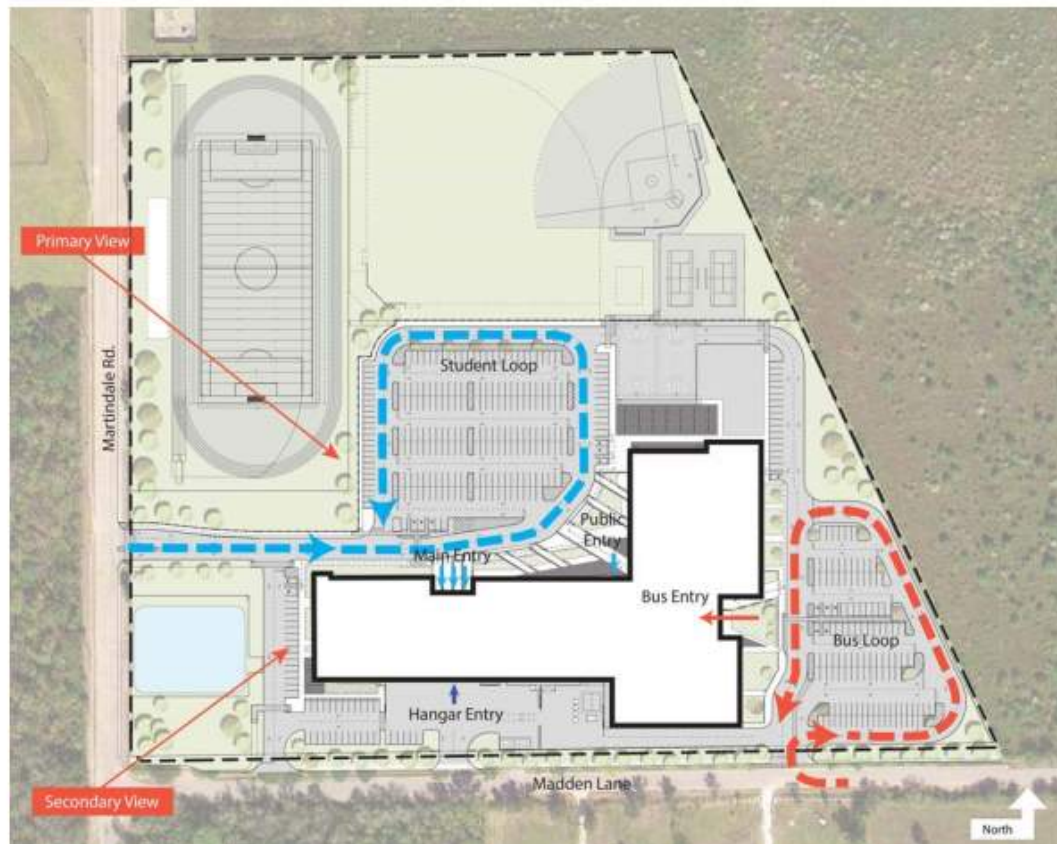
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The Actual Result



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The Actual Result



Site Circulation Plan



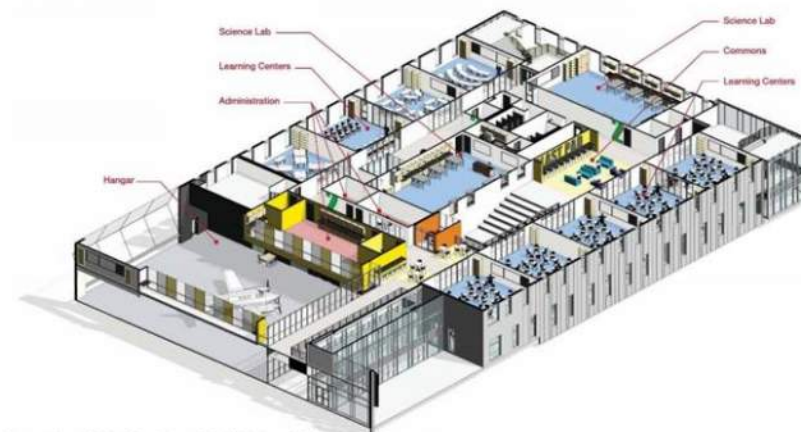
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The Actual Result

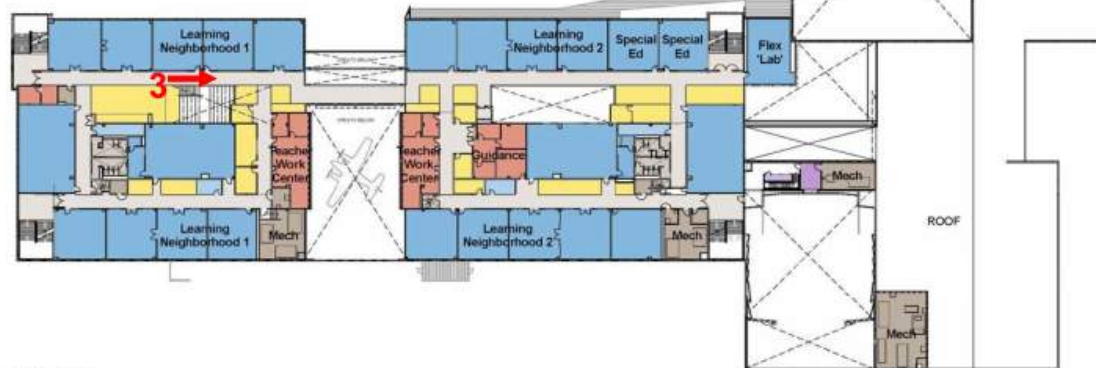


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The Actual Result



Learning Neighborhood 1 / Entry / Hangar Diagram

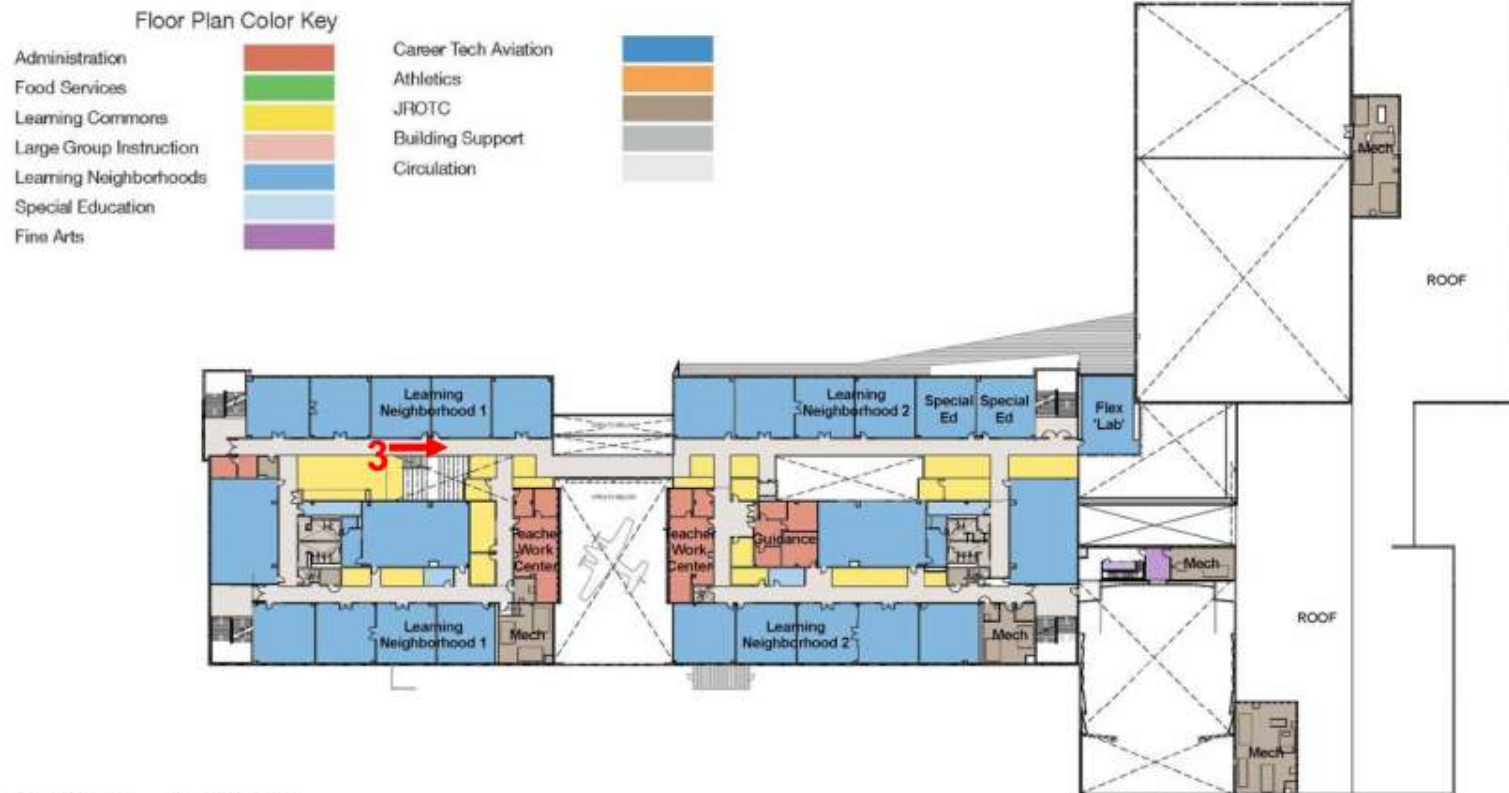


Floor Plan – Level 2



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The Actual Result



Floor Plan – Level 2



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The Actual Result



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The Actual Result



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Questions/Answers

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