



# Presentation to the Board of Education

Presented by: Facilities Review Committee

May 3, 2022

# Facilities Review Committee Charge

**The Troy School District's Facilities Review Committee is a decision-making body inclusive of TSD staff and community members representing the diversity of the Troy community. The committee is charged with developing a plan for upgrading TSD educational facilities to support flexible, student-centered learning communities that meet the mission and vision of the District. The Committee is charged with developing a recommendation at the conclusion of their analysis for the Board of Education's consideration.**

# FRC Members

- Vital Anne
- Michelle Barsh
- Lauren Bestul
- Kerry Brennan
- Adam Burns
- Renee Burzynski
- Chris Centi
- Mike Cottone
- Scott Courtney
- Jonathan Cross
- Shaun Dantas
- Bob Dowd
- Mary Frederick
- Tim Fulcher
- Roberto Garcia
- Michael Giglio
- Cornelius Godfrey
- Julie Gould
- Ahmed Hakim
- Elizabeth Hammond
- Stephen Hatfield
- Alison Hendry
- Kimberly Hoyle
- Hussein Irani
- Kelly Jones
- Brian Kelly
- Ron Keoleian
- Erin Keyser
- Ramanathan
- Krishnamoorthy
- Briana Matti
- Mark Moebus
- Gayle Moran
- Christian Mueller
- Dawn Mulcahy
- Brian Nutting
- Matthew Olovson
- Joe Pettinato
- Michelle Phillips
- Sarah Phillips
- Namita Prasad
- David Recker
- Tonia Romancheck
- Matt Sackrison
- Sande Frisen
- Sunil Sivaraman
- Brian Smiatacz
- Beth Soggs
- Aparna Sriram
- Alyssa Stevens
- Ann Sumnar
- Swarnalatha Talluri
- Debbie Taylor
- Lijo Thommana
- John Tu
- Kelsey Weatherspoon
- Alecia West
- Nicole Wilson
- Fiona Wingblad
- Marie Woodman
- Hong Ye
- Brian Zawislak
- Stephanie Zendler

# 7 FRC Meeting Dates / Tours



## MEETING CALENDAR

### October

**TUES 12** 5:30 PM - 8:00 PM  
FRC MEETING #1  
SERVICES BUILDING - BOARD ROOM

MEETING 1

**TUES 26** 6:00 PM - 8:00 PM  
FRC MEETING #2  
MORSE ELEMENTARY  
BUILDING WALKTHROUGH 5:30 (OPTIONAL)

MEETING 2

### November

**TUES 30** 6:00 PM - 8:00 PM  
FRC MEETING #3  
LARSON MIDDLE SCHOOL  
BUILDING WALKTHROUGH 5:30 (OPTIONAL)

MEETING 3

### December

**TUES 07** MID-PROCESSS UPDATE PRESENTED AT BOE WORKSHOP

### January

**TUES 11** 6:00 PM - 8:00 PM  
FRC MEETING #4  
ATHENS HIGH SCHOOL  
BUILDING WALKTHROUGH 5:30 (OPTIONAL)

MEETING 4

### February

**TUES 08** 6:00 PM - 8:00 PM  
FRC MEETING #5  
WATTLES ELEMENTARY  
BUILDING WALKTHROUGH 5:30 (OPTIONAL)

MEETING 5

### March

**TUES 08** 6:00 PM - 8:00 PM  
FRC MEETING #6  
SMITH MIDDLE SCHOOL  
BUILDING WALKTHROUGH 5:30 (OPTIONAL)

MEETING 6

### COMMUNITY SURVEY MARCH 14TH - APRIL 8TH

### April

**TUES 12** 6:00 PM - 8:00 PM  
FRC MEETING #7 (FINAL)  
TROY HIGH MEDIA CENTER  
BUILDING WALKTHROUGH 5:30 (OPTIONAL)

MEETING 7

### May

**TUES 03** 6:00 PM  
FRC TO PRESENT AT BOE WORKSHOP

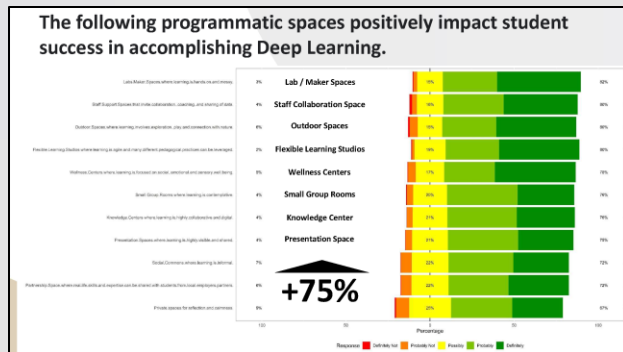
**TUES 17** 7:00 PM  
PRESENTATION AT BOARD MEETING /  
BOE TAKES ACTION

FRC: FACILITIES REVIEW COMMITTEE  
BOE: BOARD OF EDUCATION

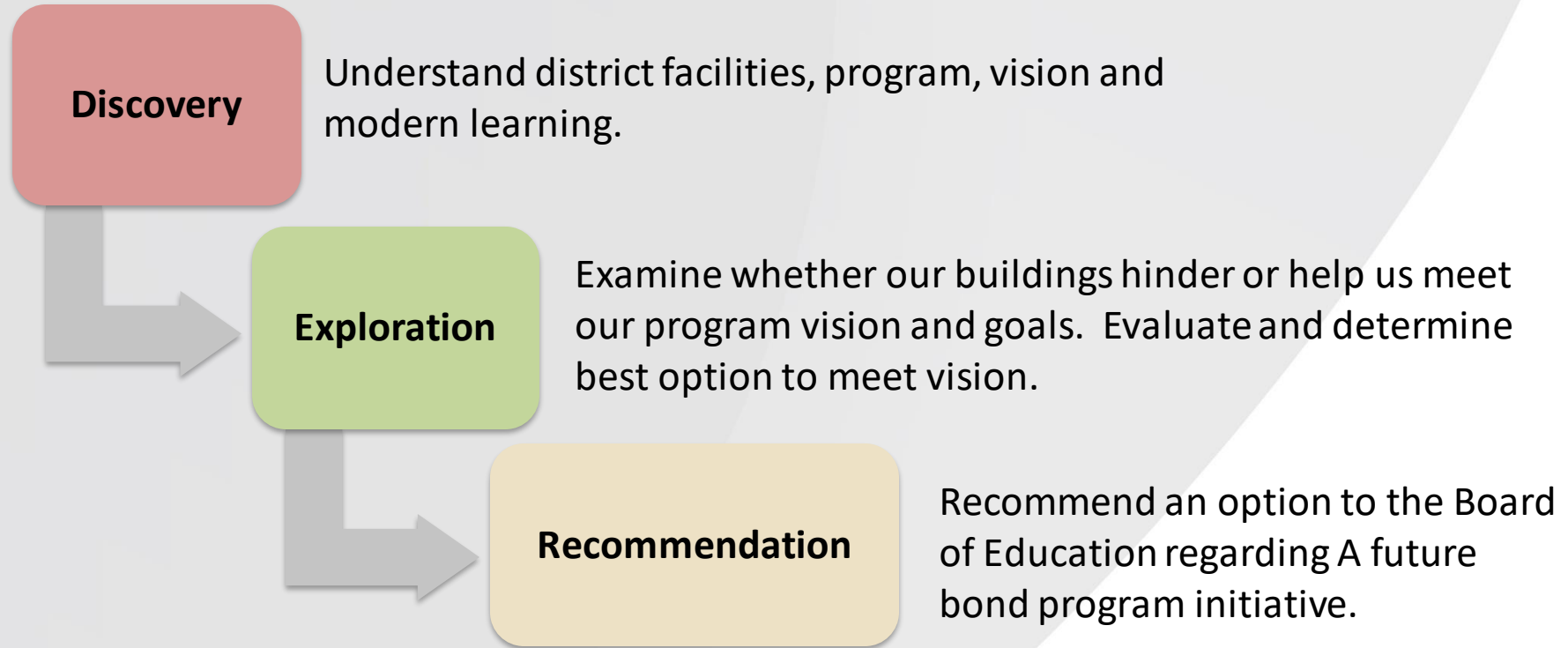


# Pre-FRC Activities – “Stretch Your Thinking”

- Student and Teacher Feedback to gain perspective on educational spaces
- Cabinet and Board of Education Feedback to understand their vision of education and current state of buildings
- Deep Dive with Administrative Leaders (with Dr. Wagner) to “Stretch their Thinking” on the future of education in TSD



# Path to the Recommendation



# Discovery





# District Overview



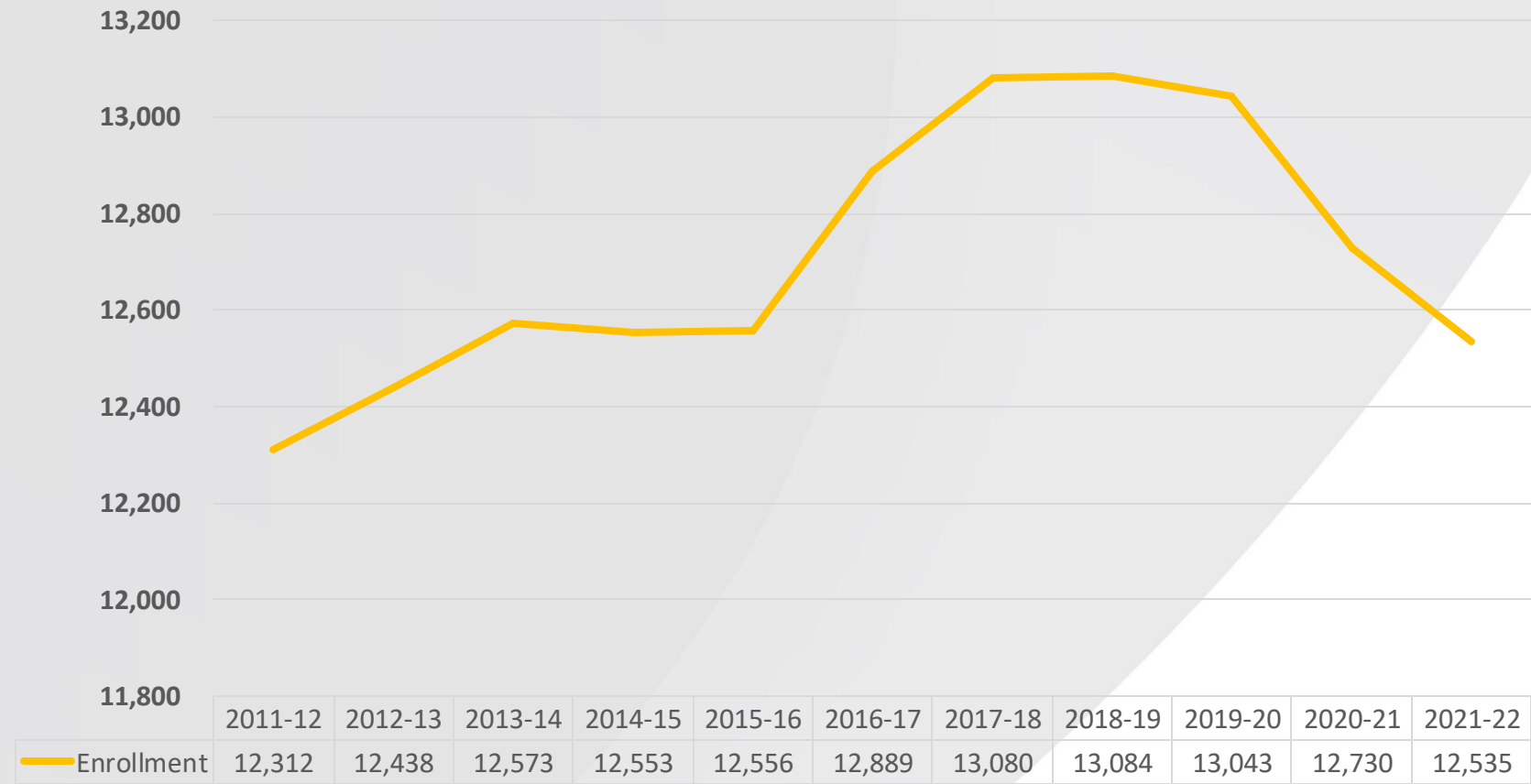
# Building Information

Building	Site Acreage	Square Footage	Opened	Building Additions Year (s)
Barnard	18	64,192	1978	2007
Bemis	15.2	64,192	1978	2007
Costello	23	52,055	1972	2007
Hamilton	15	64,192	1983	2007
Hill	12.9	54,336	1967	71 - 93 - 2006
Leonard	16.1	59,220	1959	68 - 94 - 2006
Martell	14.2	52,799	1972	92 - 2007
Morse	9.8	54,636	1956	62 - 68 - 94 - 2006
Schroeder	10	61,896	1970	93 - 2006
Troy Union	21.8	66,929	1925	53 - 70 - 90 - 2006
Wass	21.4	64,192	1978	2007
Wattles	19	59,150	1967	78 - 2007
Baker	40	128,098	2006	
Boulan Park	16	116,351	1971	2015
Larson	32	116,351	1971	2015
Smith	20.1	100,734	1967	73 - 82 - 89 - 2007
Athens	50	398,426	1974	93 - 99 - 2006
Troy Learning Center(TLC)	3	39,600	2020	
THS	72	354,210	1992	2005 – 2015
IA East/TCT	Shared Site With Baker	91,455	1952	55 - 67 - 70 - 78 – 80 - 19
Troy Preschool	13.6	68,654	2019	
Board Office	15.5	12,000	1973	1988
Services Building	Shared Site With Board	29,143	2000	
Transportation	3.9	11,328	1964	2007
Rankin	1.5	24,696		

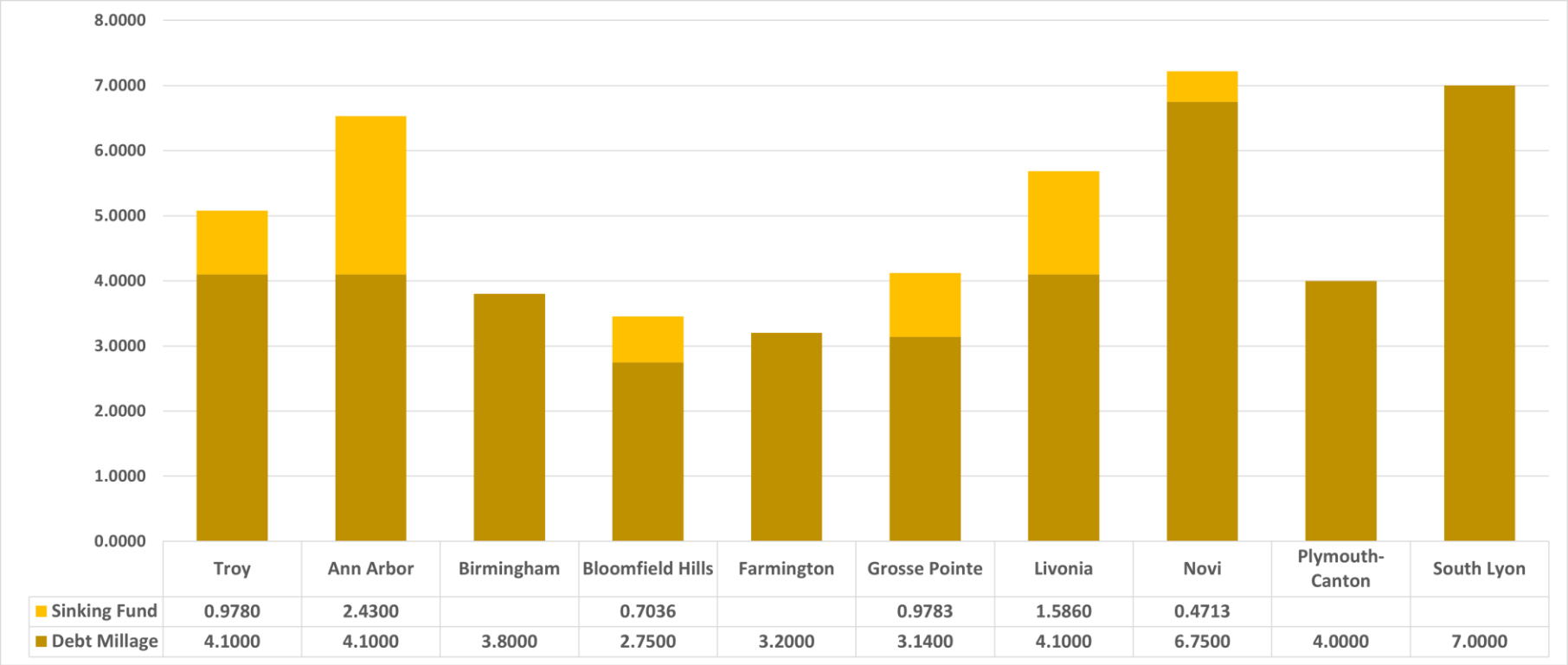
## Fun Facts

- Average building age: 48 years old
- Roughly 2.2 million square feet of buildings
  - That's over 50 acres!
- Approximately 20,000 interior light fixtures
- Over 4,300 doors
- Over 2 million square feet of parking lot
- 1.7 million square feet of roofing
- Approximately 500 acres of property
  - That's roughly 2.3% of Troy's total area!

# Enrollment Trend



# Debt Millage Rates





# **Facilities Condition Assessment**

# Facilities Condition Assessment (FCA)

- Roofing
- Architectural Systems
- Mechanical Systems
- Electrical Systems
- Site Work (Paving)
- Site Work (Playgrounds/Athletics)
- Security

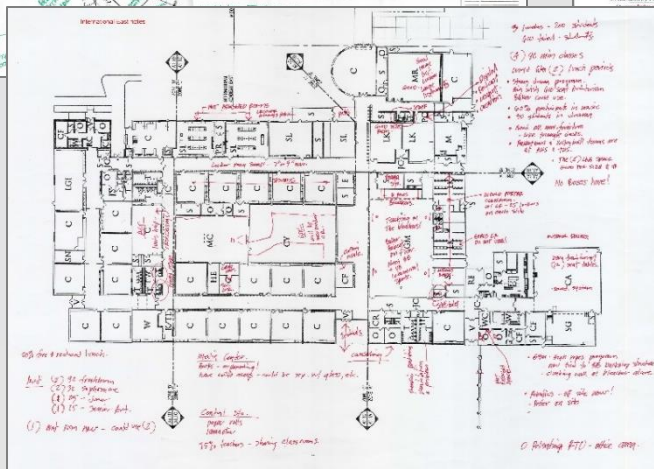


# FCA Cost Summary – By Priority

Critical Needs (1-3 years)	\$45-55 Million
Near Future Needs (4-6 years)	\$90-100 Million
Future Needs (7-10 years)	<u>\$85-95 Million</u>
<b>TOTAL</b>	<b>\$220-250 Million</b>



# **Program Assessment**

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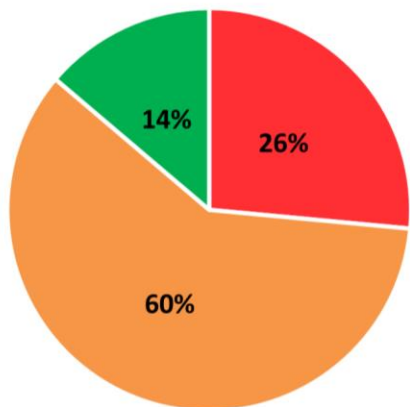
Troy School District - Program Assessment - PES Schools			
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Program Assessment Area	Topic	Indicator	Notes
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# Attributes of Modern Learning Environments

## Program Assessment Grade Across ALL Buildings / ALL Attributes



■ Poor ■ Needs Improvement ■ Good

### Attributes of Modern Learning Environments

	Barnard	Bemis	Costello	Hamilton	Hill	Leonard	Martell	Morse	Schroeder	Troy Union	Was	Wattles	Baker	Boulton	Larson	Smith	AMS	THS	IAE	TCHS
School Organized into Smaller Learning Communities																				
Classroom Size																				
Ability of Space to Adapt																				
Collaboration Spaces																				
Connection to the Outdoors																				
Entry Image																				
Traffic Separation on Site																				
Appropriate Playgrounds																				
Teacher Collaboration Spaces																				
Spaces for Physical Activity																				
Athletic / Recreation / Community Facilities																				
Spaces for Fine and Performing Arts																				
Spaces for Community Partnerships																				
Universal Design																				
Acoustics																				
Environmental Control																				
Natural Light																				
Integration of Technology																				
Furniture - Mobile and Varied																				



Good



Needs Improvement



Poor



# Bond Financing

# Estimated Bonding Capacity – 30 Year Bond

Scenario Table No.	Bond Amount	Bond Term	Estimated Total Interest Cost	Estimated Interest Rate	Principal Amortized within 1st 6 Years	Ballot Info		Maximum Total Mills All Debt	Increase (Decrease) in Debt Levy
						First Year Millage*	Average Millage		
Table_1c									
Series 2023	\$70,000,000	29 yrs., 3 mo.	\$48,843,000	4.00%	\$9,450,000				
Series 2026	90,000,000	30 yrs., 0 mo.	63,284,000	4.00%	9,925,000				
Series 2029	<del>135,000,000</del>	30 yrs., 0 mo.	<del>95,213,000</del>	4.00%	13,925,000				
Total	\$295,000,000		\$207,340,000			1.23	2.19	4.10	0.00
Table_2c									
Series 2023	\$110,000,000	29 yrs., 3 mo.	\$75,901,000	4.00%	\$19,925,000				
Series 2026	135,000,000	30 yrs., 0 mo.	96,061,000	4.00%	14,025,000				
Series 2029	<del>175,000,000</del>	30 yrs., 0 mo.	<del>121,778,000</del>	4.00%	19,500,000				
Total	\$420,000,000		\$293,740,000			2.20	3.13	5.10	1.00
Table_3c									
Series 2023	\$150,000,000	29 yrs., 3 mo.	\$100,583,000	4.00%	\$30,075,000				
Series 2026	175,000,000	30 yrs., 0 mo.	121,905,000	4.00%	20,175,000				
Series 2029	<del>200,000,000</del>	30 yrs., 0 mo.	<del>142,299,000</del>	4.00%	20,550,000				
Total	\$525,000,000		\$364,787,000			3.19	3.93	6.10	2.00
Table_4c									
Series 2023	\$185,000,000	29 yrs., 3 mo.	\$124,042,000	4.00%	\$38,700,000				
Series 2026	210,000,000	30 yrs., 0 mo.	146,276,000	4.00%	26,750,000				
Series 2029	<del>230,000,000</del>	30 yrs., 0 mo.	<del>163,975,000</del>	4.00%	24,375,000				
Total	\$625,000,000		\$434,293,000			4.08	4.68	7.00	2.90



**Exploration**

# Image Exercise

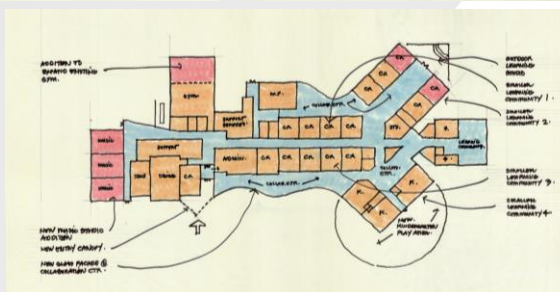
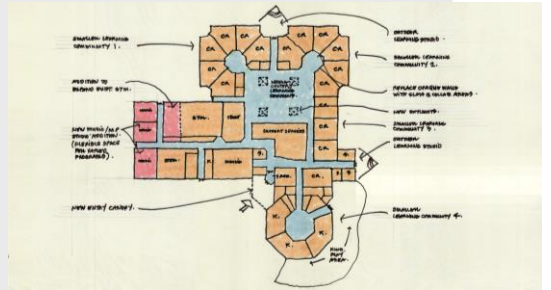
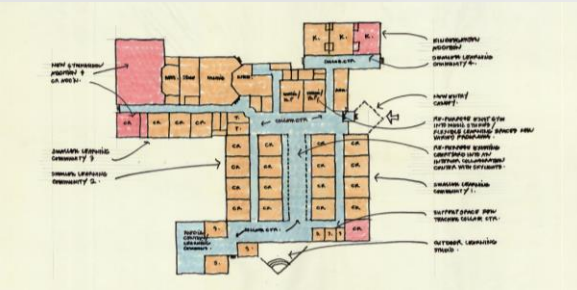
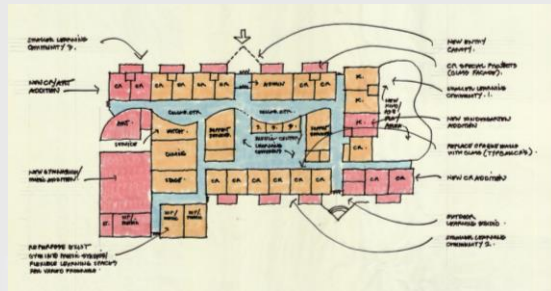
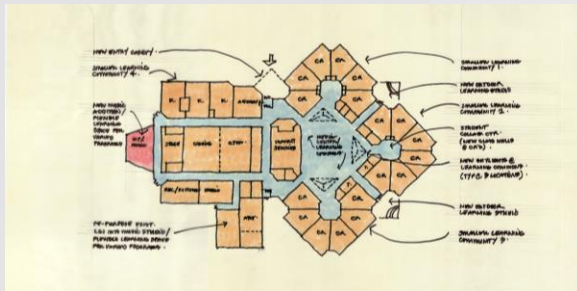
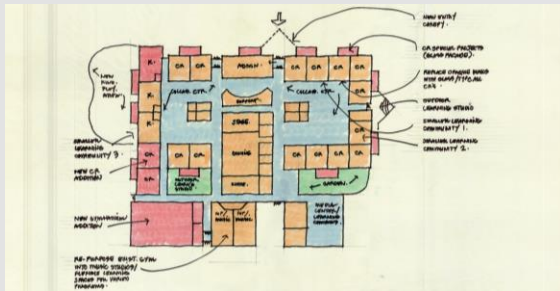


# Prioritization of Guiding Principles

<b>1</b>	<b>Flexible &amp; Adaptable Learning Spaces</b>
<b>2</b>	<b>Spaces that Encourage Curiosity &amp; Exploration</b>
<b>3</b>	<b>Flexible Furniture</b>
<b>4</b>	<b>Technology</b>
<b>5</b>	<b>Student Collaboration Space</b>
<b>6</b>	<b>Smaller Learning Communities</b>
<b>7</b>	<b>Abundant Natural Light</b>
<b>8</b>	<b>Interdisciplinary Collaboration</b>
<b>9</b>	<b>Acoustics - Quiet Spaces/Sensory</b>

<b>10</b>	<b>Accessibility/Universal Design</b>
<b>11</b>	<b>Upgrade Performing Arts / Athletic Spaces</b>
<b>12</b>	<b>Career / Partnerships</b>
<b>13</b>	<b>Strong Visual Image / Brand Identity</b>
<b>14</b>	<b>Professional Collaboration Space</b>
<b>15</b>	<b>Eco-Friendly</b>
<b>16</b>	<b>Playground Upgrades</b>
<b>17</b>	<b>Access that is direct, safe &amp; welcoming</b>
<b>18</b>	<b>Gross Motor Development</b>

# Development of Elementary Concepts



# Grading Elementary Concepts

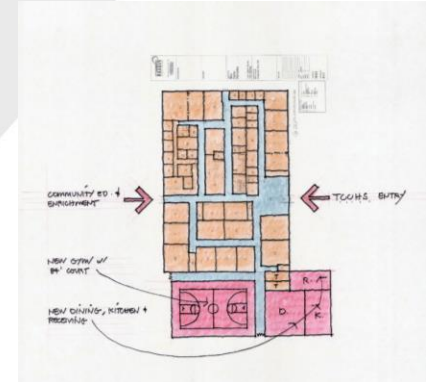
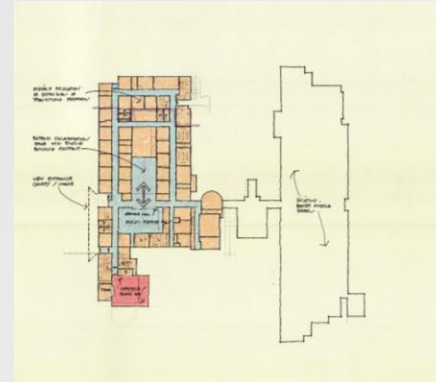
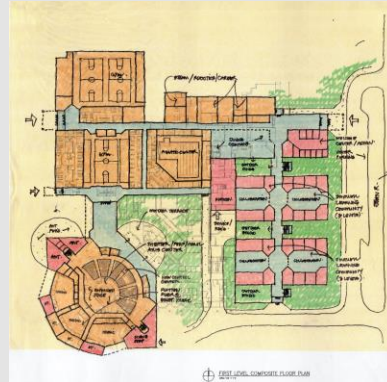
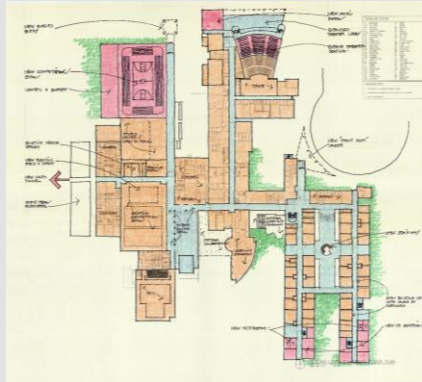
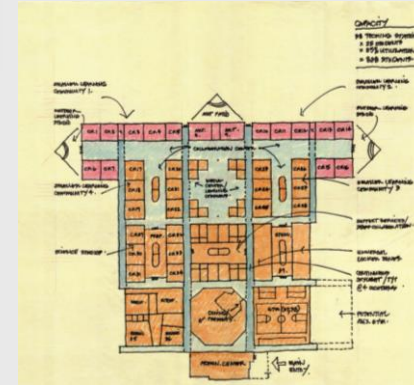
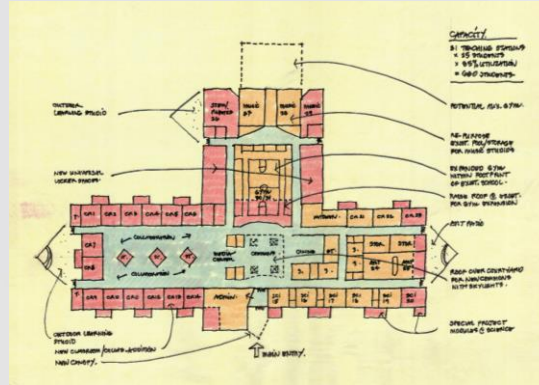
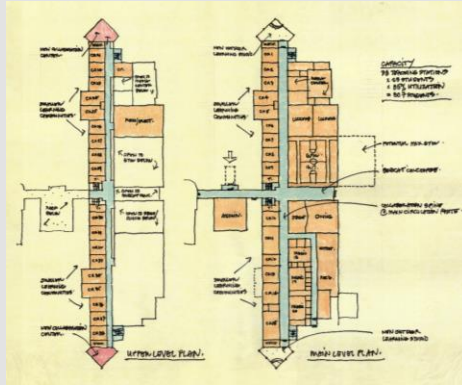
		Barnard / Bemis / Hamilton / Wass Elementaries				Costello / Martell Elementaries				Hill Elementary				Wattles Elementary				Leonard Elementary				Morse Elementary				Schroeder Elementary				Troy Union Elementary			
		Table 1	Table 2	Table 3	Table 4	Table 1	Table 2	Table 3	Table 4	Table 1	Table 2	Table 3	Table 4	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 5	Table 6	Table 7	Table 8	Table 5	Table 6	Table 7	Table 8	Table 5	Table 6	Table 7	Table 8
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10	Professional Collaboration Space																																
11	Acoustics - Quiet Spaces/Sensory																																
12	Upgrade Performing Arts / Athletic Spaces																																
13	Upgrade Playgrounds																																
14	Interdisciplinary Collaboration																																
15	Eco-Friendly																																
16	Access that is direct, safe & welcoming																																
17	Gross Motor Development																																
18	Strong Visual Image / Brand Identity																																

Greyed out principles (4, 5, 8, 15) were not evaluated.

Excellent  
Good  
Fair  
Does Not Address



# Development of Secondary Concepts



# Grading of Secondary Concepts

		Baker Middle School							Smith Middle School							Boulton Park / Larson Middle Schools							Athens High School							Troy High School							International Academy East							Troy College & Career High School						
		Table 1	Table 2	Table 3	Tab/3/4	Table 6	Table 7	Table 8	Table 1	Table 2	Table 3	Table 4/5	Table 6	Table 7	Table 8	Table 1	Table 2	Table 3	Table 4/5	Table 6	Table 7	Table 8	Table 1	Table 2	Table 3	Table 4/5	Table 6	Table 7	Table 8	Table 1	Table 2	Table 3	Table 4/5	Table 6	Table 7	Table 8	Table 1	Table 2	Table 3	Table 4	Table 6	Table 7	Table 8	Table 1	Table 2	Table 3	Table 4/5	Table 6	Table 7	Table 8
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Greyed out principles (4, 5, 8, 15) were not evaluated.

Excellent  
Good  
Fair  
Does Not Address

good athletic, bad performing arts

excellent performing art, fair athletic spaces

# Elementary School Conceptual Estimates

FACILITY	Year Built	Site Acres	Current Area	Proposed Additions	Total Area	PROJECT TOTAL
Barnard Elementary	1978	18.0	64,400	2,500	66,900	<b>13,619,015</b>
Bemis Elementary	1978	15.2	64,192	2,500	66,692	<b>12,589,390</b>
Costello Elementary	1972	23.0	52,055	23,791	75,846	<b>25,954,245</b>
Hamilton Elementary	1983	15.0	64,192	2,500	66,692	<b>14,854,447</b>
Hill Elementary	1967	12.9	54,336	9,436	63,772	<b>20,949,751</b>
Leonard Elementary	1959	16.1	59,220	20,016	79,236	<b>24,280,268</b>
Martell Elementary	1972	14.2	52,799	23,791	76,590	<b>25,223,999</b>
Morse Elementary	1956	9.8	54,636	21,987	76,623	<b>24,088,590</b>
Schroeder Elementary	1970	10.0	61,896	19,396	81,292	<b>26,179,111</b>
Troy Union Elementary	1925	21.8	66,929	27,589	94,518	<b>32,416,900</b>
Wass Elementary	1978	21.4	64,192	2,500	66,692	<b>13,485,130</b>
Wattles Elementary	1967	19.0	59,150	9,075	68,225	<b>15,850,241</b>
<b>FACILITIES TOTALS:</b>		<b>196.4</b>	<b>717,997</b>	<b>165,081</b>	<b>883,078</b>	<b>249,491,086</b>

# Secondary School Conceptual Estimates

FACILITY	Year Built	Site Acres	Current Area	Proposed Additions	Total Area	PROJECT TOTAL
Boulan Middle	1971	16.0	110,830	36,220	147,050	<b>52,491,202</b>
Larson Middle	1971	32.0	110,830	36,220	147,050	<b>52,508,820</b>
Smith Middle	1967	20.1	100,734	55,090	155,824	<b>60,171,884</b>
Baker Middle	2006	40.0	128,098	3,152	131,250	<b>15,609,084</b>
IAE	1952	40.0	81,311	11,555	92,866	<b>18,775,074</b>
Athens High	1974	50.0	398,426	174,579	334,579	<b>157,518,140</b>
Troy High	1992	72.0	343,207	101,066	444,273	<b>132,000,435</b>
TLC	1970	2.0	38,179	16,308	54,487	<b>11,960,973</b>
FACILITIES TOTALS:		272.1	1,311,615	434,190	1,507,379	501,035,611

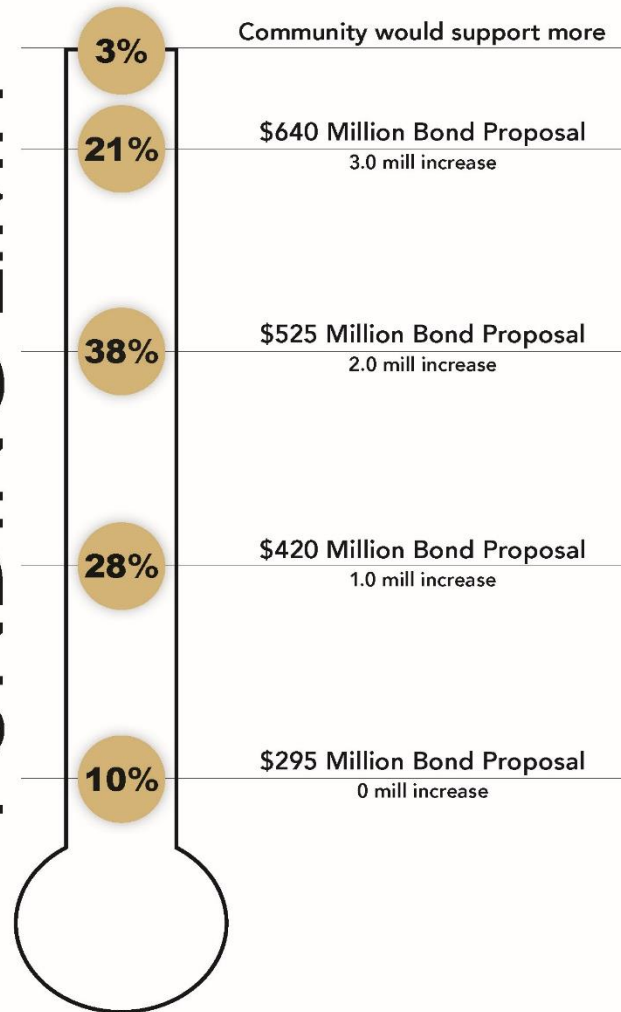
# Summary

Facilities	Conceptual Estimate Total
Elementary Schools	\$249,491,086
Secondary Schools	\$501,035,611
<b>All School Facilities</b>	<b>\$750,526,697</b>

# Financial Tolerance Exercise

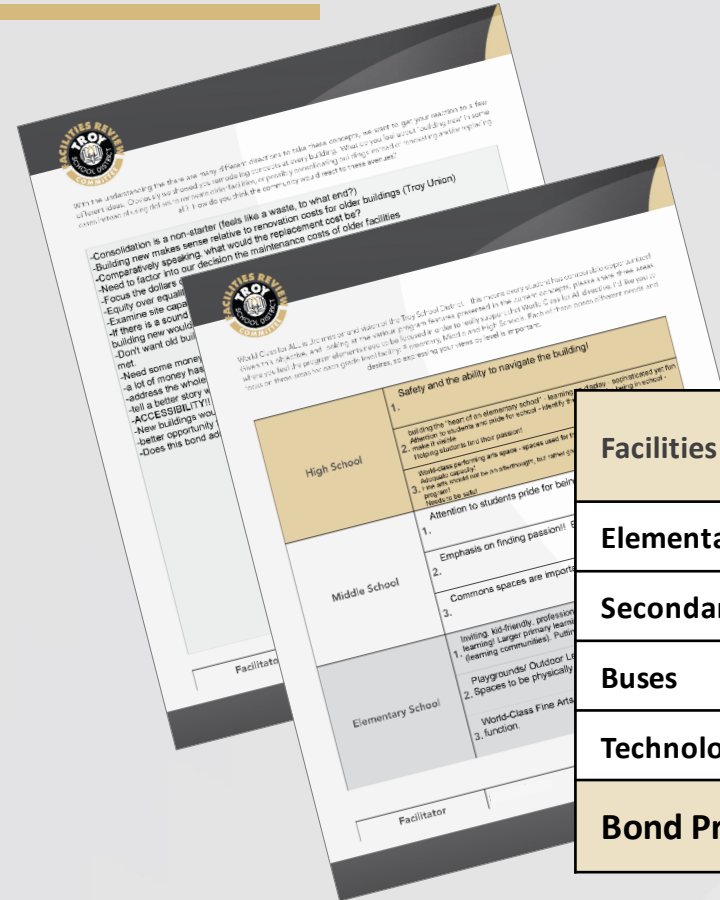
- Greatest percentage falls in the \$525 million mark
- 62% support \$525M or higher
- 38% support \$420M or lower

FUNDING LIMIT





# Refinement of Conceptual Ideas



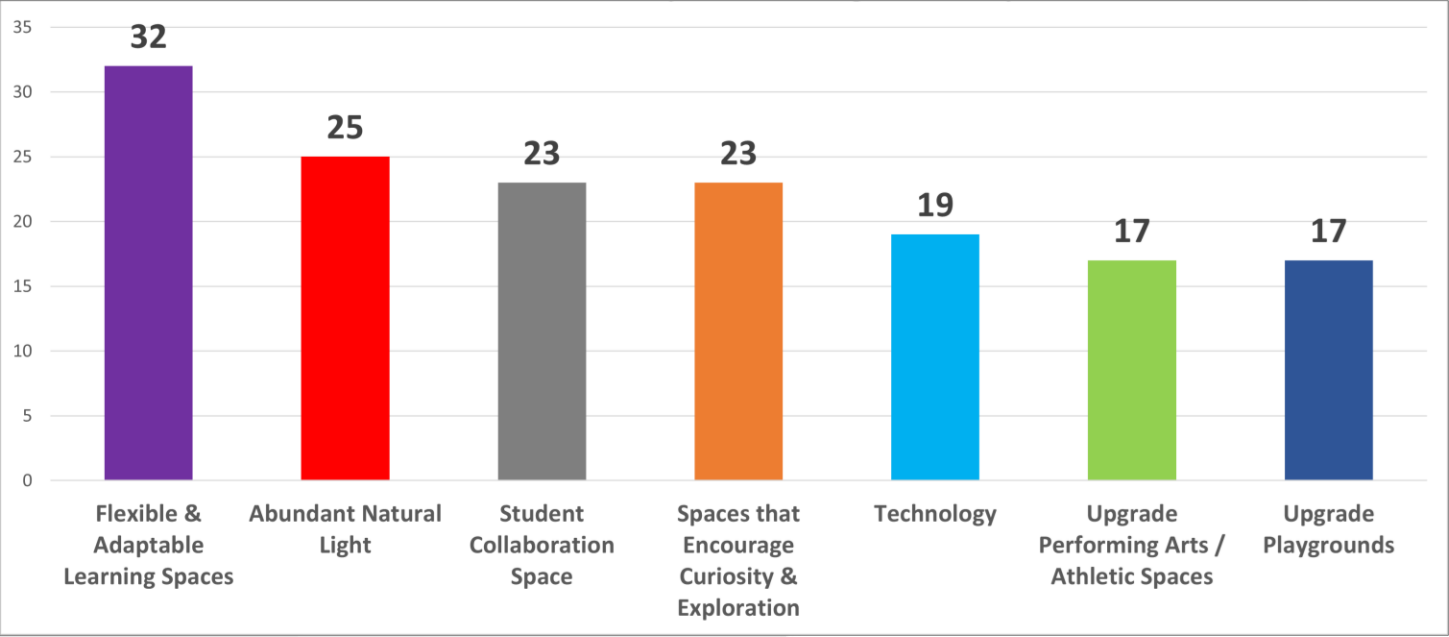
Facilities	Original Conceptual Estimates	Revised Conceptual Estimates
Elementary Schools	\$249,491,086	\$138,184,058
Secondary Schools	\$501,035,611	\$436,249,767
Buses	(not included in estimate)	\$12,000,000
Technology	(rolled into school estimates)	\$30,000,000
<b>Bond Program Total</b>	<b>\$750,526,697</b>	<b>\$616,433,825</b>

# Further Refinement of Priorities

These will help familiarize you with the priorities that are already presented in the list of 18 Guiding Principles for the Future of the School. Now it's your turn to help refine the list by marking each priority with an 'X' in the appropriate column. The 'X' marks will be used to determine the final list of priorities that will be presented to the Board of Education for their review.

Guiding Principles	PR001	PR002	PR003	PR004	PR005	PR006	PR007	PR008
1. Flexible & Adaptable Learning Spaces								
2. Student Collaboration Space								
3. Spaces that Encourage Curiosity & Exploration								
4. Technology								
5. Flexible Furniture								
6. Smaller Learning Communities								
7. Career/Partnerships								
8. Accessibility/Universal Design								
9. Abundant Natural Light								
10. Professional Collaboration Space								
11. Accessible Quiet Spaces/Study								
12. Upgrade Performing Arts/Athletic Spaces								
13. Upgrade Playgrounds								
14. Interdisciplinary Collaboration								
15. Eco-Friendliness								
16. Access that is direct, safe & welcoming								
17. Green Master Development								
18. Strong Visual Image / Brand Identity								

Facilitator





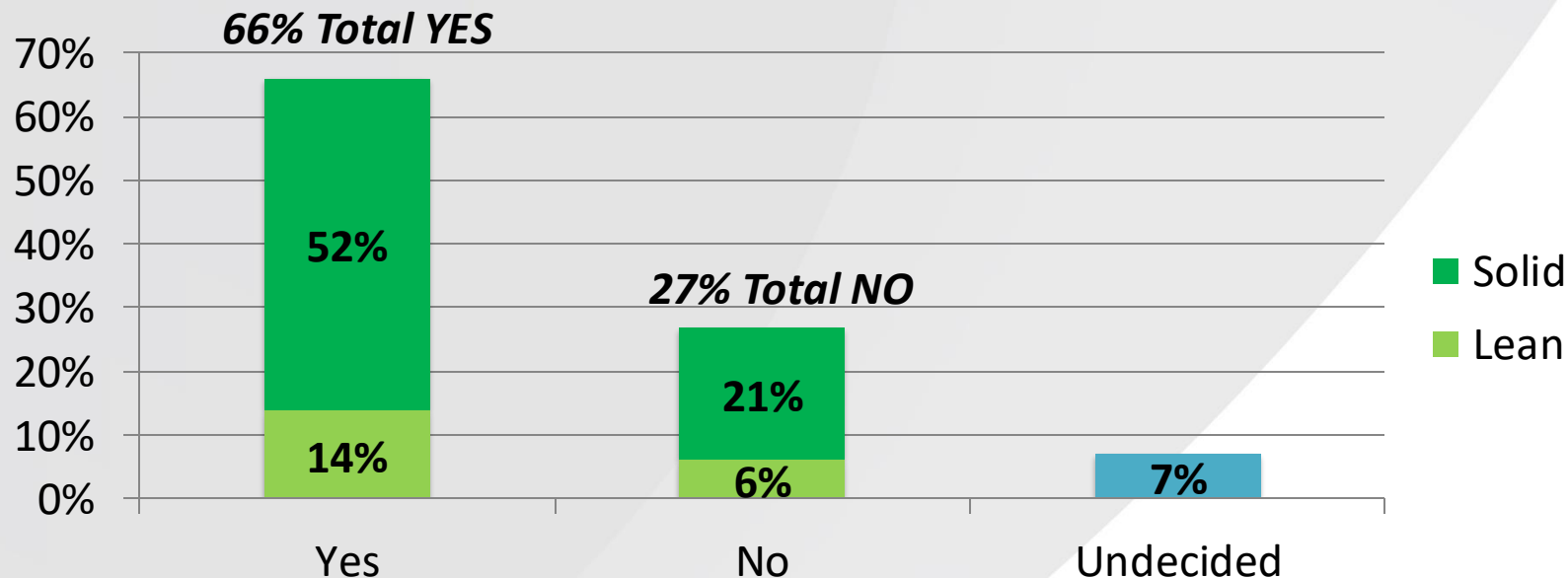
Facilities Review Committee | 33



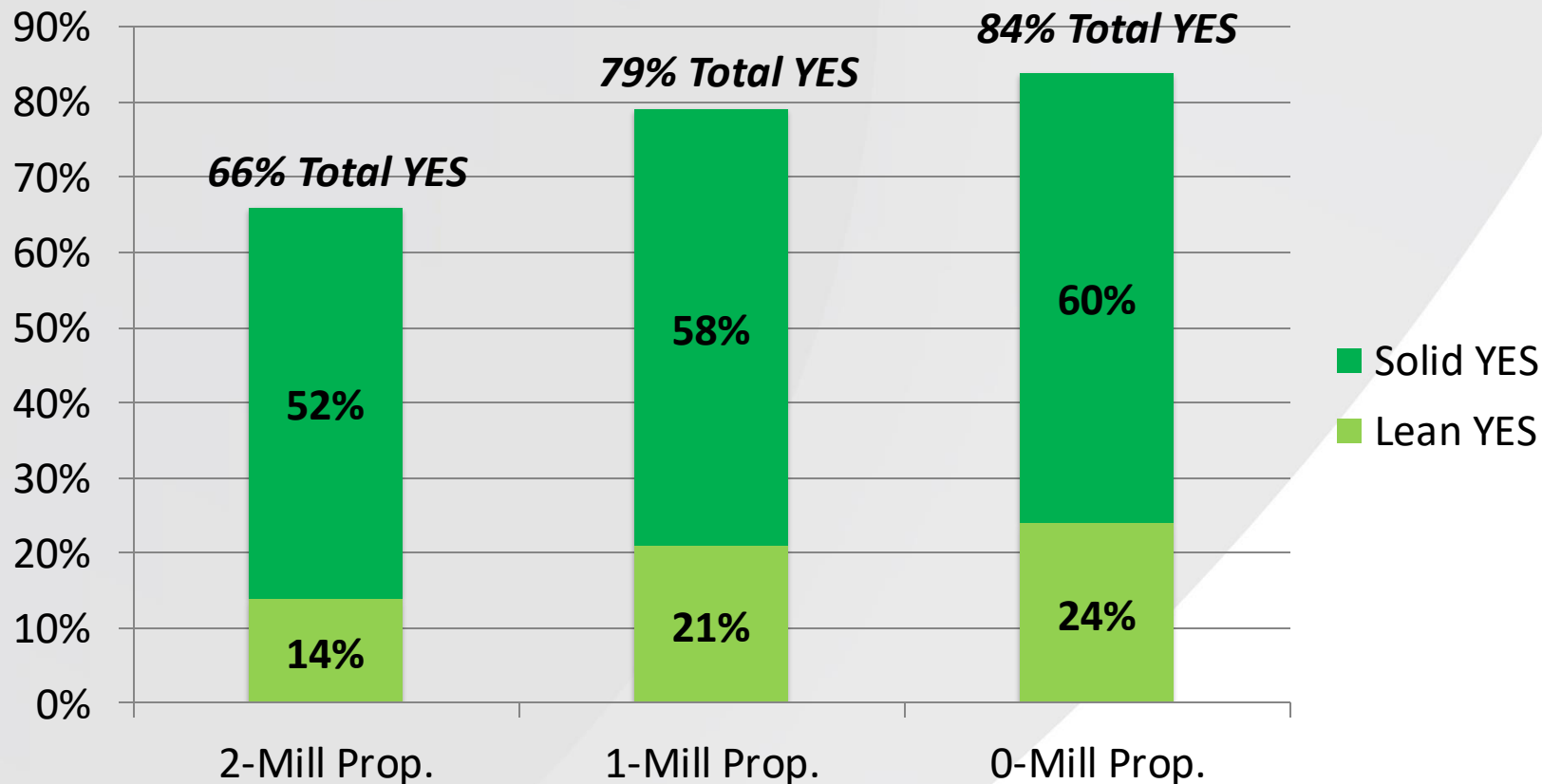
# Survey Results

# 2-Mill Proposal Vote

Respondents were asked how they would vote on the 2-mill proposal, and if “undecided” at first, further asked “Well, if the election were held today and you had to decide right now, would you lean toward voting YES in favor of the bond proposal or NO to oppose it?”



# Voter Progression



# Analysis of Feedback

- Very consistent thinking across 2 mill Build and Individual Selections
- One major area of difference being THS academic remodeling
- Consensus on wanting to allocate renovation dollars to THS without going to \$49M level

Category	Potential Bond Program Scope	Estimated Cost	Sum of Individual Votes	2 mill Table Build
ALL ELEMENTARY SCHOOLS	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$85,400,000	40	X
	Accessibility/Universal Design Upgrades at Total Room (Distance Priority)	\$6,500,000	38	X
	New Flexible, Adaptable Furniture (Distance Priority)	\$7,600,000	32	X
	Add Special Instruction Space (music, art, world languages, etc.)	\$18,500,000	18	
	Removable Media Center (Multi-use space for interdisciplinary collaboration/STEM lab/robotics)	\$5,200,000	12	
	Replacement of Playgrounds with New Surfaces & Accessible Equipment	\$6,000,000	32	X
	Openness or reconfigurable for 3rd-5th graders (classroom, classroom additions as depicted in concept)	\$13,600,000	24	X
	Add Natural Light at Media Centers	\$1,500,000	6	
	Add Outdoor Learning Tracks	\$1,800,000	3	
BAKER MIDDLE SCHOOL	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$9,200,000	40	X
	Accessibility/Universal Design Upgrades at Total Room (Distance Priority)	\$650,000	37	X
	New Flexible, Adaptable Furniture (Distance Priority)	\$1,300,000	32	X
	Removable Media Center (Multi-use space for interdisciplinary collaboration/STEM lab/robotics)	\$1,200,000	14	X
	Add Outdoor Learning Tracks	\$150,000	2	
BOULDER PARK / JACOBSONS	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$18,400,000	40	X
	Accessibility/Universal Design Upgrades at Total Room (Distance Priority)	\$1,500,000	36	X
	New Flexible, Adaptable Furniture (Distance Priority)	\$2,500,000	33	X
	Reconfigure all classrooms and Media Centers for interdisciplinary collaboration/STEM lab/robotics (designer, art, and science), add art & student collaboration spaces that encourage creativity & exploration	\$25,700,000	32	X
	Add Natural Light with Integrated lighting controls	\$5,100,000	6	
	Addition of Multiple-use spaces for interdisciplinary collaboration/STEM lab/robotics	\$8,000,000	16	
SMITH MIDDLE SCHOOL	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$8,800,000	40	X
	Accessibility/Universal Design Upgrades at Total Room (Distance Priority)	\$500,000	36	X
	New Flexible, Adaptable Furniture (Distance Priority)	\$1,200,000	31	X
	Build new 2-story school (120,000 sq ft for 750 students, including space for STEM lab/robotics)	\$75,000,000	27	X
	Removable Media Center (Multi-use space for interdisciplinary collaboration/STEM lab/robotics)	\$25,200,000	12	
	Addition of Multiple-use spaces for interdisciplinary collaboration/STEM lab/robotics (Remodeling concept, only)	\$4,000,000	10	
TROY HIGH SCHOOL	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$25,600,000	40	X
	Accessibility/Universal Design Upgrades at Total Room (Distance Priority)	\$1,500,000	37	X
	New Flexible, Adaptable Furniture (Distance Priority)	\$4,500,000	33	X
	Removable Academic Wings (designer concept for interdisciplinary collaboration space, additional classrooms & enhanced main entry)	\$49,800,000	23	
	Expand Theater Gallery and Lobby for direct, safe, welcoming entry	\$12,900,000	18	
	Expand Music rehearsal spaces & add new rehearsal space	\$3,500,000	21	X
	Enhance Athletic Fields	\$8,700,000	14	
	New Home & Bleachers on West Side of Stadium	\$3,700,000	8	
	Add Multiple-use space for interdisciplinary collaboration/robotics/STEM/robotics	\$6,900,000	17	X
	Add Competition Gym with Track	\$18,500,000	10	
ATHENS HIGH SCHOOL	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$19,300,000	40	X
	Accessibility/Universal Design Upgrades at Total Room (Distance Priority)	\$4,480,000	37	X
	New Flexible, Adaptable Furniture in Recreation Scheme (Distance Priority)	\$3,400,000	33	X
	New Academic Wing (2 levels) / Major Remodeling of Non-academic Areas	\$114,000,000	37	X
	Partial New / Remodeling of Academic Areas	\$68,500,000	4	
	Openness / Reconfigurable Spaces and Classroom Learning	\$7,900,000	11	
	Removable existing CTR Interior Physical Education as a central recreation	\$3,000,000	12	
	Enhance Athletic Fields	\$7,500,000	14	
TCCS	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$2,800,000	40	X
	Accessibility/Universal Design Upgrades at Total Room (Distance Priority)	\$390,000	34	X
	Add Dining / Kitchen / Pantry	\$2,300,000	5	
	Add Gymnasium	\$5,000,000	10	
UAE	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$5,100,000	40	X
	Accessibility/Universal Design Upgrades at Total Room (Distance Priority)	\$850,000	34	X
	New Flexible, Adaptable Furniture (Distance Priority)	\$900,000	30	
	Design Flexible & Adaptable Learning Spaces for interdisciplinary Collaboration	\$4,850,000	10	
OTHER ITEMS	Expand Cafeteria / Multi-use space	\$1,950,000	11	
	FOUNDATION - Purchase of Buses	\$12,000,000	40	X
	FOUNDATION - Special Education Programing Upgrade	\$7,200,000	40	X
	FOUNDATION - Technology Upgrade	\$32,000,000	40	X
	FOUNDATION - Support/Administrative Facilities Condition Assessment Needs (Years 1-10)	\$7,700,000	40	X
		Totals	\$558,810,000	\$517,110,000
			Majority Individual	Majority Table

# Updated 2 mill Build

FRC formed consensus around a new 2 mill Build that included an allocation of \$14,790,000 to upgrades at Troy High School

2 Mill Recommendation from the Facilities Review Committee			
Category	Potential Bond Program Scope	Estimated Cost	2 mill Table Build
ALL ELEMENTARY SCHOOLS	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$85,400,000	X
	Accessibility/Universal Design Upgrades to all Toilet Rooms (District Priority)	\$6,500,000	X
	New Flexible, Adaptable Furniture (District Priority)	\$7,600,000	X
	Replacement of Playgrounds with New Surfaces & Accessible Equipment	\$6,000,000	X
	Space (new or remodeled) for 3rd Kindergarten Classroom; Classroom additions as depicted in concepts	\$13,600,000	X
BAKER MIDDLE SCHOOL	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$9,200,000	X
	Accessibility/Universal Design Upgrades to all Toilet Rooms (District Priority)	\$650,000	X
	New Flexible, Adaptable Furniture (District Priority)	\$1,300,000	X
	Remodel Media Center (Multi-use space for interdisciplinary collaboration/STEM/robotics)	\$1,200,000	X
BOULAN PARK / LARSON MIDDLE SCHOOLS	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$18,400,000	X
	Accessibility/Universal Design Upgrades to all Toilet Rooms (District Priority)	\$1,500,000	X
	New Flexible, Adaptable Furniture (District Priority)	\$2,500,000	X
	Reconfigure all classrooms and Media Centers for interdisciplinary collaboration/STEM/robotics (proper size, add glass walls, add staff & student collaboration spaces that encourage curiosity & exploration)	\$25,700,000	X
SMITH MIDDLE SCHOOL	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$8,800,000	X
	Accessibility/Universal Design Upgrades to all Toilet Rooms (District Priority)	\$500,000	X
	New Flexible, Adaptable Furniture (District Priority)	\$1,200,000	X
	Build new 2-story school (120,000 sf for 750 students, including space for STEM/robotics)	\$75,000,000	X
TROY HIGH SCHOOL	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$25,600,000	X
	Accessibility/Universal Design Upgrades to all Toilet Rooms (District Priority)	\$1,500,000	X
	New Flexible, Adaptable Furniture (District Priority)	\$4,500,000	X
	Upgrades at THS to address circulation issues, student collaboration enhancements, multi-use space for robotics, fitness and other activities, and other identified critical program needs	\$14,790,000	X
	Expand Music Rehearsal Spaces & add New Rehearsal Space	\$3,500,000	X
ATHENS HIGH SCHOOL	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$19,300,000	X
	Accessibility/Universal Design Upgrades to all Toilet Rooms / Locker Room Renovation (District Priority)	\$4,680,000	X
	New Flexible, Adaptable Furniture in Renovation Scheme (District Priority)	\$3,400,000	X
	New Academic Wing (3 levels) / Major Remodeling of Remaining Academic Areas	\$114,000,000	X
TECHS	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$2,600,000	X
	Accessibility/Universal Design Upgrades to all Toilet Rooms (District Priority)	\$330,000	X
IAE	FOUNDATION - Facilities Condition Assessment Needs (Years 1-10)	\$5,100,000	X
	Accessibility/Universal Design Upgrades to all Toilet Rooms (District Priority)	\$850,000	X
	New Flexible, Adaptable Furniture (District Priority)	\$900,000	X
OTHER ITEMS	FOUNDATION - Purchase of Buses	\$12,000,000	X
	FOUNDATION - Special Education Programming Upgrades	\$7,200,000	X
	FOUNDATION - Technology Upgrades	\$32,000,000	X
	FOUNDATION - Support/Administrative Facilities Condition Assessment Needs (Yrs 1-10)	\$7,700,000	X
Total			\$525,000,000



**Recommendation**

# FRC Recommendation

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- Over 700 hours of time invested by Committee Members
- 7 Steering Committee Meetings
- Tours of District Schools
- Professional Survey conducted by EPIC-MRA
- Development and Analysis of Various Ideas, Concepts and Estimates



# Recommendation

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- ✓ \$525 million Bond Program
- ✓ 2 mill increase to current millage rate
- ✓ Proposal on the November 8, 2022 ballot

Bond Program will transform our school facilities to support the future of education and allow Troy School District to continue to provide a World Class Education for ALL!



**Details /  
Concepts**

# Foundational Elements across ALL Buildings

	Barnard Elementary	Bemis Elementary	Costello Elementary	Hamilton Elementary	Hill Elementary	Leonard Elementary	Martell Elementary	Morse Elementary	Schroeder Elementary	Troy Union Elementary	Wass Elementary	Wattles Elementary	Boulton Park Middle School	Larson Middle School	Baker Middle School	Smith Middle School	Athens High School	Troy High School	International Academy East	Troy Career & College HS
<b>EXTERIOR ENVELOPE</b>																				
Partial roof replacement	x	x	x			x		x	x	x	x	x				x	x	x		
Roof replacement				x	x										x					x
Replace exterior doors & windows			x		x				x	x										
Replace exterior doors							x	x					x			x	x	x	x	x
Replace windows where needed												x								x
Replace select windows and exterior doors				x																
<b>INTERIOR</b>																				
Replace interior doors	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
New ceilings where needed	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Flooring upgrades where needed	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
New visual display boards (non-tech whiteboards)	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x		
New toilet partitions	x	x	x	x	x	x	x	x	x	x	x	x	x	x						
New toilet partitions & accessories																x	x	x	x	
New stage curtains	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x			
New casework in classrooms	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Replace operable walls	x	x	x	x	x	x	x	x	x	x	x	x	x	x						
New gym backboards and wall pads	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x				x
New gym backboards, wall pads and gym curtain																	x	x		
Upgrade kitchen equipment	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
New bleachers													x	x		x				
New bleachers & auditorium seating																	x	x		
New operable walls																x				
New window treatments																x	x	x		
New lockers																x	x	x		
Signage																	x	x		

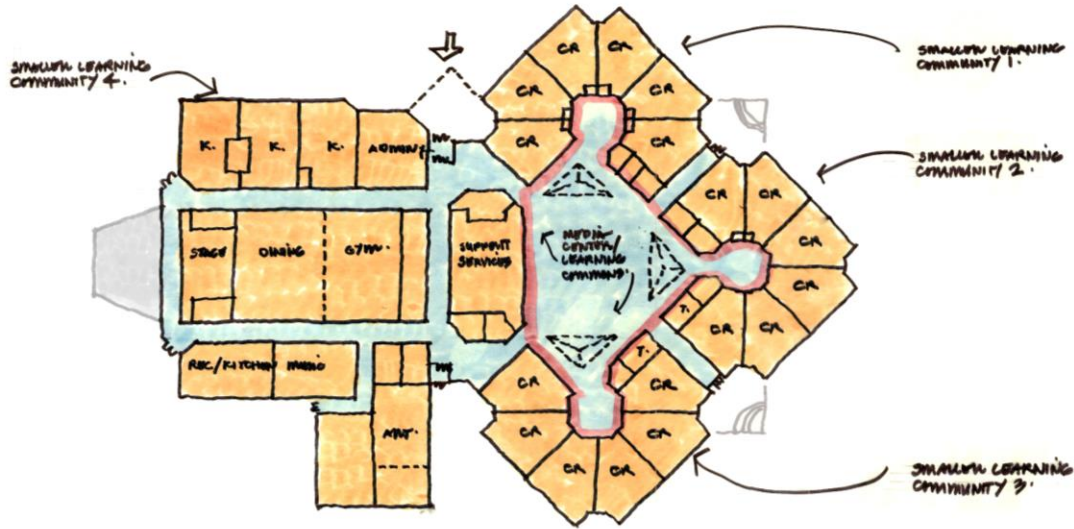
# Foundational Elements across ALL Buildings

	Barnard Elementary	Bemis Elementary	Costello Elementary	Hamilton Elementary	Hill Elementary	Leonard Elementary	Martell Elementary	Morse Elementary	Schroeder Elementary	Troy Union Elementary	Wass Elementary	Wattles Elementary	Boulton Park Middle School	Larson Middle School	Baker Middle School	Smith Middle School	Athens High School	Troy High School	International Academy East	Troy Career & College HS
<b>MECHANICAL</b>																				
Replace plumbing fixtures	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x		x	
Replace hot water heater								x	x			x								
Replace galvanized piping								x	x											
Replace water coolers	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x		x	
Replace sump pump	x	x		x				x		x										
Replace grease trap	x	x	x	x		x		x	x		x		x	x			x			
Add solids interceptor																x	x			
Replace horizontal unit ventilator in classrooms						x														
Replace cooling equipment								x	x											
Replace boiler pumps & piping			x							x		x								
Replace cooling tower												x								
Replace kitchen HVAC & exhaust			x										x	x						
Replace kitchen HVAC									x											
New / replace boilers	x	x		x	x						x				x	x			x	
Replace chiller															x		x			
Replace aging mechanical units	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Replace select room HVAC units			x																	
Replace room HVAC units with new controls	x	x		x			x	x	x	x	x	x					x	x	x	
Replace exhaust fans	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	
New temperature controls	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	
Replace pool area HVAC																x				
Replace aux gym ceiling fans																		x		

# Foundational Elements across ALL Buildings

	Barnard Elementary	Benis Elementary	Costello Elementary	Hamilton Elementary	Hill Elementary	Leonard Elementary	Martell Elementary	Morse Elementary	Schroeder Elementary	Troy Union Elementary	Wass Elementary	Wattles Elementary	Boulton Park Middle School	Larson Middle School	Baker Middle School	Smith Middle School	Athens High School	Troy High School	International Academy East	Troy Career & College HS
<b>ELECTRICAL</b>																				
Upgrade electrical service	x	x	x		x		x				x	x				x				
Replace power panels	x			x	x		x		x	x	x	x				x			x	
Replace power panels & transformers		x	x					x										x		
GFI outlets at sinks		x	x			x		x	x	x		x	x	x		x		x		
GFI outlets at sinks & power for technology											x									
Upgrade interior lighting with new LED	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Replace emergency lighting systems	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
New lighting at exterior canopy	x	x	x	x	x		x	x	x		x	x				x	x	x	x	
Access control/intrusion detection	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Replace floor box covers													x	x					x	
Upgrade parking lot lighting with new LED															x					
Replace football stadium lighting																	x			
<b>SITE DEVELOPMENT</b>																				
Partial concrete walkway replacement	x	x	x	x						x	x	x					x	x	x	x
Partial parking lot & concrete walkway replacement					x	x	x	x	x				x	x	x	x				
Partial asphalt replacement			x	x																
Replace asphalt paving																				x
Improve site drainage	x	x	x				x	x												
Replace fencing, flagpole, benches, bike racks	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Resurface track, fill cracks													x	x	x	x	x			
Tennis court resurface & crack repair																x	x			
Stadium turf replacement																	x	x		
Top dress, level, and repair warning track on baseball/softball fields and practice field																				
Top dress, level, and repair warning track on baseball/softball fields																		x		
Top dress, level & repair irrigation on practice field																		x		

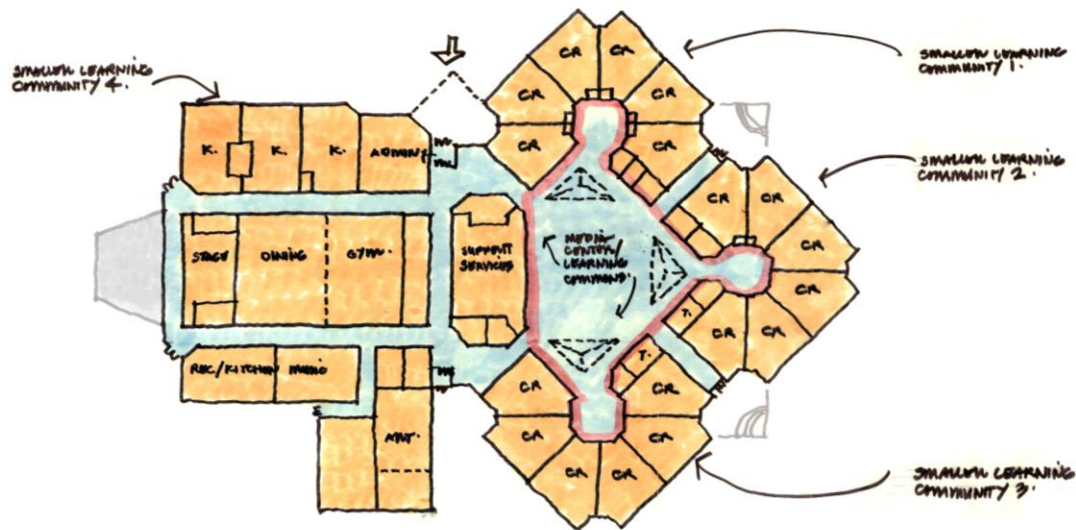
# Barnard Elementary School



## FEATURES OF BOND 2022

- **Infrastructure Upgrades as depicted on Previous Matrix**
- **Programmatic Upgrades**
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom

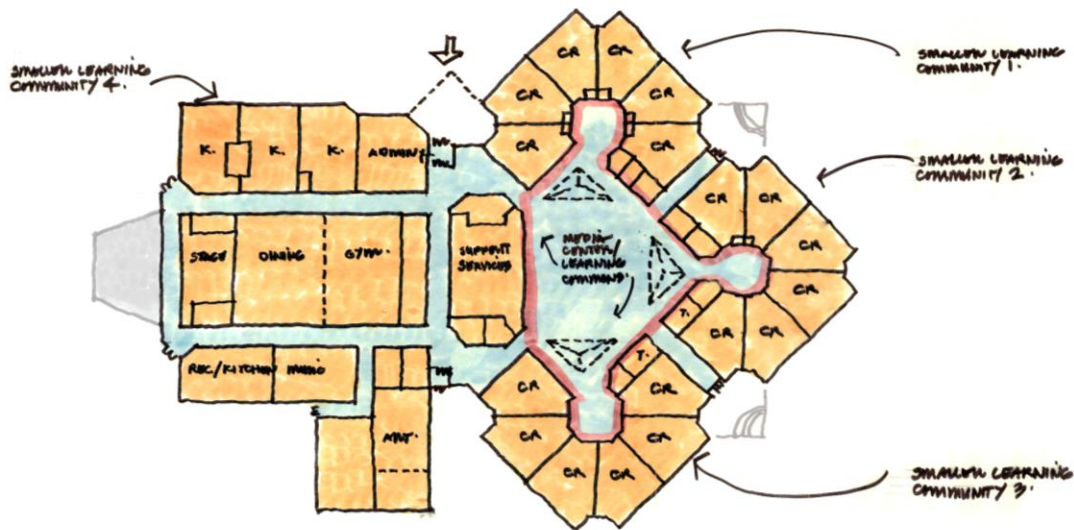
# Bemis Elementary School



## FEATURES OF BOND 2022

- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom

# Hamilton Elementary School

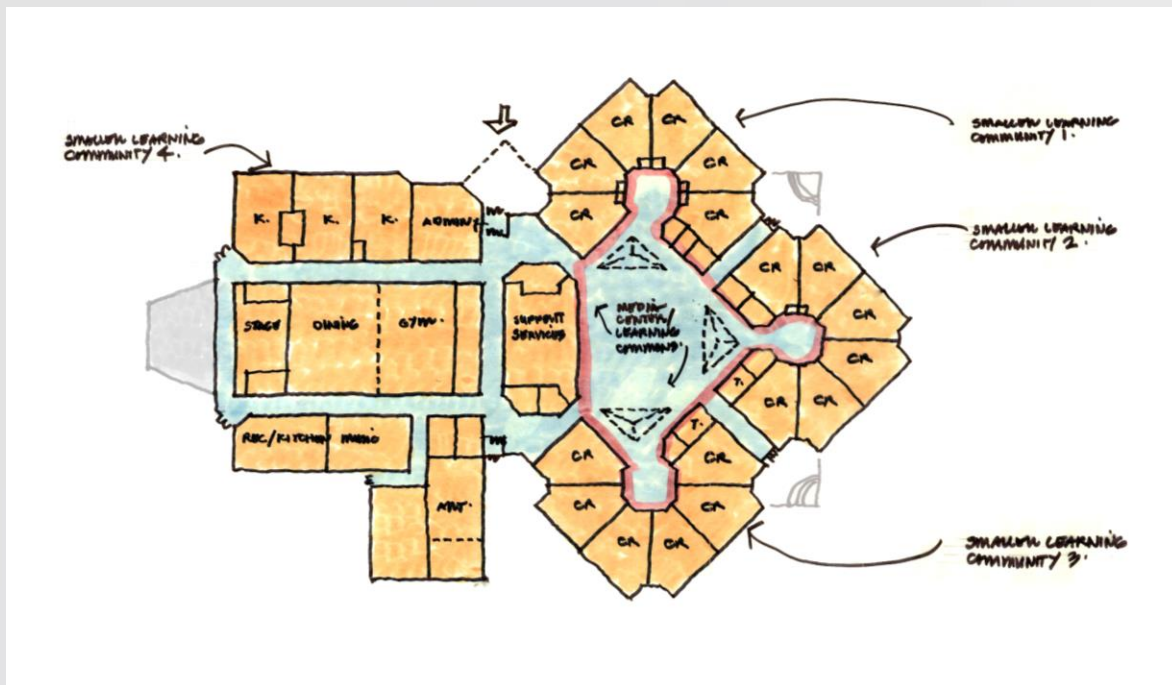


## FEATURES OF BOND 2022

- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom



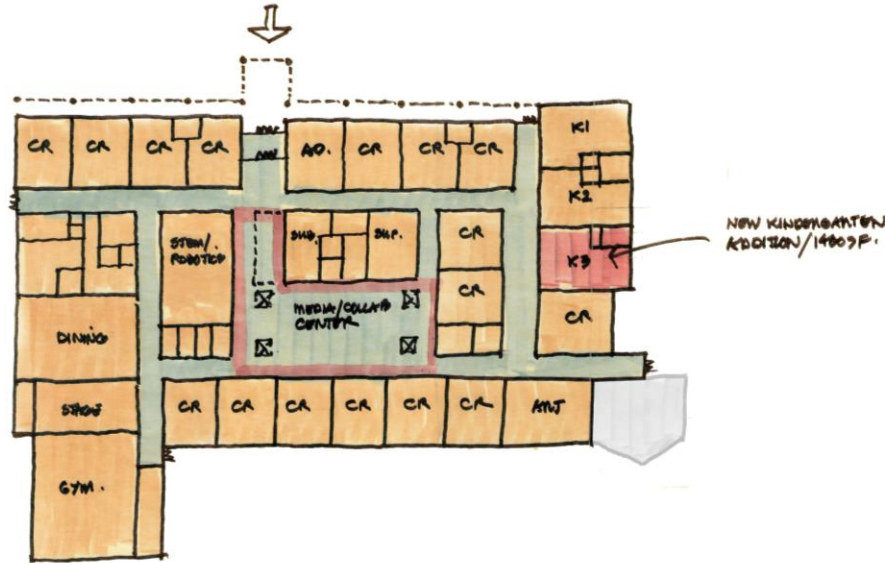
# Wass Elementary School



## FEATURES OF BOND 2022

- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom

# Costello Elementary School



## FEATURES OF BOND 2022

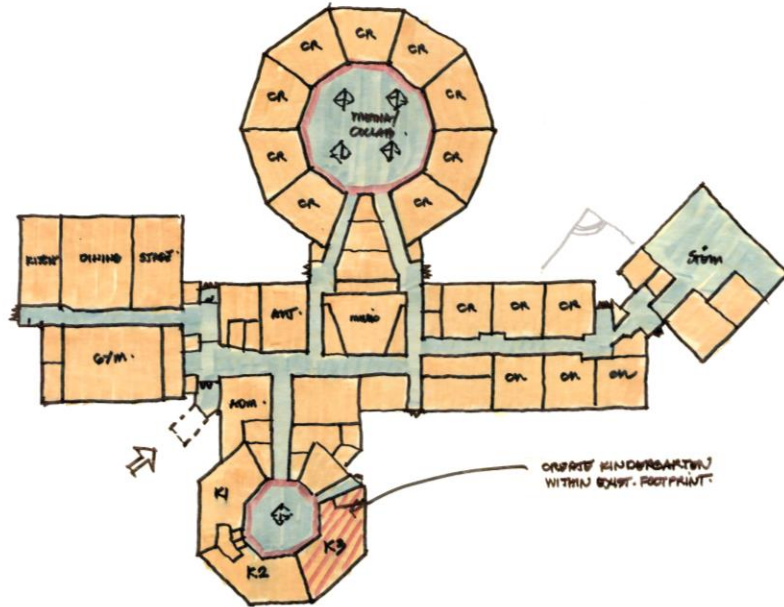
- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom

[illegible]

➤ **Infrastructure Upgrades as depicted on Previous Matrix**

- Accessibility / universal design upgrades to all toilet rooms
- New flexible, adaptable furniture
- Replacement of playgrounds with new surfaces & accessible equipment
- Space (new or remodel) for 3rd Kindergarten classroom

# Hill Elementary School



## FEATURES OF BOND 2022

- **Infrastructure Upgrades as depicted on Previous Matrix**
- **Programmatic Upgrades**
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom

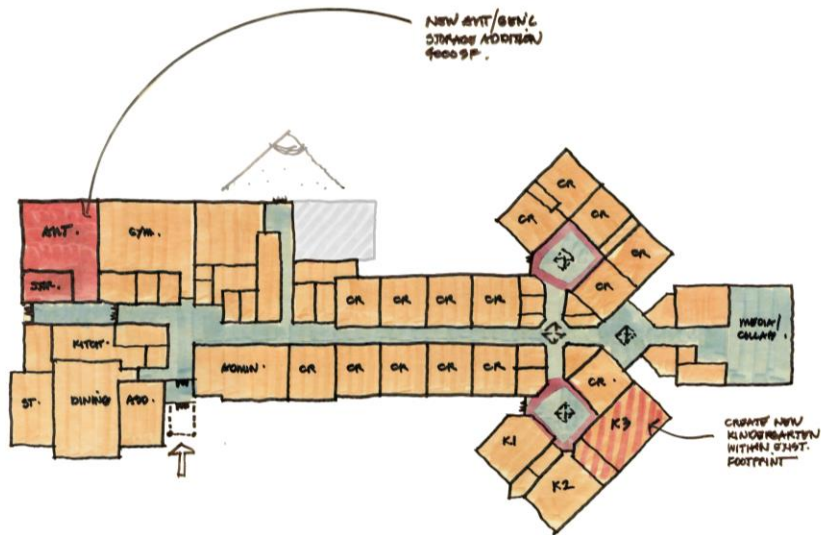
# Leonard Elementary School



## FEATURES OF BOND 2022

- **Infrastructure Upgrades as depicted on Previous Matrix**
- **Programmatic Upgrades**
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom

# Morse Elementary School



## FEATURES OF BOND 2022

- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom
  - New art room/general storage addition

# Schroeder Elementary School



## FEATURES OF BOND 2022

- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom



A hand-drawn floor plan of a school building. The plan is divided into several sections. At the top, there is a dashed line indicating the 'ORIGINAL SCHOOL' boundary. To the left, a dashed line indicates the 'REMOVING BUILT' area. To the right, a dashed line indicates the 'RELOCATING PORTAL' area. The plan includes the following rooms and areas:

- Top Section:** A row of rooms labeled 'CA', 'CA', 'CA', 'CA', 'ADMIN.', 'CA', 'CA', 'CA', 'CA'.
- Left Section:** A row of rooms labeled 'K1', 'K2', 'K3'.
- Center Section:** A large area labeled 'Gym.' with a green background. To its right is a 'STAGE' area.
- Right Section:** A large area labeled 'MEETING HALL' with a green background. To its right is a row of rooms labeled 'CA', 'CA', 'CA', 'CA'.
- Bottom Section:** A row of rooms labeled 'KENT', 'MEET', and 'STRAW'.

Annotations and other features include:

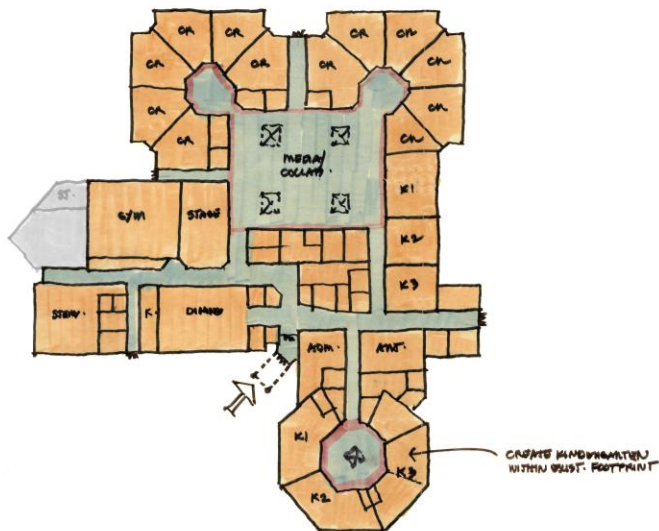
- A dashed line at the top left labeled 'REMOVING BUILT. ORIGINAL SCHOOL'.
- A dashed line at the top right labeled 'RELOCATING PORTAL. BUILT. SCHOOL. ORIGINAL SCHOOL'.
- A dashed line at the top center labeled 'NEW CANOPY @ FRONT FACADE'.
- A dashed line at the bottom left labeled 'ORIGINAL BUILT. CA RM. KINDERGARTEN'.
- A dashed line at the bottom right labeled 'STRAW'.
- A dashed line at the bottom center labeled 'KENT'.
- A dashed line at the bottom left labeled 'MEET'.
- A dashed line at the bottom right labeled 'STRAW'.

➤ **Infrastructure Upgrades as depicted on Previous Matrix**

- Accessibility / universal design upgrades to all toilet rooms
- New flexible, adaptable furniture
- Replacement of playgrounds with new surfaces & accessible equipment
- Space (new or remodel) for 3rd Kindergarten classroom
- 4 new classrooms to replace removed original structure



# Wattles Elementary School



## FEATURES OF BOND 2022

- **Infrastructure Upgrades as depicted on Previous Matrix**
- **Programmatic Upgrades**
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Replacement of playgrounds with new surfaces & accessible equipment
  - Space (new or remodel) for 3rd Kindergarten classroom

UPPER LEVEL PLAN.

MAIN LEVEL PLAN.

CAPACITY  
 98 TEACHING STATIONS  
 x 13 STUDENTS  
 x 85% UTILIZATION  
 = 807 STUDENTS.

POTENTIAL MIX-ETHNIC  
 BOBAC CONCESSIONS  
 COLLABORATION/SPINE  
 (B) MAIN CIRCULATION PATHWAY  
 ADMIN.

➤ **Infrastructure Upgrades as depicted on Previous Matrix**

- Accessibility / universal design upgrades to all toilet rooms
- New flexible, adaptable furniture
- Remodel media center (multi-use space for interdisciplinary collaboration/STEM/robotics)

CAPACITY:

26 TEACHING STATIONS  
X 25 STUDENTS  
X 83% UTILIZATION  
= 765 STUDENTS

The floor plan shows a building layout with the following rooms and features:

- Top Center:** STAFF/ROBOTS 25/10
- Top Left:** AMT. 1, AMT. 2, CR 3, CR 4, CR 5, CR 6, STAFF.
- Top Right:** CR 7, CR 8, CR 9, CR 10, CR 11, CR 12, STAFF.
- Middle Left:** CR 13, CR 14, CR 15, CR 16, CR 17, CR 18, STAFF.
- Middle Center:** MEDIA/ COLLABORATION CENTER
- Middle Right:** CR 19, CR 20, CR 21, CR 22, CR 23, CR 24, STAFF.
- Bottom Left:** MUSIC 31, KITCHEN, MUSIC 32.
- Bottom Center:** DINING/ MULTI-PURPOSE
- Bottom Right:** STYL 33/34
- Bottom Center:** ADMIN. CENTER
- Bottom Right:** MAIN ENTRY

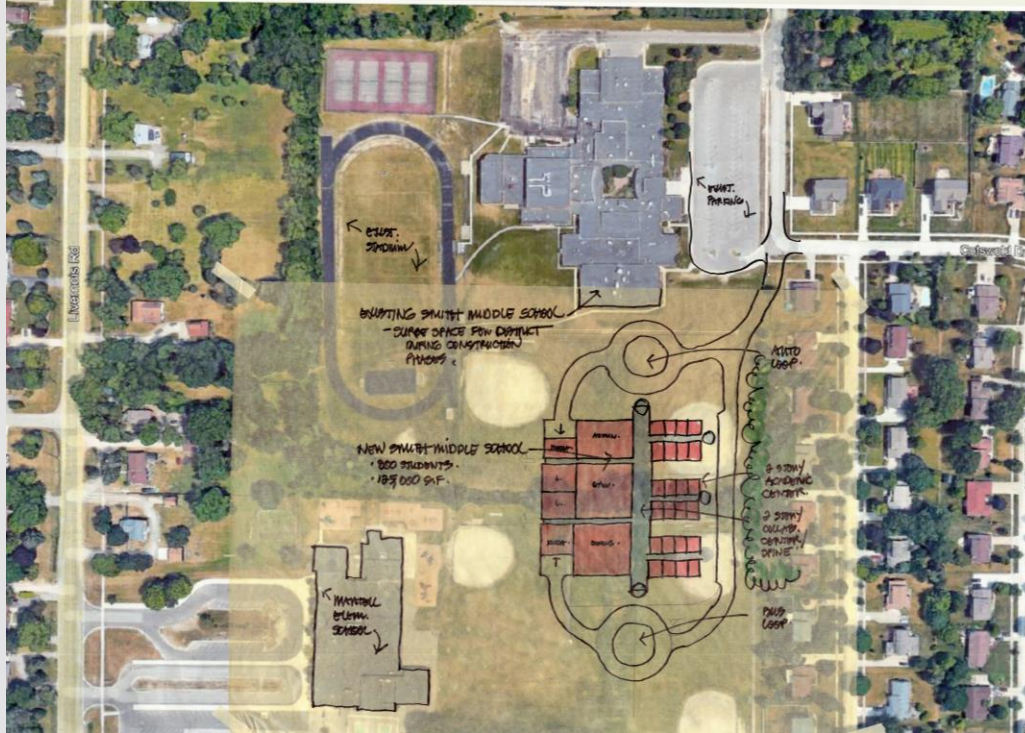
Annotations on the right side of the plan:

- SMALLER LEARNING COMMUNITY / TYP @ 5 MODULES
- STUDENT COLLABORATION / TYP
- STAFF COLLABORATION / TYP
- FLATTER FLOOR @ DINING SPACE
- NEW UNIVERSAL LECTURE ROOM ADDITION 3400 SF.

- **Infrastructure Upgrades as depicted on Previous Matrix**
- **Programmatic Upgrades**

- Accessibility / universal design upgrades to all toilet rooms
- New flexible, adaptable furniture
- Reconfigure all classrooms and media center for interdisciplinary collaboration/STEM/robotics (proper size, add glass walls, add staff & student collaboration spaces that encourage curiosity & exploration)

# Smith Middle School

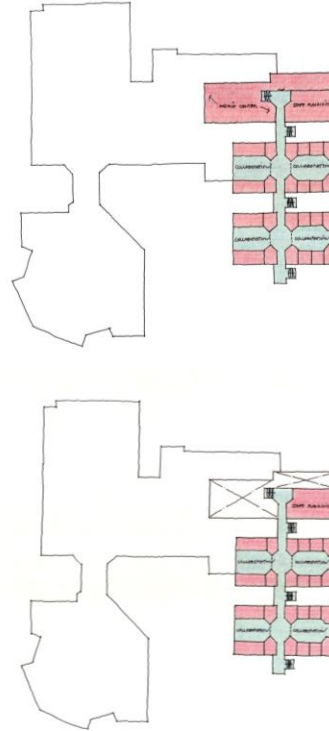
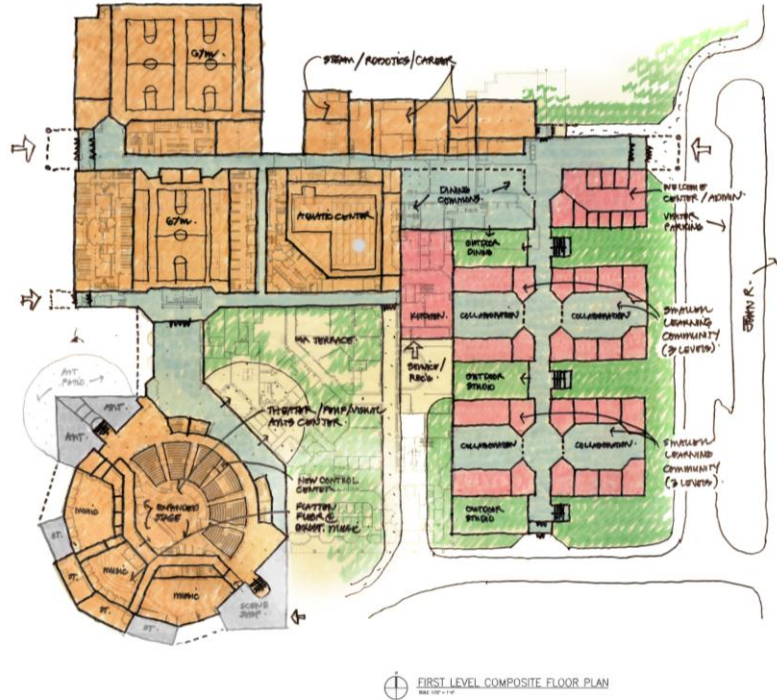


## FEATURES OF BOND 2022

- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - Build new 2-story school (120,000 square feet for 750 students, including space for STEM/ robotics)



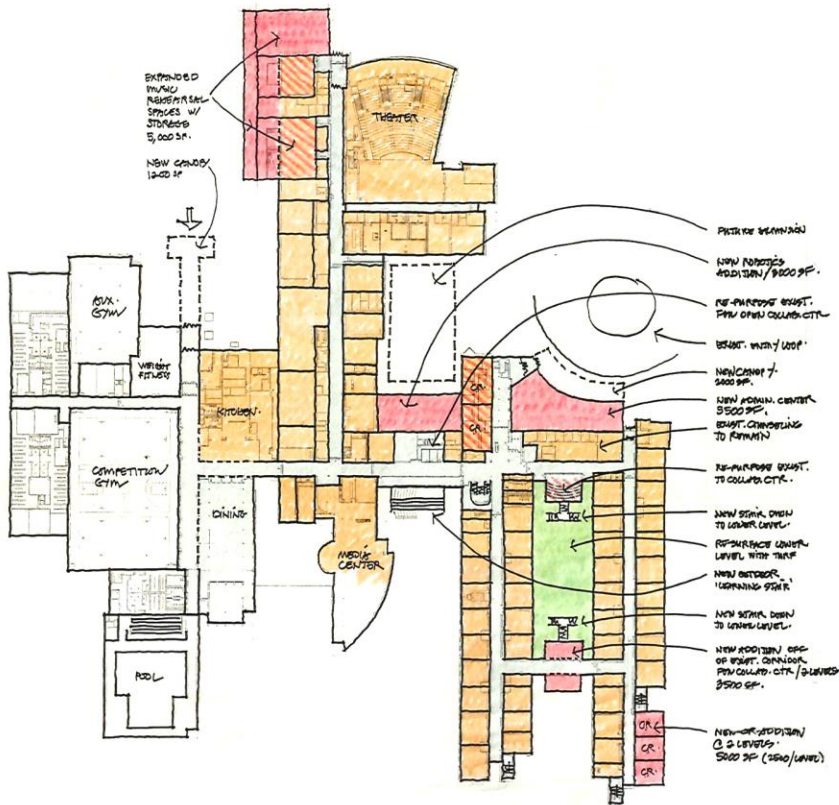
# Athens High School



## FEATURES OF BOND 2022

- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture
  - New academic wing (3 levels) and major remodeling of remaining academic areas

# Troy High School



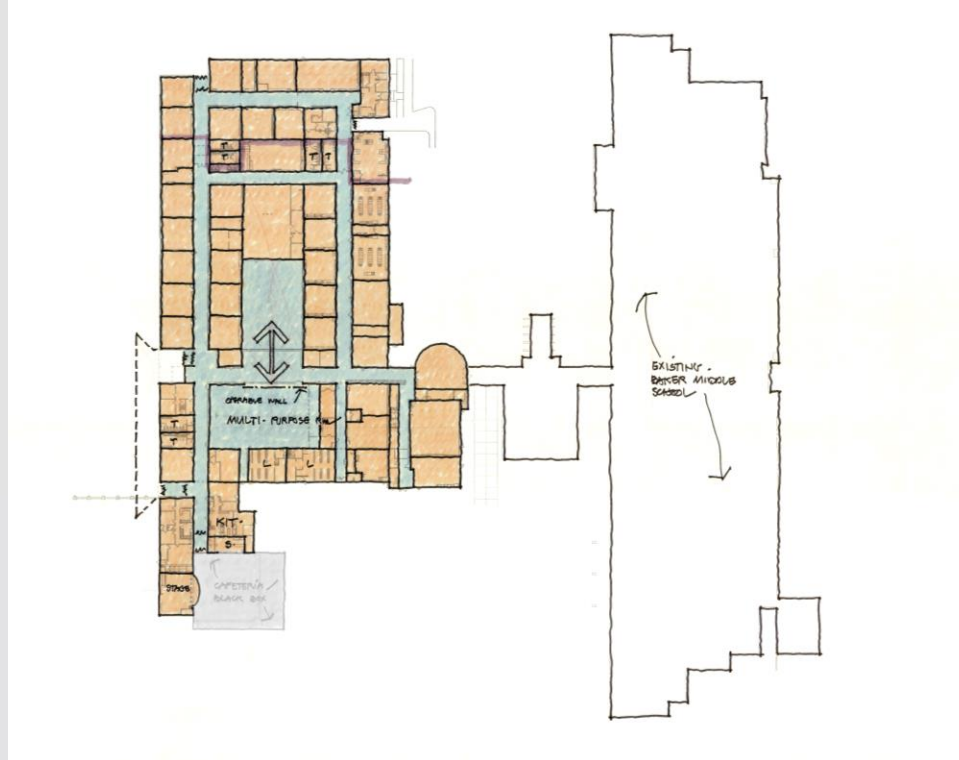
## FEATURES OF BOND 2022

➤ **Infrastructure Upgrades as depicted on Previous Matrix**

## ➤ Programmatic Upgrades

- Accessibility / universal design upgrades to all toilet rooms
- New flexible, adaptable furniture
- Upgrade at THS to address circulation issues, student collaboration enhancements, multi-use space for robotics, fitness and other activities, and other identified critical program needs
- Expand music rehearsal spaces and add new rehearsal space

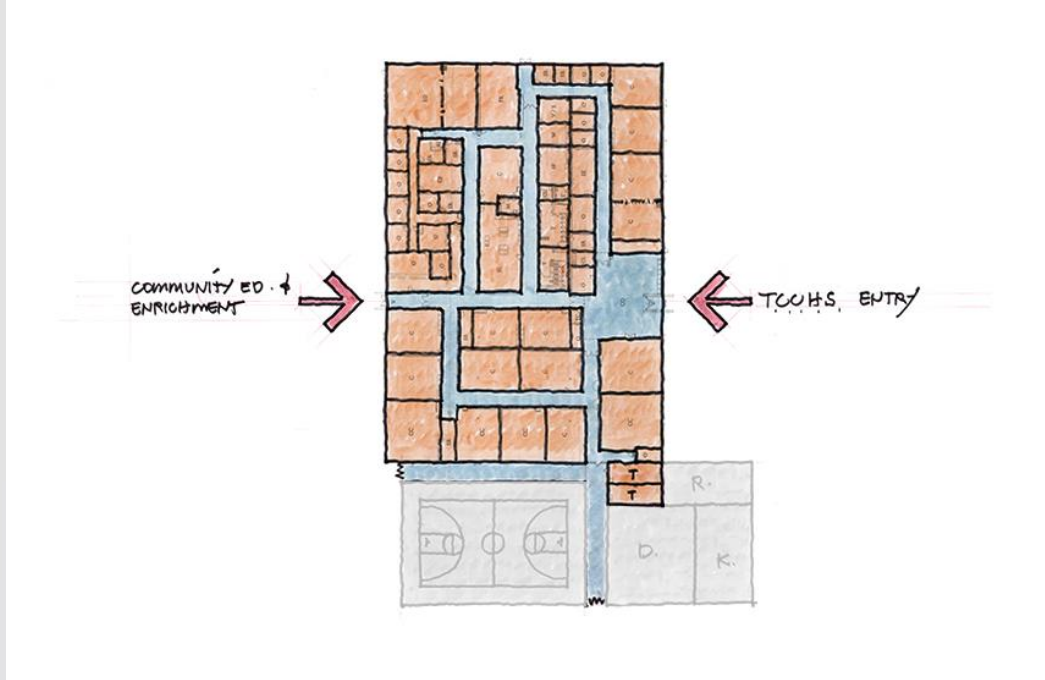
# International Academy East & Troy Center for Transition



## FEATURES OF BOND 2022

- **Infrastructure Upgrades as depicted on Previous Matrix**
- **Programmatic Upgrades**
  - Accessibility / universal design upgrades to all toilet rooms
  - New flexible, adaptable furniture

# Troy Career & College High School



## FEATURES OF BOND 2022

- Infrastructure Upgrades as depicted on Previous Matrix
- Programmatic Upgrades
  - Accessibility / universal design upgrades to all toilet rooms



# District Support Buildings

- Roof replacement
- Replace windows
- Replace exterior doors
- New ceilings where needed
- Flooring upgrades where needed
- Toilet partitions & accessories
- Replace casework where needed
- Upgrade lighting to LED
- Replace aging mechanical units
- Replace plumbing fixtures where needed
- Replace exhaust fans
- Temperature controls
- Upgrade electrical service
- Replace power panels
- Upgrade interior lighting with new LED
- Access control/intrusion detection
- Replace asphalt paving
- Partial concrete walkway replacement



**Financials**

# Taxpayer Impact / \$525 million - 2 mill increase

	Troy Zip Codes			
	48083	48084	48085	48098
Average Home Market Value	\$300K	\$353K	\$392K	\$470K
Annual Impact to Taxpayer	\$300	\$353	\$392	\$470
Monthly Impact to Taxpayer	\$25	\$29	\$33	\$39



*Thank you for the  
opportunity to present  
the work of the FRC*