DISTRICT-WIDE FEASIBILITY STUDY UPDATE FOR THE

ASD Allentown SCHOOL DISTRICT

LEHIGH COUNTY, PA

February 4, 2021

BRESLIN ARCHITECTS

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Allentown School District
Feasibility Study Update

PART 1
ENROLLMENTS, CAPACITIES, & FACILITIES EVALUATION

A. PURPOSE OF THE STUDY

The Commonwealth of Pennsylvania requests that School Districts complete a Study of Facilities owned by the School District on a periodic basis. The Study must provide an appraisal as to each facility's ability to meet current and planned educational needs. It must also describe the degree to which the facilities meet current construction standards, applicable codes, and provide estimated costs of repairs and upgrades. In addition, the Study must contain an analysis of construction or renovation options with cost estimates.

This Feasibility Study is an update to the June 1, 2016 & October 26, 2017 Feasibility Studies, that focuses specifically on Harrison-Morton Middle School, Raub Middle School, and Jefferson Elementary School. These three buildings have been identified as requiring immediate attention due to deteriorating physical conditions.

B. AUTHOR'S CREDENTIALS

This report has been prepared by Breslin Architects. Over the last 50 years Breslin Architects has been the Architect for a wide range of educational projects encompassing more than 4 billion dollars in current construction value. The following professional staff contributed to the completion of this report:

Stephen J. Behrens, A.I.A., LEED AP BD+C
Michael K. Ackerman, A.I.A.
Jason M. LeMaster, Associate A.I.A.
Karla Roldan-Castillo, Associate A.I.A.
Theresa J. Mihok
Angela Haskins
Diane M. Downing

Breslin Architects wishes to acknowledge the contribution of the following companies for their assistance in evaluating the existing conditions and recommending solutions:

Consolidated Engineers for their assistance in evaluating the heating, ventilating, air-conditioning, plumbing, and electrical components of this study.

Barry Isett & Associates for their assistance in evaluating potential building sites.

In addition, we thank Thomas Smith, Director of Facilities; Thomas E. Parker, Superintendent; the entire School Board, and all the Operational/Academic Administrators.

C. SCHOOL BUILDINGS EVALUATED

			Current PDE Capacity
Harrison Morton Middle School	Grades:	6-8	785
Raub Middle School	Grades:	6-8	897
Jefferson Elementary School	Grades:	K-5	575
		TOTAL	**2257 Students**

D. METHODOLOGY

Each school evaluated in this update has been inspected by the Architect and an analysis has been made using Pennsylvania Department of Education (PDE) Standards for determining the rated building capacity. The capacity analysis for each building is located in the appendix, using Pennsylvania Department of Education PlanCon forms.

The capacities for the various grade structure categories; i.e., Elementary (K-5), Middle (6-8), and High School (9-12), were subsequently compared to the projected enrollments, which have been provided by DecisionInsite and the Pennsylvania Department of Education. The results are prepared on the following pages.

E. SCHOOL DISTRICT OVERVIEW

The Allentown School District serves a community of over 118,000 residents in Lehigh County. Situated in the Lehigh Valley, the District lies approximately 75 miles west of New York City and 45 miles north of Philadelphia. The School District map can be found at the bottom right of this page.

In 2020-2021, the Allentown School District's total enrollment of 16,468 students included an Early Childhood Center, 13 Elementary Schools comprised of Grades K-5, a Lincoln Newcomer Academy program serving grades K-6, four 6 through 8 Middle Schools, three High Schools, an Alternative Education program serving grades 6-12, and a Newcomer Academy program, serving grades 7-12.

F. EDUCATIONAL PROGRAMMING

The Study team met with the District Academic Administration to review the educational program for the three schools with a focus on alignment with the District's Strategic Framework - Critical Area 2, and the Comprehensive School Improvement Plans. Particular attention was given to identifying the educational deficiencies in the buildings and gather feedback on how facility improvements could address current and future goals.

Education Spaces

The need for adaquate and appropriate space for current educational programming in the aging buildings has reached a critical level. Key attributes of improved space include inviting, flexible, multiuse space for collaboration, and classrooms that better support project work, team interaction and presentation, display and student testing. Specific program spaces that should be considered include:

- Art rooms with student display
- Familiy and Consumer Science Kitchens
- Career application demonstration areas
- Band and Choral in separate rooms with storage
- Home Economics in Kitchen with smart appliances
- STEAM Labs with 3-D printing, laser cutter and other fabrication equipment
- Science Labs with moveable lab tables that can meet up along the perimeter

Technology

The District has established a one-to-one device to student program so there is a higher demand for fluid wireless internet for anytime / anywhere access. Currently, the existing buildings have dead spots. There is a need for more innovative learning spaces for small group instruction that provide digital connectivity between spaces in the building, to other schools in the District, and to other institutions worldwide. The program would benefit from Library / Makerspace combination rooms and student presentation space.

Special Education and Language Support Programming

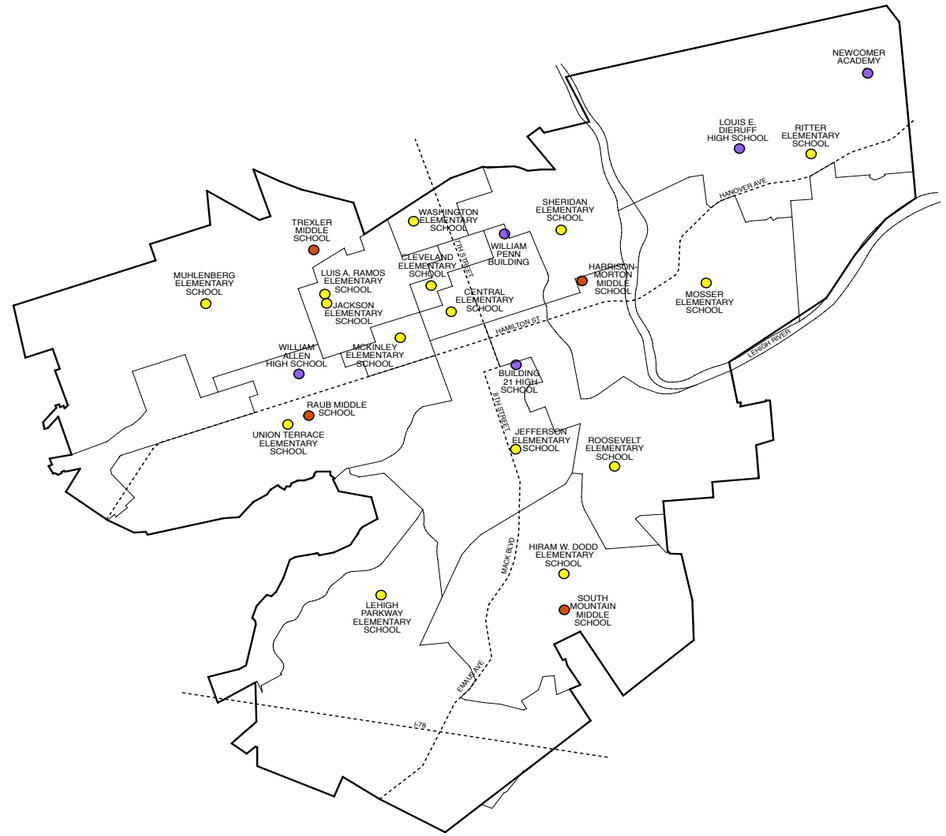
The Allentown School District provides a full continuum of supports, services and programs for English language learners and students with disabilities in the least restrictive environment, yielding the highest academic, behavioral, social and life-skill gains. The three buildings studied currently have inadquate space for co-teaching models in the classroom as well as learning

Middle School Transformation

The District is committed to partnerships with the schools, families and community to implement a program of Middle School Transformation, recognizing the link between Middle School success and college and career readiness. Facility support for this program will include classrooms designed to invite belonging and daily implementation of team building restorative practices activities. Building wide availability of dedicated support space must be included for teacher collaboration, staff development meeting and training, and confidential review of student data.

Current student services protocols will require a Health Suite with a room properly designed for isolation of students being observed or identified with contageous illness.

G. SCHOOL DISTRICT MAP



A. ENROLLMENT PROJECTIONS AND CAPACITIES SNAPSHOT

The Buildings in the Allentown School District have been effectively utilized by administrators and teachers to capture and use all available space.

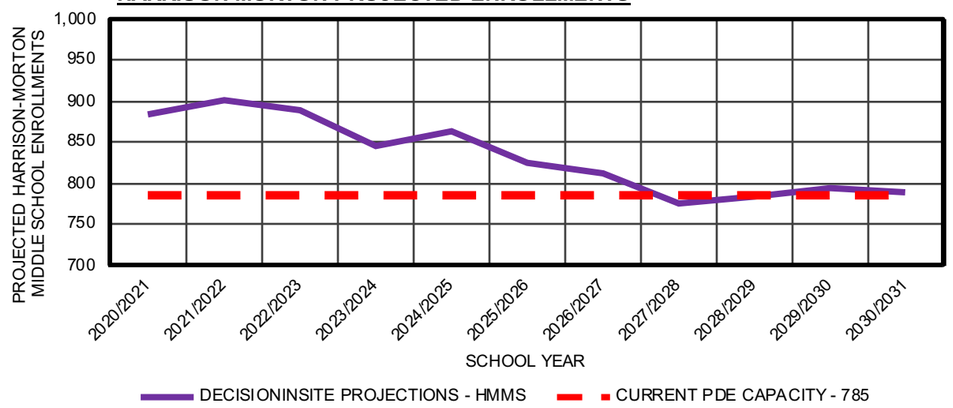
A comparison of building capacities and enrollment projections indicate that Harrison-Morton and Raub Middle Schools are currently over capacity and are projected to remain at or over capacity for the next ten years. Jefferson Elementary School is projected to remain slightly below capacity for the next ten years.

1. HARRISON-MORTON MIDDLE SCHOOL
   a. Enrollment projections at Harrison-Morton Middle School will not be adequately addressed through 2030 if school programming remains status quo.
   b. Enrollment projections indicate a moderate decline starting in 2021/2022, however, projections remain at or above current PDE capacity for the next ten years.
   c. Refer to adjacent graph.

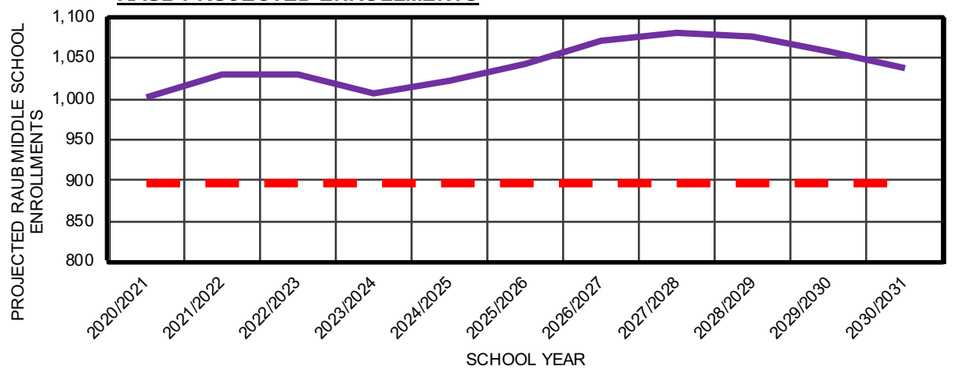
2. RAUB MIDDLE SCHOOL
   a. Enrollment projections at Raub Middle School will not be adequately addressed through 2030 if school programming remains status quo.
   b. Enrollment projections indicate a slight increase over the next ten years, with projections remaining above current PDE capacity.
   c. Refer to adjacent graph.

3. JEFFERSON ELEMENTARY SCHOOL
   a. Enrollment projections at Jefferson Elementary School will be adaquately addressed through 2030 only if school programming remains status quo.
   b. Enrollment projections indicate a slight decline starting in 2024/2025, with enrollments projected to remain below current PDE capacity over the next ten years
   c. Refer to adjacent graph.

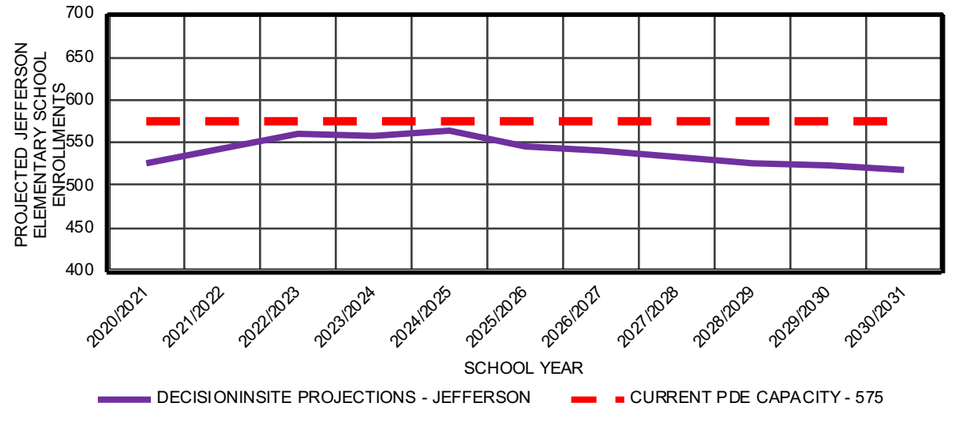
HARRISON-MORTON PROJECTED ENROLLMENTS



RAUB PROJECTED ENROLLMENTS



JEFFERSON PROJECTED ENROLLMENTS

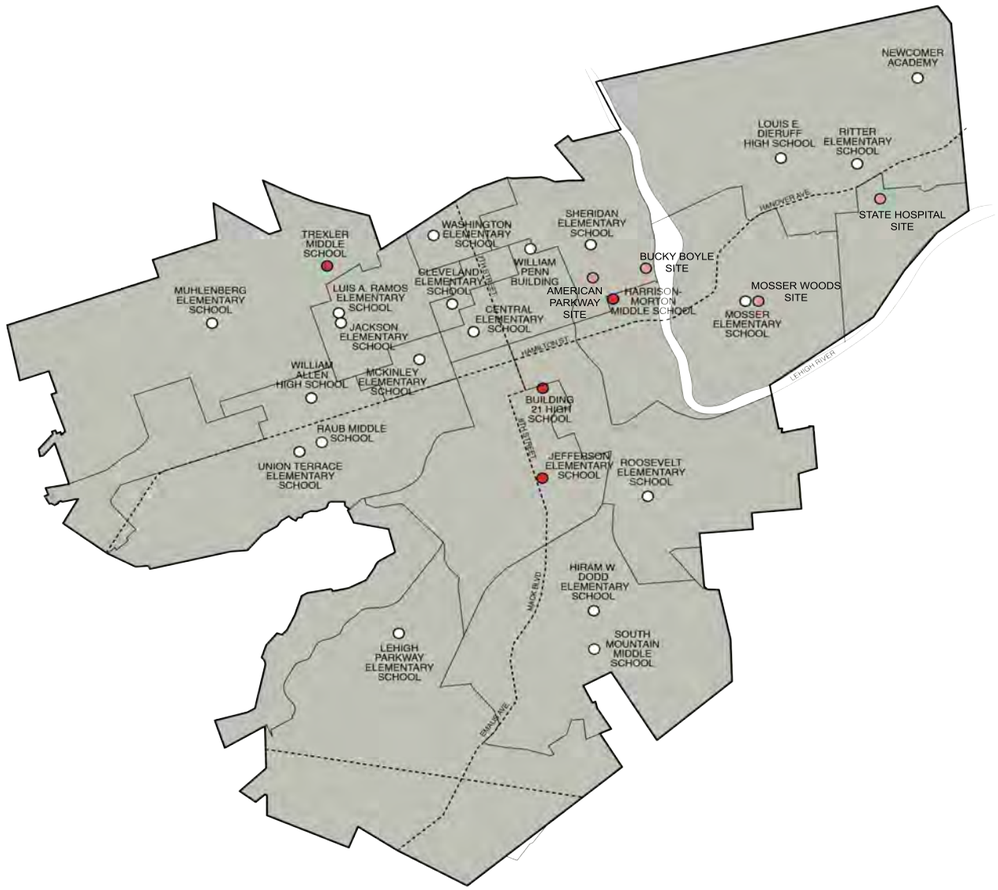


B. Executive Summary of Capacities, Enrollments, and Capital Improvements

ELEMENTARY SCHOOLS	GRADE STRUCTURE	PRESENT PDE CAPACITY	PLANNED PDE CAPACITY	ACTUAL ENROLLMENTS	DECISIONINSITE PROJECTIONS		PDE PROJECTIONS		PROPOSED STATUS	CAPITAL IMPROVEMENTS
				11/3/2020	2025	2030	2024/2025	2029/2030		
JEFFERSON ELEMENTARY	K-5	575	-	527	678	663	NOTE 4	NOTE 4	-	$17,615,358.45
SUB TOTAL		**575**	-	**527**	**678**	**663**	-	-	-	**$17,615,358.45**
					(5yr)	(10yr)	(5yr)	(10yr)		
MIDDLE SCHOOLS	**GRADE STRUCTURE**	**PRESENT PDE CAPACITY**	**PLANNED PDE CAPACITY**	**ACTUAL ENROLLMENTS**	**DECISIONINSITE PROJECTIONS**		**PDE PROJECTIONS**		**PROPOSED STATUS**	**CAPITAL IMPROVEMENTS**
		NOTE 2		11/3/2020	2025	2030	2024/2025	2029/2030		
HARRISON-MORTON MIDDLE SCHOOL	6-8	785	-	883	824	789	NOTE 4	NOTE 4	-	$30,687,429.94
RAUB MIDDLE SCHOOL	6-8	897	-	1002	1042	1039	NOTE 4	NOTE 4	-	$33,306,026.00
SOUTH MOUNTAIN MIDDLE SCHOOL	6-8	1,039	-	1244	1178	1177	NOTE 4	NOTE 4	-	NOTE 5
TREXLER MIDDLE SCHOOL	6-8	781	-	828	754	779	NOTE 4	NOTE 4	-	NOTE 5
SUB TOTAL		**3,502**	-	**3,957**	**3,798**	**3,784**	**3,455**	**3,740**	-	$63,993,455.94
DISTRICT TOTAL		-	-	-	-	-	-	-	-	**$81,608,814.39**
					(5yr)	(10yr)	(5yr)	(10yr)		

NOTES:

- 1. THE PRESENT PDE CAPACITY DOES NOT INCLUDE TEMPORARY CLASSROOMS, SPECIAL EDUCATION CLASSROOMS OR ESOL CLASSROOMS
- 2. MIDDLE SCHOOL CAPACITY IS CALCULATED USING A UTILIZATION FACTOR OF .8
- 3. MAXIMUM ESTIMATED REIMBURSEMENT CAN ONLY BE CALCULATED ON DEFINED CAPITAL PROJECTS
- 4. PDE PROJECTIONS ARE CALCULATED BY GRADE LEVEL ONLY (SCHOOLS ARE NOT IDENTIFIED BY BUILDING)
- 5. CAPITAL IMPROVEMENTS FOR THE SOUTH MOUNTAIN MIDDLE SCHOOL AND TREXLER MIDDLE SCHOOL HAVE NOT BEEN UPDATED FOR 2020



C. CONSTRUCTION OPTIONS SUMMARY

OPTION I	**COST**
A. Renovate Raub Middle School (837 Student Capacity)	$48,000,000
B. Renovate Harrison-Morton Middle School (725 Student Capacity)	$42,400,000
C. Construct new 600 Student Magnet Middle School on Mosser Woods Site	$65,200,000
TOTAL:	**$155,600,000**

PHASING CONCEPT:

Construct New Magnet School first as swing space that allows Raub and Harrison-Morton Middle Schools to be renovated in phases one at a time.

(Transportation, Staffing, and Operational Costs to be determined)

OPTION II	**COST**
A. Construct New 900 Student Middle School on American Parkway Site	$82,000,000
B. Construct New 1,000 Student Middle School and Renovate Building 21 on Building 21 Site	$89,300,000
TOTAL:	**$171,300,000**

PHASING CONCEPT:

Construct two (2) New Middle Schools while Raub and Harrison-Morton Middle Schools remain in place until completion and then divest the existing properties

OPTION III	**COST**
A. Construct New 900 Student Middle School on the Bucky Boyle Site	$74,300,000
B. Replace Community Athletic Fields Off-Site (8 Acres minimum)	$6,000,000
C. Construct New 1,000 Student Middle School and Renovate Building 21 on Building 21 Site	$89,300,000
TOTAL:	**$169,600,000**

PHASING CONCEPT:

Construct two (2) New Middle Schools while Raub and Harrison-Morton Middle Schools remain occupied until completion and then divest the existing properties

(Phasing required to replace Community Athletic Fields in advance of Option IIIa construction)

ADDITIONAL OPTIONS	**COST**
1. Construct New 600 Student Magnet Middle School on State Hospital Site	$63,760,000
2. Expand Building 21 to accommodate CTE Programming	$8,493,400
3. Expand Building 21 to accommodate District Administration Building	$16,719,800
4. Replace Jefferson Elementary School on existing site (700 Student Capacity)	$38,000,000
5. Renovate Jefferson Elementary School for 525 Students	$28,500,000

A. ENROLLMENT PROJECTIONS

DecisionInsite completed two enrollment projections: a Conservative Projection and a Moderate Projection. DecisionInsite recommends using the Conservative Projection for "budget planning purposes" and the Moderate Projection for "facilities planning purposes". The final "Analysis of Enrollment Projections" report by DecisionInsite is included in the appendix of this study.

The Allentown School District presently serves 3,957 students across 4 middle schools. The total Pennsylvania Department of Education (PDE) capacity at the middle school level is 3,502 (Utilization factor of Building Total x 0.8 used)

The analysis of enrollment projections prepared by DecisionInsite (Fall 2021 Moderate) for the Allentown School District projects a total middle school enrollment of 3,798 students in 2025 and 3,784 students in 2030. PDE enrollment projections indicate 3,455 students in 2025 and 3,740 students in 2030.

The previous 5 year enrollment history from October 2014 to October 2019 has shown an increase of 288 Middle School students. 2020 enrollments increased by 122 students over 2019.

COMPARISON OF CURRENT CAPACITIES TO PROJECTED STUDENT ENROLLMENTS

MIDDLE SCHOOLS (6-8)	CURRENT FUNCTIONAL CAPACITY	ACTUAL ENROLL-MENTS	DECISIONINSITE 10 YR MAXIMUM PROJECTED ENROLLMENT	PDE PROJECTIONS		MAX/MIN CAPACITY DIFFERENCE
		11/3/2020		2024/2025	2029/2030	year varies
Harrison-Morton	785	883	**863**	NOTE 2	NOTE 2	**-78**
Raub	897	1,002	**1,081**	NOTE 2	NOTE 2	**-184**
South Mountain	1,039	1,244	**1,244**	NOTE 2	NOTE 2	**-205**
Trexler	781	828	**828**	NOTE 2	NOTE 2	**-47**
TOTALS:	**3,502**	**3,957**	**4,016**	**3,455**	**3,740**	**-514**
				(5 year)	(10 year)	
ELEMENTARY SCHOOLS (K-5)	**CURRENT PDE CAPACITY**					2024-2025
Jefferson	575	527	**564**	NOTE 2	NOTE 2	**11**
TOTALS:	**575**	**527**	**564**	NOTE 2	NOTE 2	**11**

NOTES:

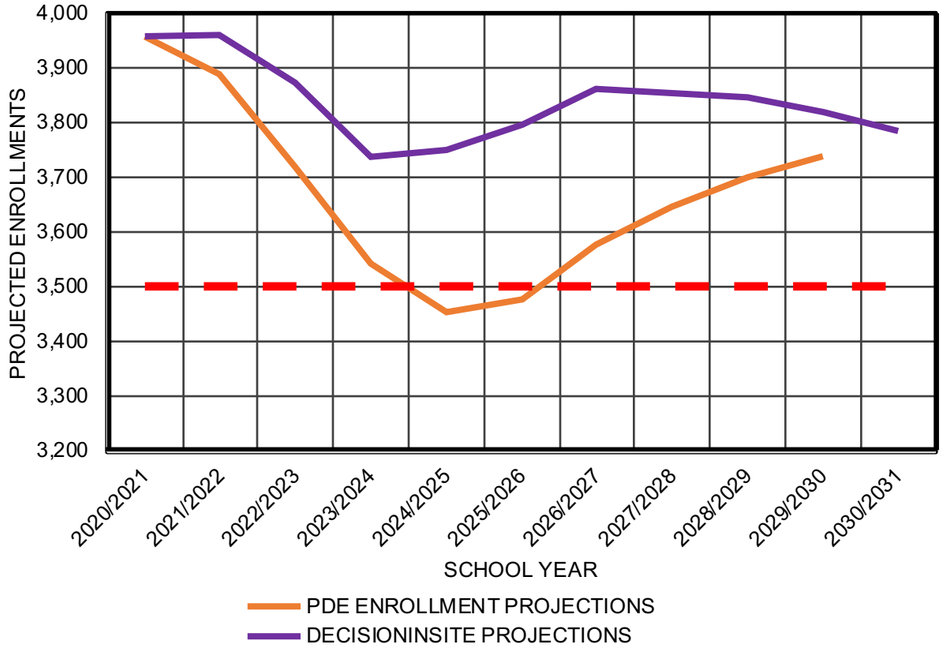
1. The PDE Capacity includes regular classrooms only and does not include Temporary Classrooms, Special Education Classrooms, ESOL Classrooms

2. PDE Projections are not available for individual schools

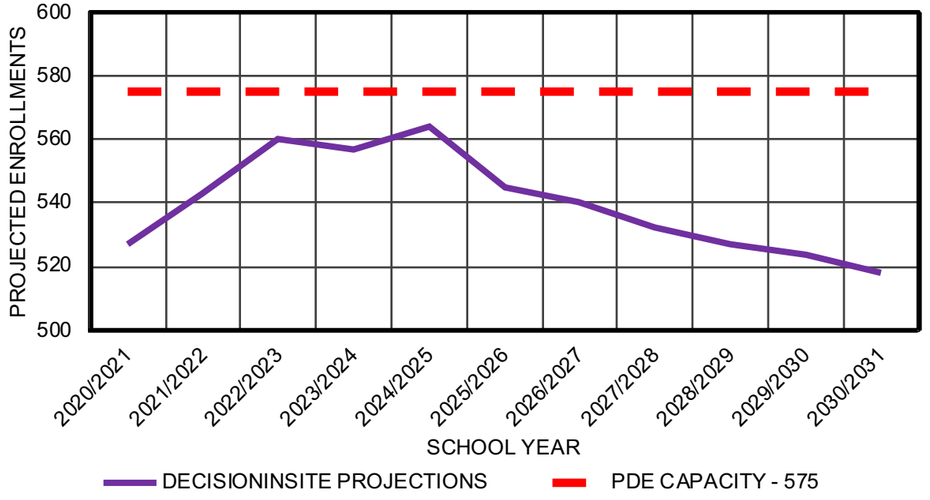
3. Max/Min Capacity Difference is based on the highest projected amount of students compared to the current PDE capacity of each individual school and is expressed as either the most students above or the least students below the current PDE Capacity.

4. Functional capacity for Middle Schools is calculated based on a 0.8 Utilization factor

Comparison of Current Capacity to Projected Student Enrollment (Middle Schools)



Comparison of Current Capacity to Projected Student Enrollment (Elementary Schools)



B. HARRISON-MORTON MIDDLE SCHOOL

The Allentown School District presently serves 883 students in Harrison-Morton Middle School. The current Pennsylvania Department of Education (PDE) capacity of the school is 785 (Utilization factor of Building Total x 0.8 used)

The analysis of enrollment projections prepared by DecisionInsite (Fall 2021 Moderate) for the Allentown School District projects a total enrollment of 824 students in 2025 and 789 students in 2030. PDE enrollment projections are not available for individual school buildings

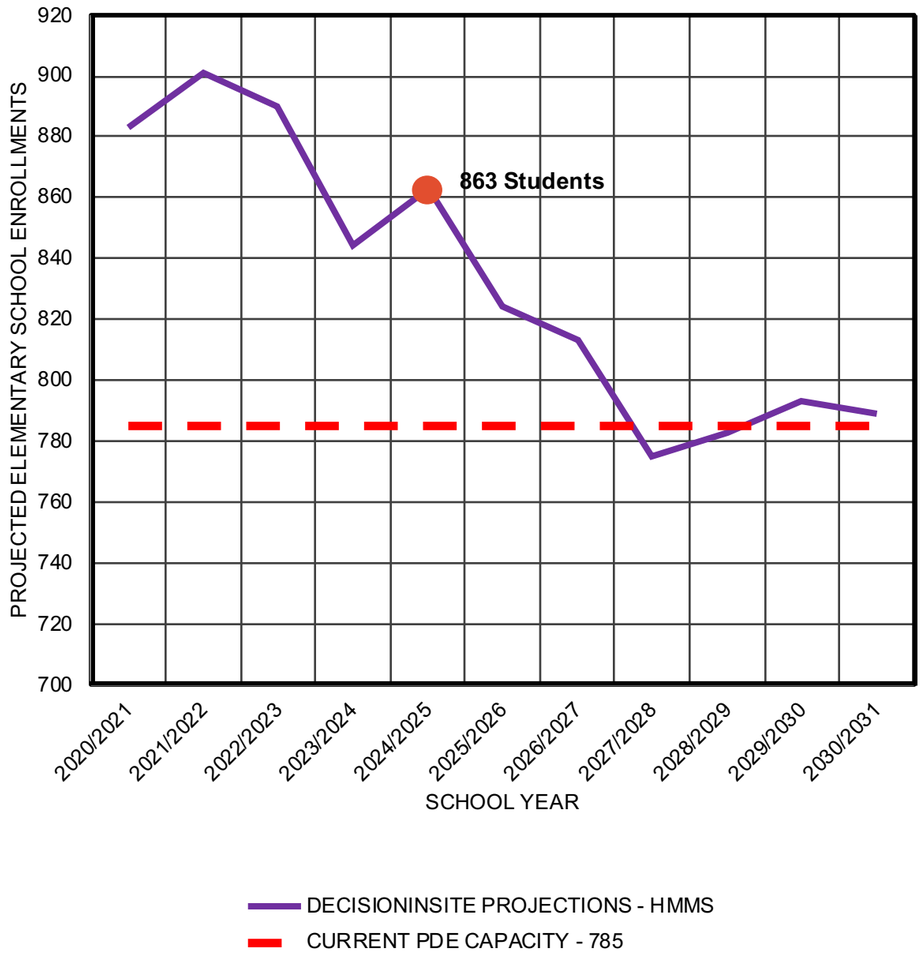
The previous 5 year enrollment history from October 2014 to October 2019 has shown an increase of 9 HMMS students. 2020 enrollments increased by 39 students over 2019.

COMPARISON OF HARRISON-MORTON MIDDLE SCHOOL CURRENT CAPACITIES TO PROJECTED STUDENT ENROLLMENTS

MIDDLE SCHOOLS (6-8)	CURRENT FUNCTIONAL CAPACITY	ACTUAL ENROLL-MENTS	DECISIONINSITE 10 YR MAXIMUM PROJECTED ENROLLMENT	PDE PROJECTIONS		MAX/MIN CAPACITY DIFFERENCE
		11/3/2020		2024/2025	2029/2030	2020/2021
Harrison-Morton	**785**	**883**	**863**	NOTE 2	NOTE 2	**-78**
Raub	897	1,002	1,081	NOTE 2	NOTE 2	
South Mountain	1,039	1,244	1,244	NOTE 2	NOTE 2	
Trexler	781	828	828	NOTE 2	NOTE 2	
TOTALS	**3,502**	**3,957**	**4,016**	**3,455**	**3,740**	
				(5 year)	(10 year)	

NOTES:
1. The PDE Capacity does not include Temporary Classrooms, Special Education Classrooms, ESOL Classrooms
2. PDE Projections are not available for individual schools
3. Max/Min Capacity Difference is based on the highest projected amount of students compared to the current PDE capacity of each individual school and is expressed as either the most students above or the least students below the current PDE Capacity.
4. Functional capacity is calculated based on a 0.8 Utilization factor

Comparison of Currrent Capacity to Projected Student Enrollment for Harrison-Morton Middle School



CATEGORY
S = SITE
B = BUILDING
ADA = ACCESSIBILITY
LS = LIFE SAFETY
P = PLUMBING
H = HVAC
E = ELECTRICAL

PRIORITY
1 = Excellent Condition - Does not need to be addressed in the next 10 years
2 = Very Good Condition - Does not need to be addressed in the next 5 years
3 = Good Condition - Satisfactory for now, but should be budgeted for within the next 5 years
4 = Poor Condition - Should be addressed within the next 3 years for repair or replacement
5 = Critical Condition - Should be addressed immediately
Note: Priority is related to the Capital Improvement Plan relevance. Number may be low because of grandfathering.

Harrison-Morton Capital Improvement Plan

Allentown School District
Feasibility Study Update

updated May 18, 2020

Item #	School	Item	Category	Quantity	Unit (sf, lf, ls, etc)	2016 Cost per Unit	2016 Estimated Cost Including 20% Indirect Costs	**2020 Estimated Cost Including 20% Indirect Costs***	Priority	Comment
1.1	HARRISON MS	Sidewalk replacement	S	10,626	sf	$ 12.00	$ 153,014.40	$ 186,677.57	5	
1.2	HARRISON MS	Storm water collection system	S	400	lf	$ 20.00	$ 9,600.00	$ 11,712.00	5	Water from downspouts are discharging onto the sidewalk causing icy conditions.
2	HARRISON MS	Pavement replacement	S	10,862	sf	$ 9.50	$ 123,826.80	$ 151,068.70	2	
3	HARRISON MS	Exterior concrete stair replacement	S	286	sf	$ 55.00	$ 18,876.00	$ 23,028.72	5	Includes stair end walls and handrails
4.1	HARRISON MS	Asbestos Abatement	B	1	ls	$ 240,000.00	$ 288,000.00	$ 351,360.00	2	
4.2	HARRISON MS	Reconstruct soffit on east side of building	B	220	sf	$ 150.00	$ 39,600.00	$ 48,312.00	2	After Abatement
4.3	HARRISON MS	Install floor tile	B	54,516	sf	$ 3.50	$ 228,967.20	$ 279,339.98	2	After Abatement
4.4	HARRISON MS	Install pipe insulation	B	625	lf	$ 120.00	$ 90,000.00	$ 109,800.00	2	After Abatement
4.5	HARRISON MS	New whiteboards	B	4,032	sf	$ 12.00	$ 58,060.80	$ 70,834.18	2	After Abatement
4.6	HARRISON MS	New tackboards	B	2,016	sf	$ 4.00	$ 9,676.80	$ 11,805.70	2	After Abatement
5.1	HARRISON MS	Radon testing	B	1	ls	$ 1,600.00	$ 1,920.00	$ 2,342.40	5	
5.2	HARRISON MS	Install radon mitigation system	B	1	ls	$ 20,000.00	$ 24,000.00	$ 29,280.00	5	
6	HARRISON MS	Lead testing	B	1	ls	$ 3,000.00	$ 3,000.00	$ 3,660.00	5	
7	HARRISON MS	Roof replacement	B	28,900	sf	$ 18.50	$ 641,580.00	$ 782,727.60	5	
8	HARRISON MS	Window replacement	B	11,100	sf	$ 45.00	$ 599,400.00	$ 731,268.00	3	
9	HARRISON MS	General brick and limestone restoration	B	1	ls	$ 40,000.00	$ 48,000.00	$ 58,560.00	4	Allowance
10	HARRISON MS	Settlement cracks in the exterior brick of the SE Boys Locker Room Addition.	B	1	lf	$ 6,000.00	$ 7,200.00	$ 8,784.00	5	Allowance
11.1	HARRISON MS	Modify classroom door vestibule to meet ADA requirements	ADA	45	ea	$ 7,000.00	$ 378,000.00	$ 461,160.00	3	
11.2	HARRISON MS	Interior single door replacement: New frames, doors and hardware to meet ADA requirements	ADA/LS	106	ea	$ 2,135.00	$ 271,572.00	$ 331,317.84	3	
12	HARRISON MS	Interior double door replacement: New frames, doors and hardware to meet ADA requirements	ADA/LS	23	pr	$ 3,260.00	$ 89,976.00	$ 109,770.72	3	
13	HARRISON MS	Exterior double door replacement: Install electric strike, power, FRP doors, hardware and frames.	ADA/LS	10	pr	$ 10,300.00	$ 123,600.00	$ 150,792.00	5	
14	HARRISON MS	Replace stair fire doors and hardware with hold-open devices to improve student traffic flow.	B	13	pr	$ 12,000.00	$ 187,200.00	$ 228,384.00	3	
15	HARRISON MS	Provide ADA signage	ADA	200	ea	$ 100.00	$ 24,000.00	$ 29,280.00	3	
16	HARRISON MS	Miscellaneous plaster repairs	B	1	ls	$ 20,000.00	$ 24,000.00	$ 29,280.00	5/2	Allowance
17	HARRISON MS	Paint interior walls	B	151,398	sf	$ 1.50	$ 272,516.40	$ 332,470.01	3	
18	HARRISON MS	Replace stair handrails to meet current standards	ADA	860	lf	$ 250.00	$ 258,000.00	$ 314,760.00	2	Existing height: 2'-5". Code height: 2'-10".
19	HARRISON MS	Renovate toilet rooms to meet ADA standards	ADA	3,590	sf	$ 290.00	$ 1,249,320.00	$ 1,524,170.40	3	
20	HARRISON MS	Install area of rescue assistance intercom	ADA	2	ls	$ 5,000.00	$ 12,000.00	$ 14,640.00	2	
21	HARRISON MS	Remove and install new terrazzo flooring	B	4,500	sf	$ 30.00	$ 162,000.00	$ 197,640.00	4	
22	HARRISON MS	Replace student corridor lockers (2 high: 15"h x 18"d x 72"h)	B	425	ea	$ 450.00	$ 229,500.00	$ 279,990.00	4	
23	HARRISON MS	Area B: Renovate home economics, art and science rooms	B	5,594	sf	$ 175.00	$ 1,174,740.00	$ 1,433,182.80	4	
24	HARRISON MS	Area B: Remove science room stepped seating	B	910	sf	$ 20.00	$ 21,840.00	$ 26,644.80	2	
25	HARRISON MS	Provide ADA access to the band area	B	1	ls	$ 40,000.00	$ 48,000.00	$ 58,560.00	2	

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Harrison-Morton Capital Improvement Plan

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updated May 18, 2020

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26	HARRISON MS	Remove existing and provide ADA compliant double high/low water fountains	B	14	ea	$ 1,800.00	$ 30,240.00	$ 36,892.80	5	
27	HARRISON MS	Replace gym wood floor	B	7,150	sf	$ 25.00	$ 214,500.00	$ 261,690.00	2	
28	HARRISON MS	Renovate boys and girls locker rooms	B	3,634	sf	$ 290.00	$ 1,264,632.00	$ 1,542,851.04	4	
29	HARRISON MS	Replace gym bleachers	B	220	sf	$ 222.00	$ 58,608.00	$ 71,501.76	3	
30	HARRISON MS	Replace gym wall mats	B	300	sf	$ 8.00	$ 2,880.00	*complete*	4	
31	HARRISON MS	Upgrade gym acoustic treatment	B	1	ls	$ 12,000.00	$ 14,400.00	$ 17,568.00	4	
32	HARRISON MS	Provide ADA access to the stage and lower auditorium	ADA	1	ls	$ 40,000.00	$ 48,000.00	$ 58,560.00	3	
33	HARRISON MS	Replace stage wood floor	B	1,988	sf	$ 25.00	$ 59,640.00	$ 72,760.80	4	
34	HARRISON MS	Replace / add auditorium seating	ADA	364	ea	$ 235.00	$ 102,648.00	$ 125,230.56	4	
35	HARRISON MS	Upgrade auditorium theatrical lighting	B	1	ls	$ 190,000.00	$ 228,000.00	$ 278,160.00	4	
36	HARRISON MS	Upgrade auditorium sound system	B	1	ls	$ 150,000.00	$ 180,000.00	$ 219,600.00	4	
37	HARRISON MS	Upgrade auditorium acoustic walls & ceiling finishes	B	1	ls	$ 85,000.00	$ 102,000.00	$ 124,440.00	4	
38.1	HARRISON MS	Install fire protection sprinkler system	LS	151,398	sf	$ 4.00	$ 726,710.40	$ 886,586.69	2	
38.2	HARRISON MS	Provide fire pump (if needed)	LS	1	ea	$ 40,000.00	$ 48,000.00	$ 58,560.00	2	
38.3	HARRISON MS	Install new ceiling grid and acoustic panels in corridors	B	22,700	sf	$ 3.00	$ 81,720.00	$ 99,698.40	2	
38.4	HARRISON MS	Install new corridor light fixtures	E	22,700	sf	$ 26.00	$ 708,240.00	$ 864,052.80	4	
38	HARRISON MS	Replace all electrical power, lighting, and low voltage systems	E	151,398	sf	$ 26.00	$ 4,723,617.60	$ 5,762,813.47	4	
39	HARRISON MS	Replace heating system	H	151,398	ls	$ 27.00	$ 4,905,295.20	$ 5,984,460.14	4	Backed-out price for boilers.
40	HARRISON MS	Install air conditioning system	H	151,398	ls	$ 12.00	$ 2,180,131.20	$ 2,619,760.06	4	Deducted Faculty Lounge A/C
41	HARRISON MS	Scheduled plumbing upgrades	P	1	ls	$ 1,500,000.00	$ 1,800,000.00	$ 2,107,000.00	5	Deducted Backflow preventor
42	HARRISON MS	Plumbing system upgrades	P	151,398	sf	$ 5.00	$ 908,388.00	*complete*	5	
43	HARRISON MS	Replace food service equipment	B	1	ls	$ 260,000.00	$ 312,000.00	$ 380,640.00	2/3	
44	HARRISON MS	Replace food service equipment	B	1	ls	$ 340,000.00	$ 408,000.00	$ 497,760.00	4/5	
45	HARRISON MS	Install emergency generator system	B	1	ls	$ 160,000.00	$ 192,000.00	$ 234,240.00	4	Due to site constraints, the emergency generator may reduce parking capacity
							$ 26,170,636.80	$ 30,687,429.94		

*** NOTE:**

2020 Esimated Costs increase the Cost Estimates from 2016 using the inflation rates reported in the Turner Construction Index. Completed work was identified by the District. No further building assessments were performed at this time.

C. RAUB MIDDLE SCHOOL

The Allentown School District presently serves 1,002 students in Raub Middle School. The total Pennsylvania Department of Education (PDE) capacity of the school is 897 (Utilization factor of Building Total x 0.8 used)

The analysis of enrollment projections prepared by DecisionInsite (Fall 2021 Moderate) for the Allentown School District projects a total enrollment of 1,042 students in 2025 and 1,039 students in 2030. PDE enrollment projections are not available for individual school buildings.

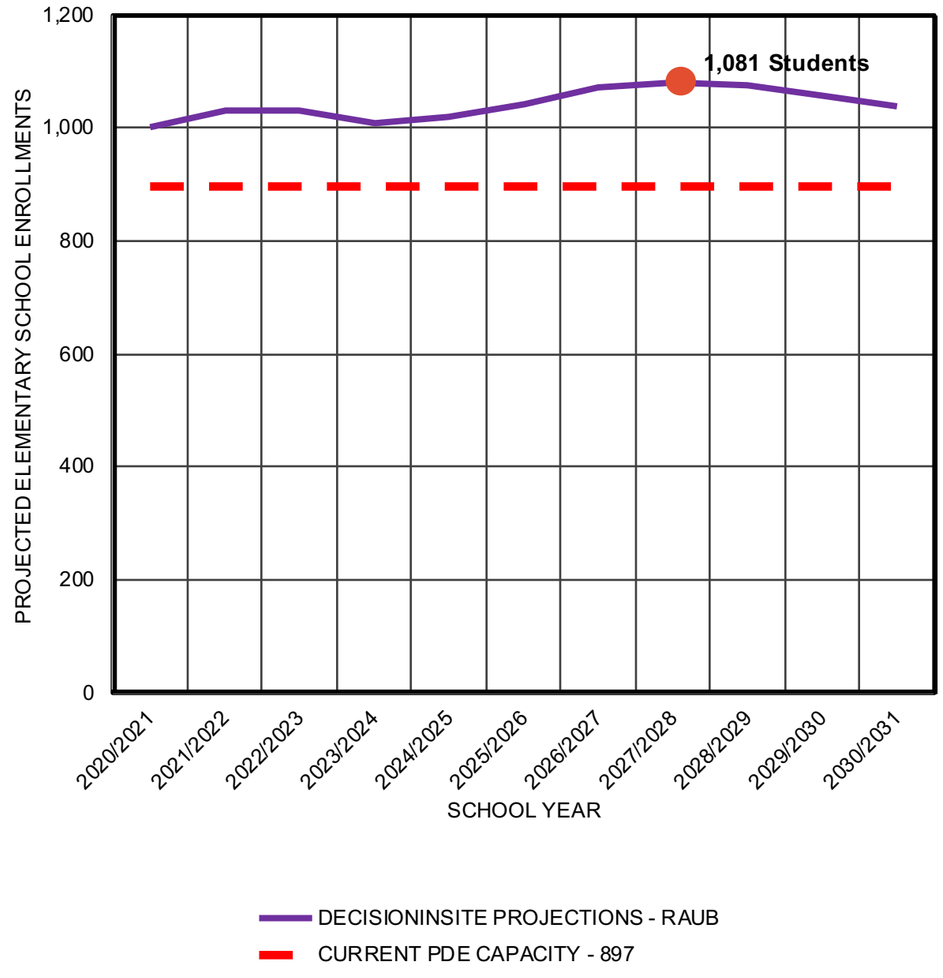
The previous 5 year enrollment history from October 2014 to October 2019 has shown an increase of 122 Raub Middle School students. 2020 enrollments increased by 13 students over 2019.

COMPARISON OF RAUB MIDDLE SCHOOL CURRENT CAPACITIES TO PROJECTED STUDENT ENROLLMENTS

MIDDLE SCHOOLS (6-8)	CURRENT FUNCTIONAL CAPACITY	ACTUAL ENROLL-MENTS	DECISIONINSITE 10 YR MAXIMUM PROJECTED ENROLLMENT	PDE PROJECTIONS		MAX/MIN CAPACITY DIFFERENCE
		11/3/2020		2024/2025	2029/2030	2020/2021
Harrison-Morton	785	883	863	NOTE 2	NOTE 2	
Raub	**897**	**1,002**	**1,081**	NOTE 2	NOTE 2	**-184**
South Mountain	1,039	1,244	1,244	NOTE 2	NOTE 2	
Trexler	781	828	828	NOTE 2	NOTE 2	
TOTALS	**3,502**	**3,957**	**4,016**	**3,455**	**3,740**	
				(5 year)	(10 year)	

NOTES:
1. The PDE Capacity does not include Temporary Classrooms, Special Education Classrooms, or ESOL Classrooms
2. PDE Projections not available for each individual school facility
3. Max/Min Capacity Difference is based on the highest projected amount of students compared to the current PDE capacity of each individual school and is expressed as either the most students above or the least students below the current PDE Capacity.
4. Functional capacity is calculated based on a 0.8 Utilization factor

Comparison of Current Capacity to Projected Student Enrollment for Raub Middle School



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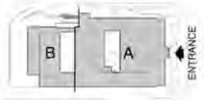

KEY PLAN

Raub Capital Improvement Plan

Allentown School District
Feasibility Study Update

updated May 15, 2020

Item #	School	Item	Category	Quantity	Unit (sf, lf, ls, etc)	2016 Cost per Unit	2016 Estimated Cost Including 20% Indirect Costs	**2020 Estimated Cost Including 20% Indirect Costs***	Priority	Comment
1	RAUB MS	Replace ramp and courtyard concrete road surface	S	38,000	sf	$ 20.00	$ 912,000.00	$ 1,098,960.00	4	
2.1	RAUB MS	Replace asphalt parking area	S	12,100	sf	$ 9.50	$ 137,940.00	*complete*	5	
2.2	RAUB MS	Install storm water collection system at parking lot downspouts	S	100	lf	$ 20.00	$ 2,400.00	$ 2,892.00	5	
2.3	RAUB MS	Repair settlement cracks in concrete retaining wall	S	1	ls	$ 45,000.00	$ 54,000.00	$ 65,070.00	5	
2.4	RAUB MS	Replace 2' of top of concrete retaining wall	S	320	lf	$ 110.00	$ 42,240.00	$ 50,899.20	5	
2.5	RAUB MS	Replace fence at retaining wall	S	320	lf	$ 30.00	$ 11,520.00	$ 13,881.60	5	
3	RAUB MS	Replace concrete stair and railing in service courtyard	S	42	sf	$ 30.00	$ 1,512.00	$ 1,821.96	4	
4	RAUB MS	Landscaping: remove and replace trees with exposed roots	S	1	ls	$ 20,000.00	$ 24,000.00	$ 28,920.00	5	
5.1	RAUB MS	Asbestos Abatement	B	1	ls	$ 270,000.00	$ 324,000.00	$ 390,420.00	2	
5.2	RAUB MS	Install floor tile	B	24,907	sf	$ 3.50	$ 104,609.40	$ 126,054.33	2	After Abatement
5.3	RAUB MS	Install pipe insulation	B	4,663	lf	$ 120.00	$ 671,472.00	$ 809,123.76	2	After Abatement
5.4	RAUB MS	New whiteboards	B	2,880	sf	$ 12.00	$ 41,472.00	$ 49,973.76	2	After Abatement
5.5	RAUB MS	New tackboards	B	1,440	sf	$ 4.00	$ 6,912.00	$ 8,328.96	2	After Abatement
6.1	RAUB MS	Radon testing	B	1	ls	$ 2,100.00	$ 2,520.00	$ 3,036.60	5	
6.2	RAUB MS	Install radon mitigation system	B	1	ls	$ 20,000.00	$ 24,000.00	$ 28,920.00	5	
7	RAUB MS	Lead testing	B	1	ls	$ 3,000.00	$ 3,000.00	$ 3,615.00	5	
8	RAUB MS	Elevator addition located in Area B courtyard. Security vestibule entrance to be located in Area A with connection to Administration.	ADA/LS	860	sf	$ 350.00	$ 361,200.00	$ 435,246.00	5	
9	RAUB MS	Interior single door replacement: New frames, doors and hardware to meet ADA requirements	ADA/LS	122	ea	$ 2,135.00	$ 312,564.00	$ 376,639.62	3	
10	RAUB MS	Interior double door replacement: New frames, doors and hardware to meet ADA requirements	ADA/LS	30	pr	$ 3,260.00	$ 117,360.00	$ 141,418.80	3	
11	RAUB MS	Exterior single door replacement: Install electric strike, power, FRP doors, hardware and frames.	ADA/LS	4	ea	$ 5,700.00	$ 27,360.00	$ 32,968.80	5	
12	RAUB MS	Exterior double door replacement: Install electric strike, power, FRP doors, hardware and frames.	ADA/LS	13	pr	$ 10,300.00	$ 160,680.00	$ 193,619.40	5	
13	RAUB MS	Replace stair fire doors and hardware with hold-open devices to improve student traffic flow.	B	16	pr	$ 12,000.00	$ 230,400.00	$ 277,632.00	3	
14	RAUB MS	Replace exterior windows	B	13,431	sf	$ 45.00	$ 725,274.00	*complete*	4	
15	RAUB MS	Roof replacement	B	1	ls	$ 200,000.00	$ 240,000.00	*complete*	5	
16	RAUB MS	General exterior brick/limestone repairs	B	1	ls	$ 40,000.00	$ 48,000.00	$ 57,840.00	3	Allowance
17	RAUB MS	Chimney repairs / height modifications	B	1	ls	$ 20,000.00	$ 24,000.00	$ 28,920.00	4	
18	RAUB MS	Renovate existing restrooms to be ADA compliant	ADA	3,369	sf	$ 290.00	$ 1,172,412.00	$ 1,412,756.46	3	
19	RAUB MS	Renovate the existing gym/auditorium/stage in addition to ADA compliant upgrades	ADA	10,829	sf	$ 190.00	$ 2,469,012.00	$ 2,975,159.46	2	
20	RAUB MS	Renovate existing locker rooms to be ADA compliant	ADA	5,500	sf	$ 290.00	$ 1,914,000.00	$ 2,306,370.00	3	
21	RAUB MS	Provide ADA signage	ADA	200	ea	$ 100.00	$ 24,000.00	$ 28,920.00	3	
22	RAUB MS	Remove existing and provide ADA compliant double high/low water fountains	ADA	14	ea	$ 1,800.00	$ 30,240.00	$ 36,439.20	3	
23	RAUB MS	Renovate library	B	6,800	sf	$ 40.00	$ 326,400.00	$ 393,312.00	4	

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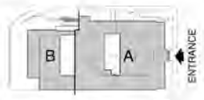


KEY PLAN

Raub Capital Improvement Plan

Allentown School District
Feasibility Study Update

updated May 15, 2020

Item #	School	Item	Category	Quantity	Unit (sf, lf, ls, etc)	2016 Cost per Unit	2016 Estimated Cost Including 20% Indirect Costs	**2020 Estimated Cost Including 20% Indirect Costs***	Priority	Comment
24	RAUB MS	Replace stair handrails to meet IBC/ADA standards	ADA	840	lf	$ 250.00	$ 252,000.00	$ 303,660.00	2	Existing height: 2'-5". Code height: 2'-10".
25	RAUB MS	Repair and refinish corridor terrazzo floors	B	18,531	sf	$ 7.00	$ 155,660.40	$ 187,570.78	2	
26	RAUB MS	Replace classroom carpet with VCT flooring	B	34,755	sf	$ 4.50	$ 187,677.00	$ 226,150.79	3	
27	RAUB MS	Paint interior walls	B	180,330	sf	$ 1.50	$ 324,594.00	$ 391,135.77	3	
28	RAUB MS	General plaster repairs	B	1	ls	$ 20,000.00	$ 24,000.00	$ 28,920.00	3	Allowance
29.1	RAUB MS	Install fire protection sprinkler system	LS	154,544	sf	$ 4.00	$ 741,811.20	$ 893,882.50	2	Grandfathered
29.2	RAUB MS	Install fire pump	LS	1	ls	$ 40,000.00	$ 48,000.00	$ 57,840.00	2	Grandfathered
29.3	RAUB MS	Install new ceiling grid and acoustic panels in corridors	B	18,531	sf	$ 3.00	$ 66,711.60	$ 80,387.48	2	
29.4	RAUB MS	Install new corridor light fixtures	E	27,050	sf	$ 4.00	$ 129,840.00	*complete*	5	
31	RAUB MS	Replace all electrical power, lighting, and low voltage systems	E	180,330	sf	$ 26.00	$ 5,626,296.00	$ 6,779,686.68	5	
32	RAUB MS	Replace heating system	H	180,330	sf	$ 23.00	$ 4,977,108.00	$ 5,997,415.14	4	Backed-out price for boilers
33	RAUB MS	Install air conditioning system	H	180,330	sf	$ 12.00	$ 2,596,752.00	$ 3,129,086.16	4	
34	RAUB MS	Plumbing system upgrade	P	180,330	sf	$ 10.00	$ 2,163,960.00	$ 2,607,571.80	5	
35	RAUB MS	Replace incoming water service	P	1	ls	$ 100,000.00	$ 120,000.00	$ 144,600.00	5	
36	RAUB MS	Replace food service equipment	B	1	ls	$ 320,000.00	$ 384,000.00	$ 462,720.00	2/3	
37	RAUB MS	Replace food service equipment	B	1	ls	$ 280,000.00	$ 336,000.00	$ 404,880.00	4/5	
38	RAUB MS	Install emergency generator system	B	1	ls	$ 160,000.00	$ 192,000.00	$ 231,360.00	4	Due to site constraints, the emergency generator may reduce parking capacity
							$ 28,872,909.60	$ 33,306,026.00		

*** NOTE:**

2020 Estimated Costs increase the Cost Estimates from 2016 using the inflation rates reported in the Turner Construction Index. Completed work was identified by the District. No further building assessments were performed at this time.

D. JEFFERSON ELEMENTARY SCHOOL

The Allentown School District presently serves 527 students in Jefferson Elementary School. The total Pennsylvania Department of Education (PDE) capacity of the school is 575.

The analysis of enrollment projections prepared by DecisionInsite (Fall 2021 Moderate) for the Allentown School District projects a total enrollment of 564 students in 2025 and 518 students in 2030. PDE enrollment projections are not available for individual school buildings.

The previous 5 year enrollment history from October 2014 to October 2019 has shown a decrease of 90 Jefferson Elementary School students. 2020 enrollments decreased by 54 students from 2019.

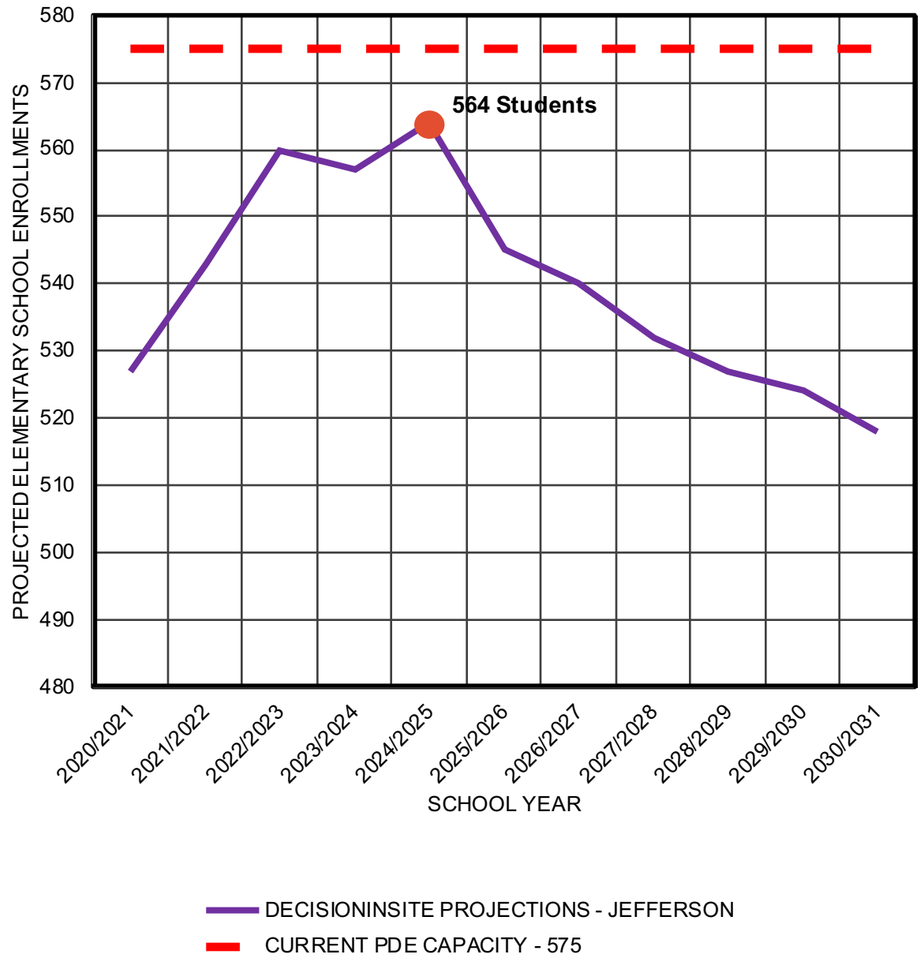
COMPARISON OF JEFFERSON ELEMENTARY SCHOOL CURRENT CAPACITIES TO PROJECTED STUDENT ENROLLMENTS

ELEMENTARY SCHOOLS (K-5)	CURRENT PDE CAPACITY	ACTUAL ENROLL-MENTS	DECISIONINSITE 10 YR MAXIMUM PROJECTED ENROLLMENT	PDE PROJECTIONS		MAX/MIN CAPACITY DIFFERENCE
		11/3/2020				2024/2025
Jefferson	**575**	**527**	**564**	NOTE 2	NOTE 2	**11**
TOTALS	**575**	**527**	**564**	NOTE 2	NOTE 2	**11**
				(5 year)	(10 year)	

NOTES:

1. The PDE Capacity does not include Temporary Classrooms, Special Education Classrooms, or ESOL Classrooms
2. PDE Projections not available for each individual school facility
3. Max/Min Capacity Difference is based on the highest projected amount of students compared to the current PDE capacity of each individual school and is expressed as either the most students above or the least students below the current PDE Capacity.
4. Functional capacity is calculated based on a 0.8 Utilization factor

Comparison of Current Capacity to Projected Student Enrollment for Jefferson Elementary School



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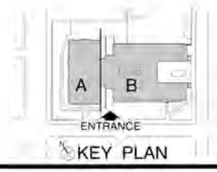

Jefferson Capital Improvement Plan

Allentown School District
Feasibility Study Update

updated May 18, 2020

Item #	School	Item	Category	Quantity	Unit (sf, lf, ls, etc)	2016 Cost per Unit	2016 Estimated Cost Including 20% Indirect Costs	**2020 Estimated Cost Including 20% Indirect Costs***	Priority	Comment
1.1	JEFFERSON ES	Replace perimeter playground/parking retaining site walls	S	360	lf	$ 35.00	$ 15,120.00	$ 18,446.40	5	
1.2	JEFFERSON ES	Replace perimeter site fence	S	360	lf	$ 10.00	$ 4,320.00	$ 5,270.40	5	
2.1	JEFFERSON ES	Perimeter foundation waterproofing and drainage system to tie into city storm water system.	B	1,100	lf	$ 80.00	$ 105,600.00	$ 128,832.00	5	
2.2	JEFFERSON ES	Replace concrete road surfaces to basement	S	3,030	sf	$ 15.00	$ 54,540.00	$ 66,538.80	5	
2.3	JEFFERSON ES	Remove and replace concrete floor of light wells to install foundation waterproofing.	S	2,000	sf	$ 15.00	$ 36,000.00	$ 43,920.00	5	
2.4	JEFFERSON ES	Provide waterproof membrane above interior spaces below pavement or concrete.	B	2,560	sf	$ 12.00	$ 36,864.00	$ 44,974.08	5	
3.1	JEFFERSON ES	Asbestos Abatement	B	1	ls	$ 45,000.00	$ 54,000.00	$ 65,880.00	2	
3.2	JEFFERSON ES	Install floor tile	B	5,706	sf	$ 3.50	$ 23,965.20	$ 29,237.54	2	After Abatement
3.3	JEFFERSON ES	Install pipe insulation	B	421	lf	$ 210.00	$ 106,092.00	$ 129,432.24	2	After Abatement
3.4	JEFFERSON ES	New whiteboards	B	3,520	sf	$ 18.00	$ 76,032.00	$ 92,759.04	2	After Abatement
3.5	JEFFERSON ES	New tackboards	B	1,760	sf	$ 8.00	$ 16,896.00	$ 20,613.12	2	After Abatement
4.1	JEFFERSON ES	Radon testing	B	1	ls	$ 1,150.00	$ 1,380.00	$ 1,683.60	5	
4.2	JEFFERSON ES	Install radon mitigation system	B	1	ls	$ 20,000.00	$ 24,000.00	$ 29,280.00	5	
5.1	JEFFERSON ES	Lead testing	B	1	ls	$ 2,600.00	$ 2,600.00	$ 3,172.00	5	
6	JEFFERSON ES	Construct secure entrance addition with elevator to service three floors. Include security desk and additional administration space.	ADA/LS	1,640	sf	$ 350.00	$ 688,800.00	$ 840,336.00	5	
7	JEFFERSON ES	Repair cracks in the face brick and replace deteriorating precast window sills	B	1	ls	$ 45,000.00	$ 54,000.00	$ 65,880.00	5/2	
8	JEFFERSON ES	Renovate (14) toilet rooms to meet ADA accessibility	B	3,103	sf	$ 290.00	$ 1,079,844.00	$ 1,317,409.68	3	
9	JEFFERSON ES	Renovate library	B	1,930	sf	$ 40.00	$ 92,640.00	$ 113,020.80	4	
10	JEFFERSON ES	Renovate administration	B	1,120	sf	$ 30.00	$ 40,320.00	$ 49,190.40	4	
11	JEFFERSON ES	Renovate nurse suite	B	1,144	sf	$ 30.00	$ 41,184.00	$ 50,244.48	5	
12	JEFFERSON ES	Renovate cafeteria & faculty dining. Relocate faculty dining and enlarge cafeteria and support spaces to 5,200 sf.	B	6,220	sf	$ 35.00	$ 261,240.00	$ 318,712.80	4	
13	JEFFERSON ES	Interior single door replacement: New frames, doors and hardware to meet ADA requirements	ADA/LS	147	ea	$ 2,135.00	$ 376,614.00	$ 459,469.08	3	
14	JEFFERSON ES	Interior double door replacement: New frames, doors and hardware to meet ADA requirements	ADA/LS	23	pr	$ 3,260.00	$ 89,976.00	$ 109,770.72	3	
15	JEFFERSON ES	Exterior single door replacement: Install electric strike, power, FRP doors, hardware and frames.	ADA/LS	2	ea	$ 5,700.00	$ 13,680.00	$ 16,689.60	5	
16	JEFFERSON ES	Exterior double door replacement: Install electric strike, power, FRP doors, hardware and frames.	ADA/LS	11	pr	$ 10,300.00	$ 135,960.00	$ 165,871.20	5	
17	JEFFERSON ES	Replace stair fire doors and hardware with hold-open devices to improve student traffic flow and reduce maintenance	B	12	pr	$ 12,000.00	$ 172,800.00	$ 210,816.00	3	

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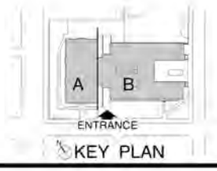


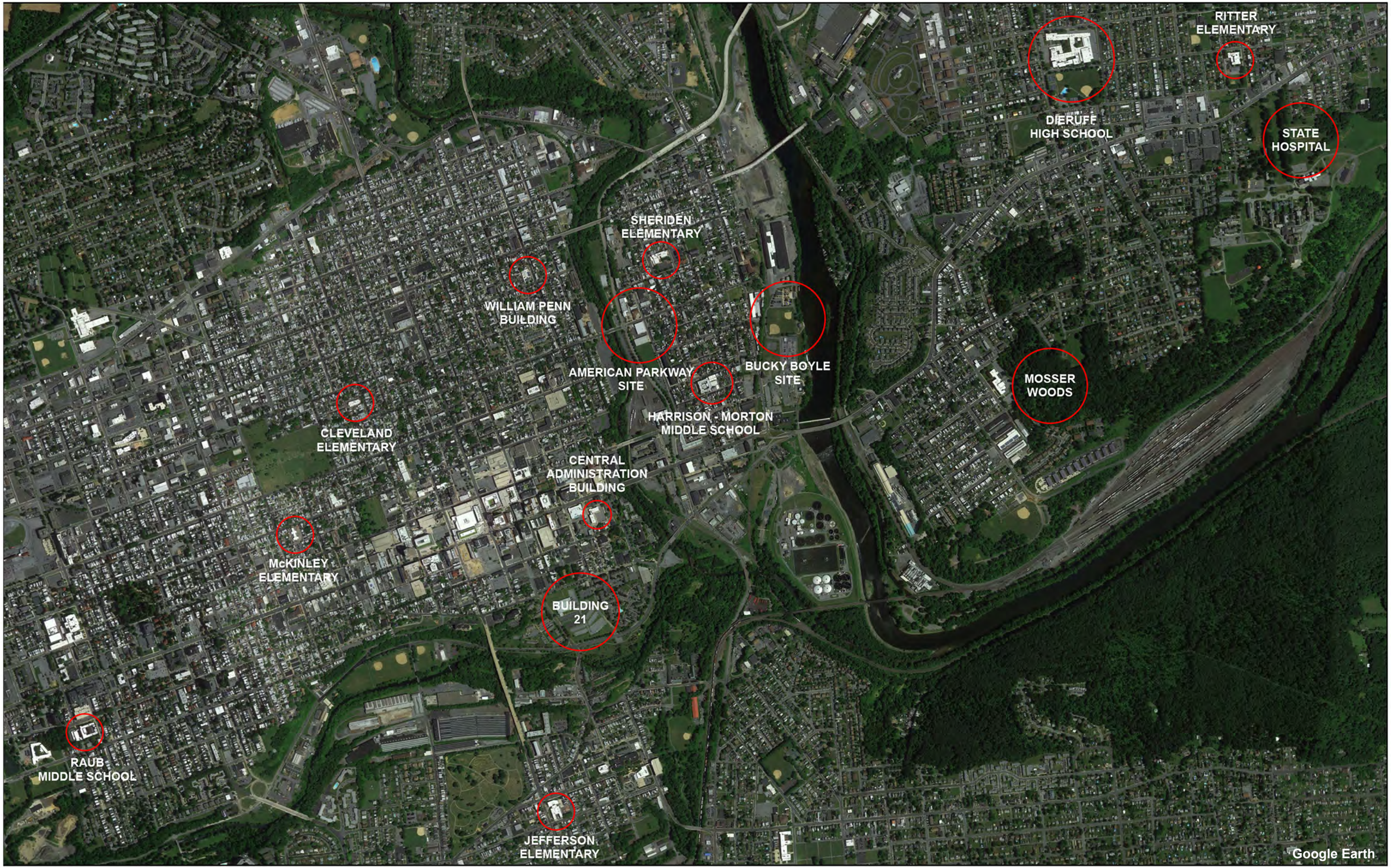
updated May 18, 2020

Item #	School	Item	Category	Quantity	Unit (sf, lf, ls, etc)	2016 Cost per Unit	2016 Estimated Cost Including 20% Indirect Costs	**2020 Estimated Cost Including 20% Indirect Costs***	Priority	Comment
18	JEFFERSON ES	Replace 9'4"h x 3'8"w windows (aluminum)	B	13,072	sf	$ 45.00	$ 705,888.00	*complete*	5	
19	JEFFERSON ES	Replace 16'0"h x 8'0"w windows (single pane with glass block above)	B	384	sf	$ 45.00	$ 20,736.00	$ 25,297.92	5	*Were these replaced too?*
20	JEFFERSON ES	Renovate condemned room into cafeteria storage	B	560	sf	$ 40.00	$ 26,880.00	$ 32,793.60	4	
21	JEFFERSON ES	Replace terrazzo floors	B	22,926	sf	$ 25.00	$ 687,780.00	$ 839,091.60	2	
22	JEFFERSON ES	Replace stair handrails to meet ADA standards	B	504	lf	$ 250.00	$ 151,200.00	$ 184,464.00	2	
23	JEFFERSON ES	Replace gym pads	B	30	lf	$ 12.00	$ 432.00	$ 527.04	5	
24	JEFFERSON ES	Auditorium stage lift - ADA accessibility	B	1	ls	$ 65,000.00	$ 78,000.00	$ 95,160.00	3	
25	JEFFERSON ES	Replace auditorium seating	B	260	ea	$ 235.00	$ 73,320.00	$ 89,450.40	2	
26	JEFFERSON ES	Repair plaster walls	B	1	ls	$ 20,000.00	$ 24,000.00	$ 29,280.00	3	
27	JEFFERSON ES	Replace basketball backstops	B	2	ls	$ 3,000.00	$ 7,200.00	$ 8,784.00	3	
28	JEFFERSON ES	Replace gymnasium wood floor	B	4,000	sf	$ 25.00	$ 120,000.00	$ 146,400.00	3	
29	JEFFERSON ES	Install new ceiling grid and acoustic panels in classrooms and non-renovated areas listed	B	45,526	sf	$ 3.00	$ 163,893.60	$ 199,950.19	3	
30.1	JEFFERSON ES	Install fire protection sprinkler system	P	105,114	sf	$ 4.00	$ 504,547.20	$ 615,547.58	2	Grandfathered
30.2	JEFFERSON ES	Provide fire pump	P	1	ls	$ 40,000.00	$ 48,000.00	$ 58,560.00	2	Grandfathered
30.3	JEFFERSON ES	Install new ceiling grid and acoustic panels in corridors	B	22,926	sf	$ 3.00	$ 82,533.60	$ 100,690.99	2	
30.4	JEFFERSON ES	Install new corridor light fixtures	E	16,000	sf	$ 4.00	$ 76,800.00	$ 93,696.00	5	
31	JEFFERSON ES	Replace all electrical power, lighting, and low voltage systems	E	105,114	sf	$ 26.00	$ 3,279,556.80	$ 4,001,059.30	5	
32	JEFFERSON ES	Replace heating system	H	105,114	ls	$ 28.00	$ 3,531,830.40	$ 4,308,833.09	4	
33	JEFFERSON ES	Install air conditioning system	H	105,114	ls	$ 12.00	$ 1,513,641.60	$ 1,846,642.75	4	
34	JEFFERSON ES	Plumbing system upgrades	P	105,114	sf	$ 10.00	$ 1,261,368.00	*complete*	5	
35	JEFFERSON ES	Replace incoming water service	P	1	ls	$ 80,000.00	$ 96,000.00	*complete*	5	
36	JEFFERSON ES	Replace food service equipment	B	1	ls	$ 160,000.00	$ 192,000.00	$ 234,240.00	2/3	
37	JEFFERSON ES	Replace food service equipment	B	1	ls	$ 90,000.00	$ 108,000.00	$ 131,760.00	4/5	
38	JEFFERSON ES	Install emergency generator system	B	1	ls	$ 120,000.00	$ 144,000.00	$ 175,680.00	4	Due to site constraints, the emergency generator may reduce parking capacity
							$ 16,502,074.40	$ 17,615,358.45		

*** NOTE:**

2020 Esimated Costs increase the Cost Estimates from 2016 using the inflation rates reported in the Turner Construction Index. Completed work was identified by the District. No further building assessments were performed at this time.

PART 2
CONSTRUCTION OPTIONS


RITTER ELEMENTARY
DIERUFF HIGH SCHOOL
STATE HOSPITAL
SHERIDEN ELEMENTARY
WILLIAM PENN BUILDING
AMERICAN PARKWAY SITE
BUCKY BOYLE SITE
MOSSER WOODS
HARRISON - MORTON MIDDLE SCHOOL
CLEVELAND ELEMENTARY
CENTRAL ADMINISTRATION BUILDING
McKINLEY ELEMENTARY
BUILDING 21
RAUB MIDDLE SCHOOL
JEFFERSON ELEMENTARY
Google Earth

OPTION I

	Cost
Option IA	
Renovate Raub Middle School on its **2.42 acre** site (**837 Student** Capacity)	**$48,000,000**
Option IB	
Renovate Harrison-Morton Middle School on its **1.79 acre** site (**725 Student** Capacity)	**$42,400,000**
Option IC	
Construct a New **600 Student** Magnet Middle School on the **22 acre** Mosser Woods Site	**$65,200,000**
SUB TOTAL:	**$155,600,000**

Land Divestures as Part of this Option

1. Sell the existing Harrison-Morton Middle School (1.77 acres)	**value req**
2. Sell the existing Raub Middle School (2.42 acres)	**value req**
3. Sell the existing McKinley Elementary School (.84 acres)	**value req**
4. Sell the existing Cleveland Elementary School (.58 acres)	**value req**
5. Sell the existing Mosser Wood Property (22 acres)	**value req**
SUB TOTAL:	**value req**
TOTAL:	**$155,600,000**

Phasing Concept

Construct a New Magnet School first as swing space that allows Raub and Harrison-Morton Middle Schools to be renovated in phases one at a time.

(Transportaion, Staffing, and Operational Costs to be determined)

Option IA

Advantages
- Lowest first costs
- No land acquisition required
- Maintains current location

Disadvantages
- Enrollment catchment area is further to the east
- Requires construction of a new school facility to accommodate a majority of students to enable renovation construction to occur. Renovations will take 1.5 to 2 years
- It is not feasible to make the entire facility 100% ADA accessible
- Shared Auditorium / Gymnasium will remain with limited ADA access
- Increased future maintenance and equipment costs in comparison to a new building
- Outdoor physical education space is not possible
- Parking facilities are limited
- Construction staging area is limited

Option IB

Advantages
- Lowest first costs
- No land acquisition required
- Maintains current location

Disadvantages
- Requires construction of a new school facility to accommodate a majority of students to enable renovation construction to occur. Renovations will take 1.5 to 2 years
- The renovated school will have a maximum PDE capacity of 725 students. Enrollment projections indicate 863 students by 2024
- It is not feasible to make the entire facility 100% ADA accessible
- Increased future maintenance and equipment costs in comparison to a new building
- Outdoor physical education space is not possible
- Parking facilities and Construction Staging Areas are limited

Option IC

Advantages
- Provides for a 600 student 21st Century Magnet Middle School in the East Side Neighborhood
- The School District currently owns the property
- The site can accommodate a Parent-drop-off zone, bus loading zone, 102 parking spaces, and a full size athletic field

Disadvantages
- A 100-foot grade change will have to be accommodated
- A four (4) story Academic Wing willl be required
- A 12" city water line will have to be relocated

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	EXISTING BUILDING	180,500 sq. ft.
EXISTING SITE AREA	2.42 acres	STUDENT CAPACITY	837 students
TOTAL SITE AREA	2.42 acres	PARKING	33 spaces

This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

SITE VIABILITY PLAN — OPT. IA

RAUB

North

0 30 60 120

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	EXISTING BUILDING	151,400 sq. ft.
EXISTING SITE AREA	1.77 acres	STUDENT CAPACITY	725 students
TOTAL SITE AREA	1.77 acres	PARKING	22 spaces

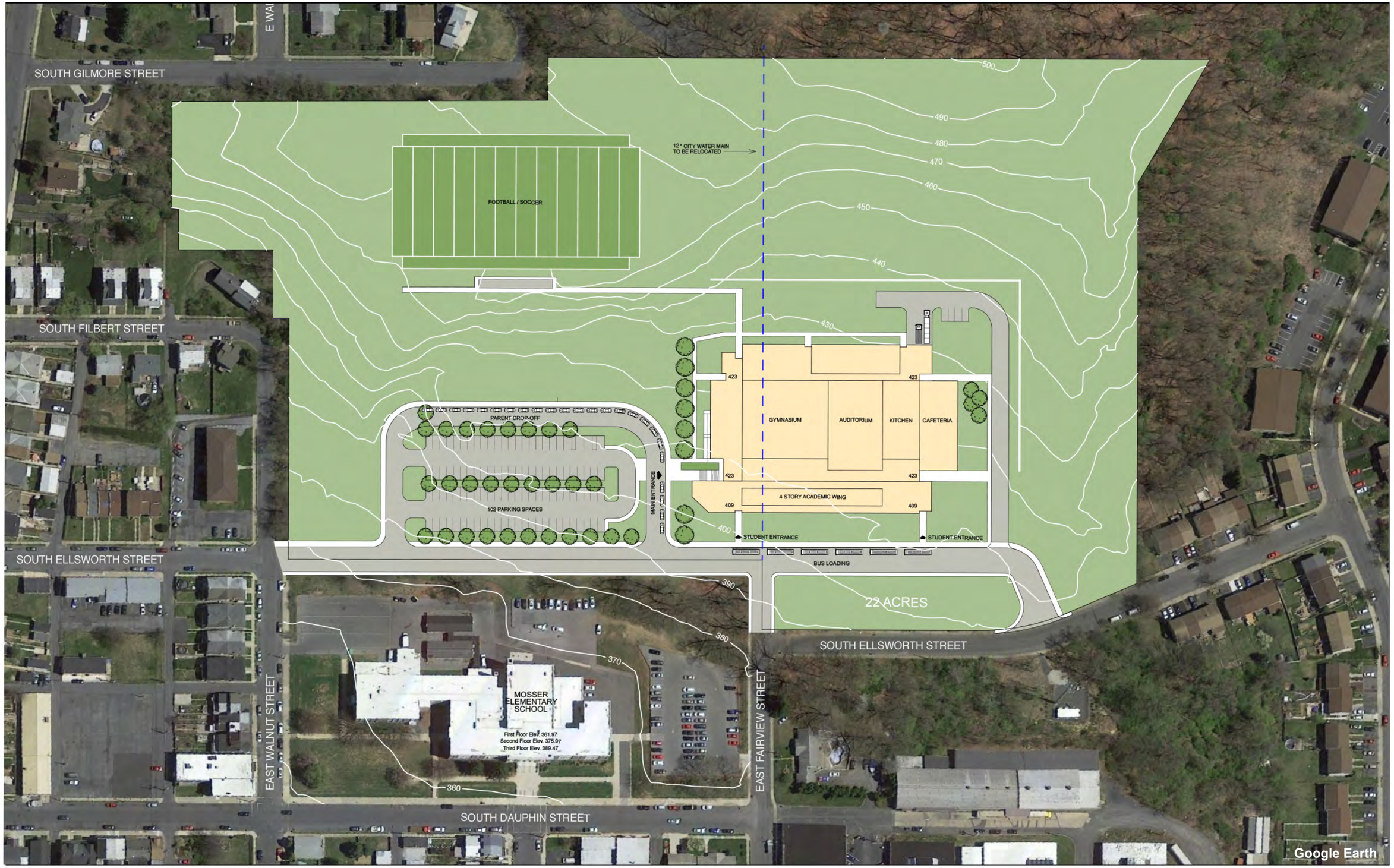
This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

SITE VIABILITY PLAN — OPT. IB

HARRISON-MORTON

North

0 30 60 120



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	NEW BUILDING	160,000 sq. ft.
EXISTING SITE AREA	22 acres	STUDENT CAPACITY	600 students
TOTAL SITE AREA	22 acres	PARKING	102 spaces

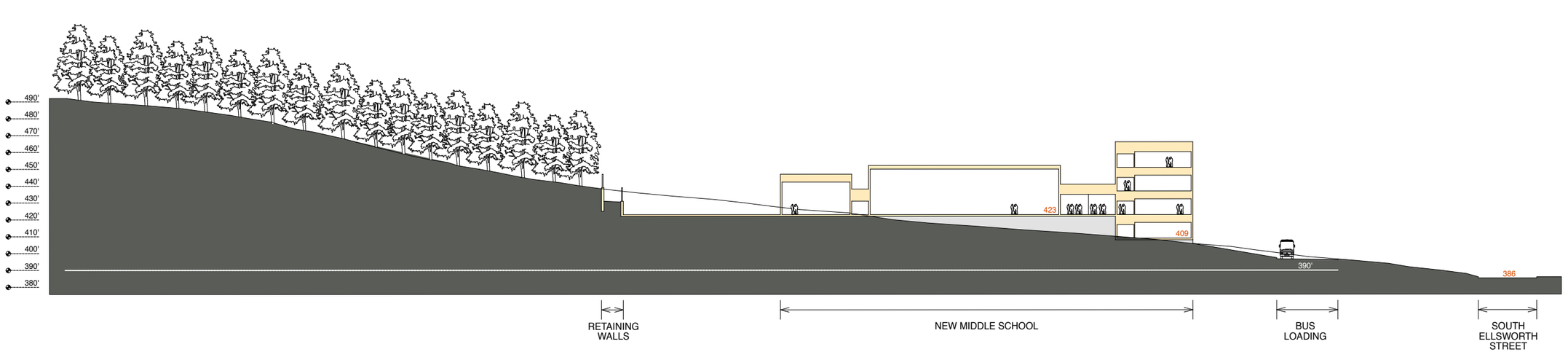
This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

SITE VIABILITY PLAN — OPT IC

MOSSER WOODS

North

0 50 100 200



NORTHWEST / SOUTHEAST SITE SECTION

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	NEW BUILDING	160,000 sq. ft.
EXISTING SITE AREA	22 acres	STUDENT CAPACITY	600 students
TOTAL SITE AREA	22 acres	PARKING	102 spaces

This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

NORTHWEST / SOUTHEAST SITE SECTION OPT. IC

MOSSER WOODS

0 30 60 120

OPTION II

	Cost
Option IIA	
Construct new **900 Student Middle School** on the **6.17** acre American Parkway site to replace Harrison-Morton Middle School.	**$82,000,000**
Option IIB	
Construct new **1,000 Student Middle School** on the **11 acre** Building 21 site to replace Raub Middle School (Building 21 will remain and be renovated).	**$89,300,000**
SUB TOTAL:	**$171,300,000**

Land Divestures as Part of this Option

1. Sell the existing Harrison-Morton Middle School (1.77 acres)	**value req**
2. Sell the existing Raub Middle School (2.42 acres)	**value req**
3. Sell the existing McKinley Elementary School (.84 acres)	**value req**
4. Sell the existing Cleveland Elementary School (.58 acres)	**value req**
SUB TOTAL:	**value req**
TOTAL:	**$171,300,000**

Phasing Concept

Construct 2 New Middle Schools while Raub and Harrison-Morton Middle Schools remain in place until completion and then divest the existing properties

Option IIA

Advantages

- Provides for a 900 Student 21st Century Middle School in the neighborhood of the Harrison-Morton Middle School that will provide a positive presence in the community
- The proposed school site is adjacent to an existing School District owned athletic field
- The site can accommodate 90 Parking Spaces
- The school can be constructed without disruption of the current Harrison-Morton school facilities

Disadvantages

- The School District does not currently own this property
- The majority of the site is in the floodplain that requires elevating the new building
- Clearing the site will require the demolition of six (6) existing buildings
- The Middle School will have to span Gordon Street
- The facility will require a four (4) story academic wing

Option IIB

Advantages

- Provides for a 1,000 Student 21st Century Middle School in the neighborhood of the Raub Middle School catchment area
- The school would share the existing District-Owned 11 Acre Building 21 Site
- The Site can accommodate 172 Parking Spaces
- The Building 21 Program can be enhanced with shared facilities with this option
- A small athletic field for physical education can be accommodated

Disadvantages

- A 60-foot grade change from Union Street to Martin Luther King Jr Drive will have to be accommodated
- The southern portion of the site is in the floodplain, which is only acceptable for parking and athletic fields

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	4.41 acres	NEW BUILDING	190,000 sq. ft.
EXISTING SITE AREA	2.13 acres	STUDENT CAPACITY	900 students
TOTAL SITE AREA	6.54 acres	PARKING	108 spaces

This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

SITE VIABILITY PLAN — OPT IIA

AMERICAN PARKWAY

North

0 100 200 400

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	4.41 acres
EXISTING SITE AREA	2.13 acres
TOTAL SITE AREA	6.54 acres

EXISTING SITE PLAN — OPT IIA

AMERICAN PARKWAY

North

0 50 100 200

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

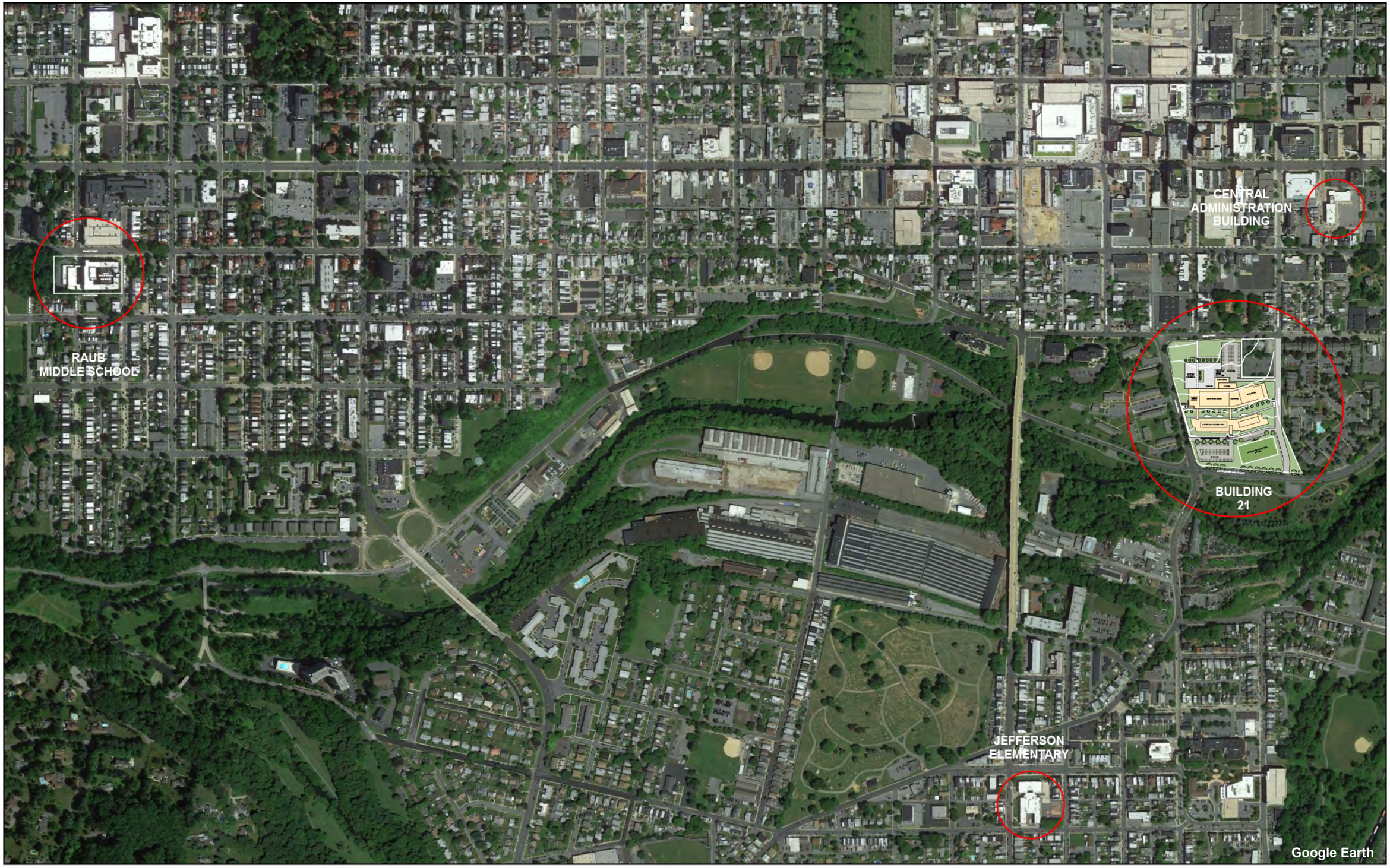
NEW SITE AREA	4.41 acres	NEW BUILDING	190,000 sq. ft.	This Exhibit represents an Architectural Evaluation.
EXISTING SITE AREA	2.13 acres	STUDENT CAPACITY	900 students	Further Site & Zoning Analysis will be required.
TOTAL SITE AREA	6.54 acres	PARKING	108 spaces	

SITE VIABILITY PLAN — OPT IIA

AMERICAN PARKWAY

North

0 50 100 200



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	NEW M.S.BUILDING	206,000 sq. ft.	This Exhibit represents an Architectural Evaluation.
EXISTING SITE AREA	11 acres	STUDENT CAPACITY	1,000 students	Further Site & Zoning Analysis will be required.
TOTAL SITE AREA	11 acres	PARKING	172 spaces	

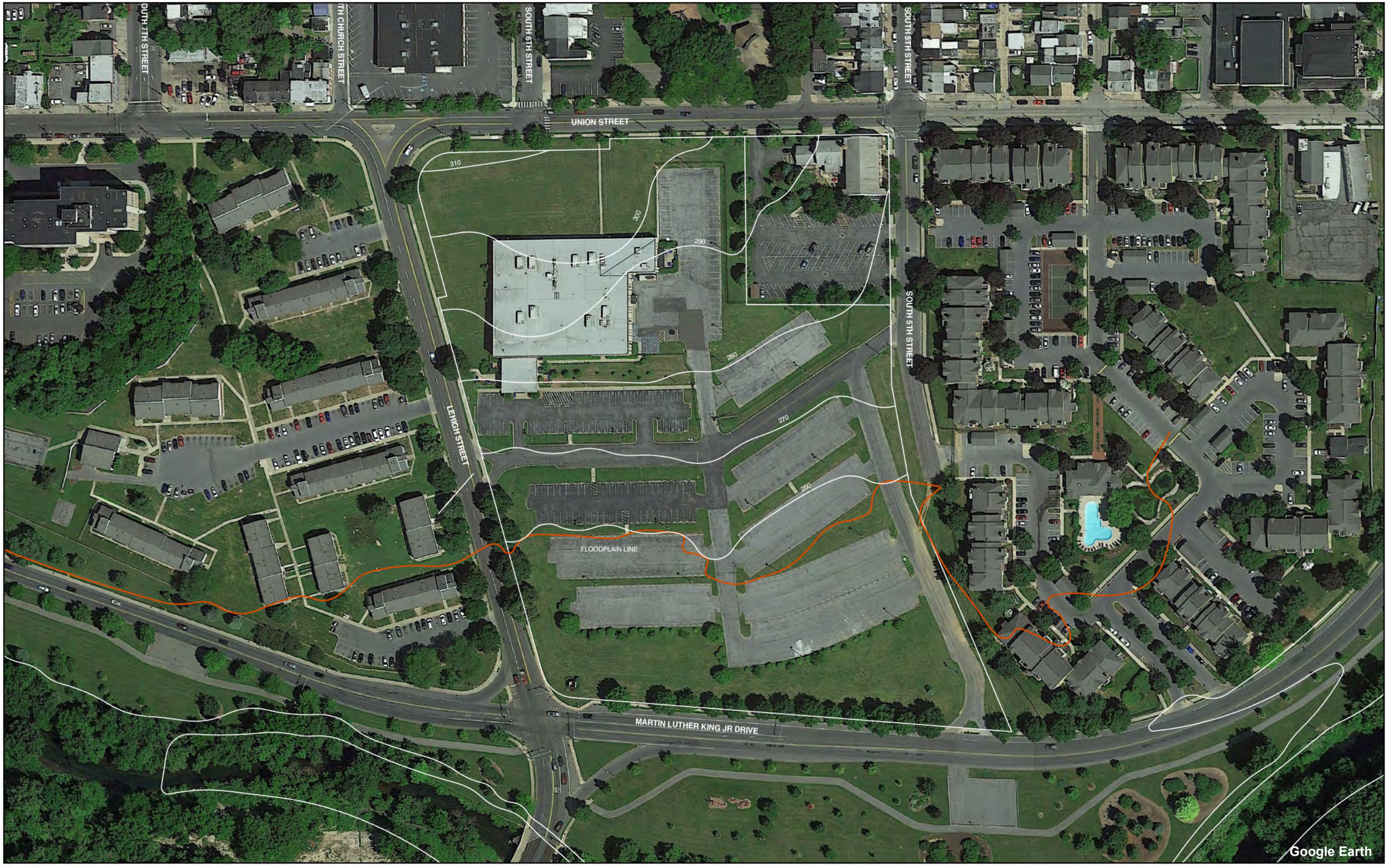
SITE VIABILITY PLAN

BUILDING 21

OPT. IIB & IIIC

North

0 200 400 800



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	EXISTING BUILDING	70,000 sq. ft.
EXISTING SITE AREA	11 acres	STUDENT CAPACITY	550 students
TOTAL SITE AREA	11 acres	PARKING	140 lined spaces

This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

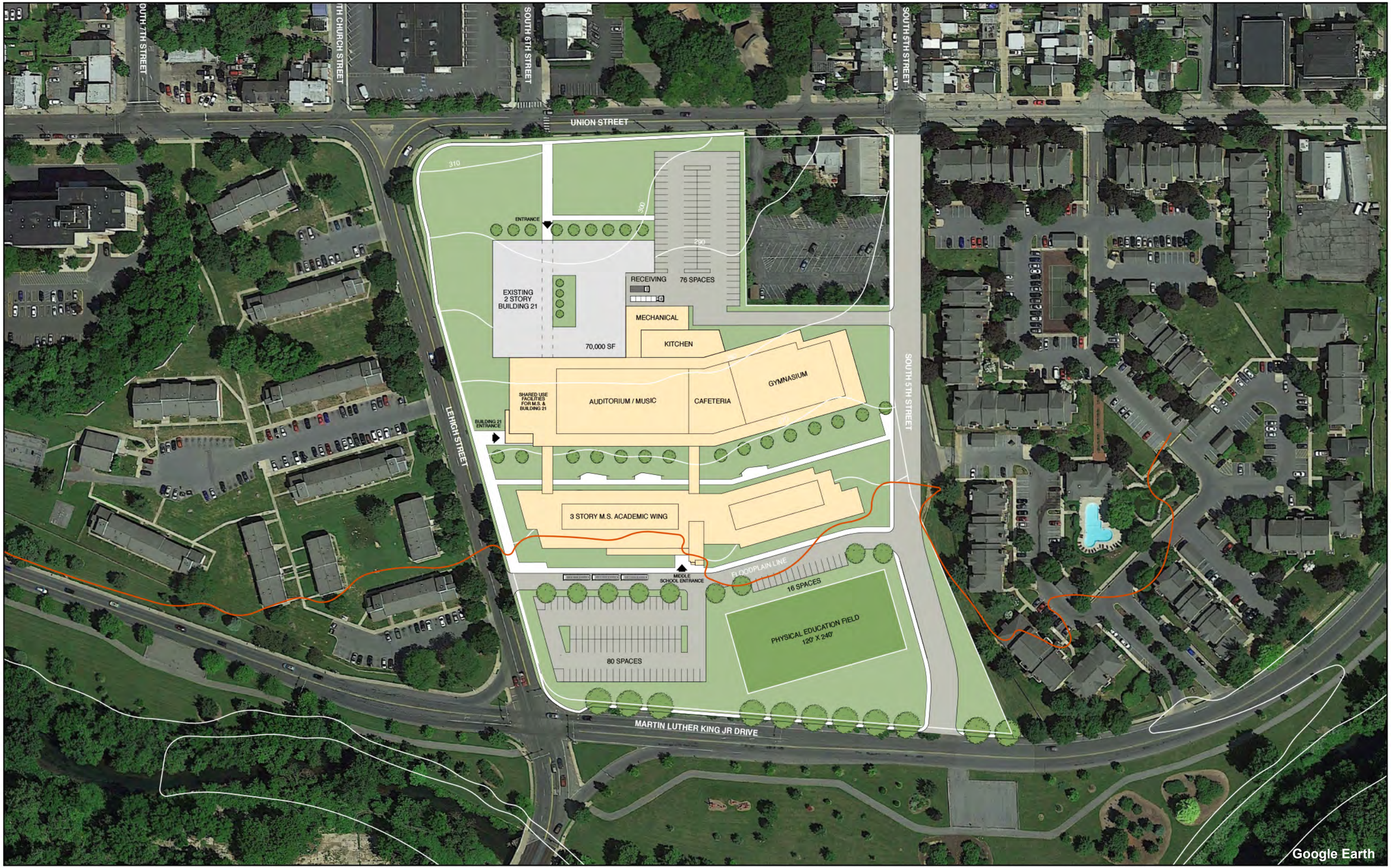
SITE VIABILITY PLAN

BUILDING 21

OPT. IIB & IIIC

North

0 50 100 200



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	NEW M.S.BUILDING	206,000 sq. ft.	This Exhibit represents an Architectural Evaluation.
EXISTING SITE AREA	11 acres	STUDENT CAPACITY	1,000 students	Further Site & Zoning Analysis will be required.
TOTAL SITE AREA	11 acres	PARKING	172 spaces	

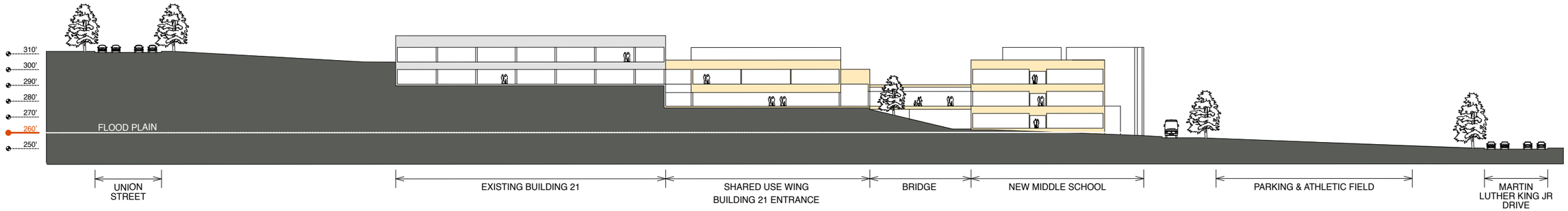
SITE VIABILITY PLAN

BUILDING 21

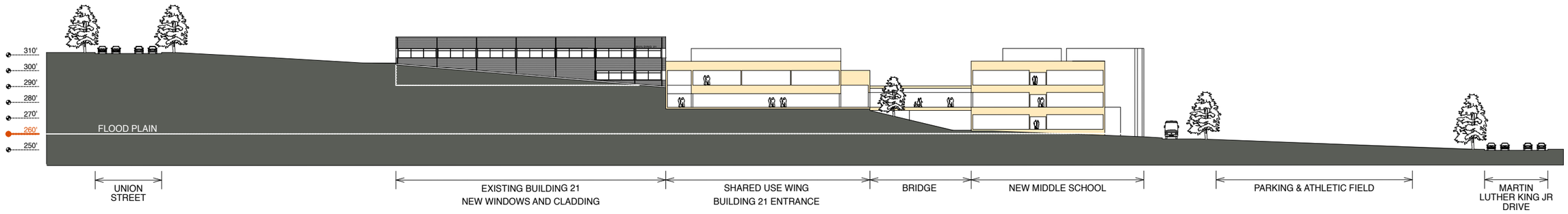
OPT. IIB & IIIC

North

0 50 100 200



NORTH / SOUTH SITE SECTION



NORTH / SOUTH SITE SECTION

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	NEW M.S.BUILDING	206,000 sq. ft.	This Exhibit represents an Architectural Evaluation.
EXISTING SITE AREA	11 acres	STUDENT CAPACITY	1,000 students	Further Site & Zoning Analysis will be required.
TOTAL SITE AREA	11 acres	PARKING	172 spaces	

NORTH / SOUTH SITE SECTIONS

BUILDING 21

OPT. IIB & IIIC

0 25 50 100

OPTION III

	Cost
Option IIIA	
Construct new **900 Student Middle School** on the 1**1.58 acre** Bucky Boyle site to replace Harrison-Morton Middle School.	**$74,300,000**
Option IIIB	
Replace Community Athletic Fields Off-Site (8 acres minimum)	**$6,000,000**
Option IIIC	
Construct new **1,000 Student Middle School** on the **11 acre** Building 21 site to replace Raub Middle School (Building 21 will remain and be renovated).	**$89,300,000**
SUB TOTAL:	**$169,600,000**

Land Divestures as Part of this Option

1. Sell the existing Harrison-Morton Middle School (1.77 acres)	**value req**
2. Sell the existing Raub Middle School (2.42 acres)	**value req**
3. Sell the existing McKinley Elementary School (.84 acres)	**value req**
4. Sell the existing Cleveland Elementary School (.58 acres)	**value req**
5. Sell the Existing Mosser Woods Property (22 acres)	**value req**
SUB TOTAL:	**value req**
TOTAL:	**$169,600,000**

Phasing Concept

Construct 2 New Middle Schools while Raub and Harrison-Morton Middle Schools remain in place until completion and then divest the existing properties

(Phasing required to replace Community Athletic Fields in advance of Option IIIa construction)

Option IIIA

Advantages
- Provides for a 21st Century Middle School in the neighborhood of the Harrison-Morton Middle School
- The 9-Acre site can accommodate a Parent-Drop-Off Zone and Bus Loading Zone

Disadvantages
- The School District does not currently own this property
- A pedestrian link will have to be constructed for student access to North Front Street to both the North and South
- A four (4) Story Academic Wing will be required
- The Site can only accommodate 36 parking spaces
- The site is shared with a city owned water intake station
- The site borders a large power station
- Athletic fields cannot be accommodated
- The existing Community Athletic Fields will have to replace at another site. They are comprised of one (1) baseball field, one (1) softball field, one (1) football field overlay and two (2) basketball courts which are all lighted with adjoining toilet facilities and parking

Option IIIB

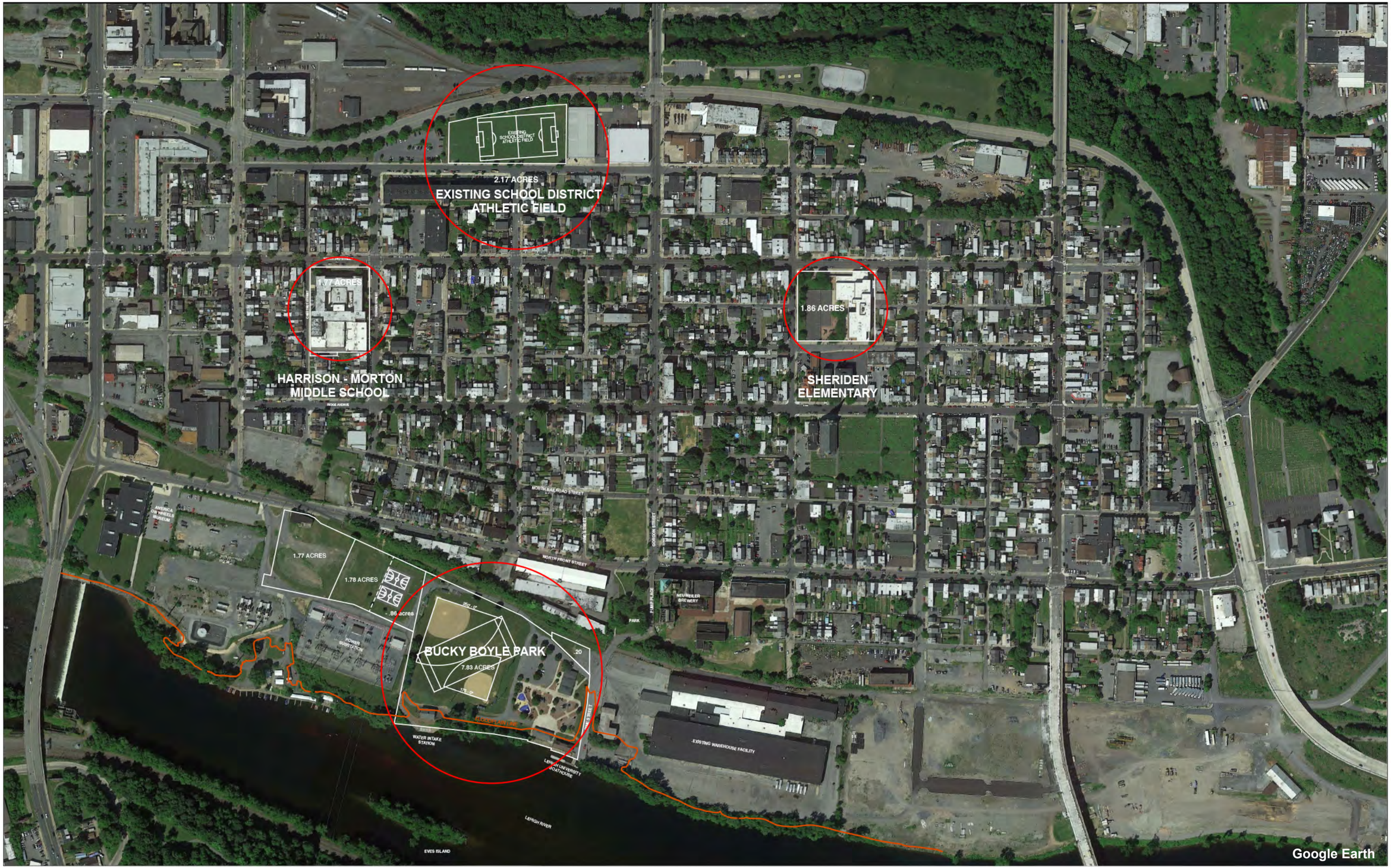
Advantages
- Provides newer facilities

Disadvantages
- Extremely high first costs
- The School District does not currently own property for such a facility
- A land acquisition of this size is not readily available in this area of the School District

Option IIIC

Advantages
- Provides for a 1,000 Student 21st Century Middle School in the neighborhood of the Raub Middle School catchment area
- The school would share the existing District-Owned 11 Acre Building 21 Site
- The Site can accommodate 172 Parking Spaces
- The Building 21 Program van be enhanced with shared facilities with this option
- A small athletic field for physical education can be accommodated

Disadvantages
- A 60-foot grade change from Union Street to Martin Luther King Jr Drive will have to be accommodated
- The southern portion of the site is in the floodplain, which is only acceptable for parking and athletic fields



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

SITE VIABILITY PLAN OPT IIIA

BUCKY BOYLE PARK North

0 100 300 500

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

ADDITIONAL SITE AREA	1.06 acres (.86 + .20)
EXISTING PARK AREA	7.84 acres
TOTAL SITE AREA	8.90 acres

This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

SITE VIABILITY PLAN — OPT IIIA

BUCKY BOYLE PARK

North

0 100 200 300

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

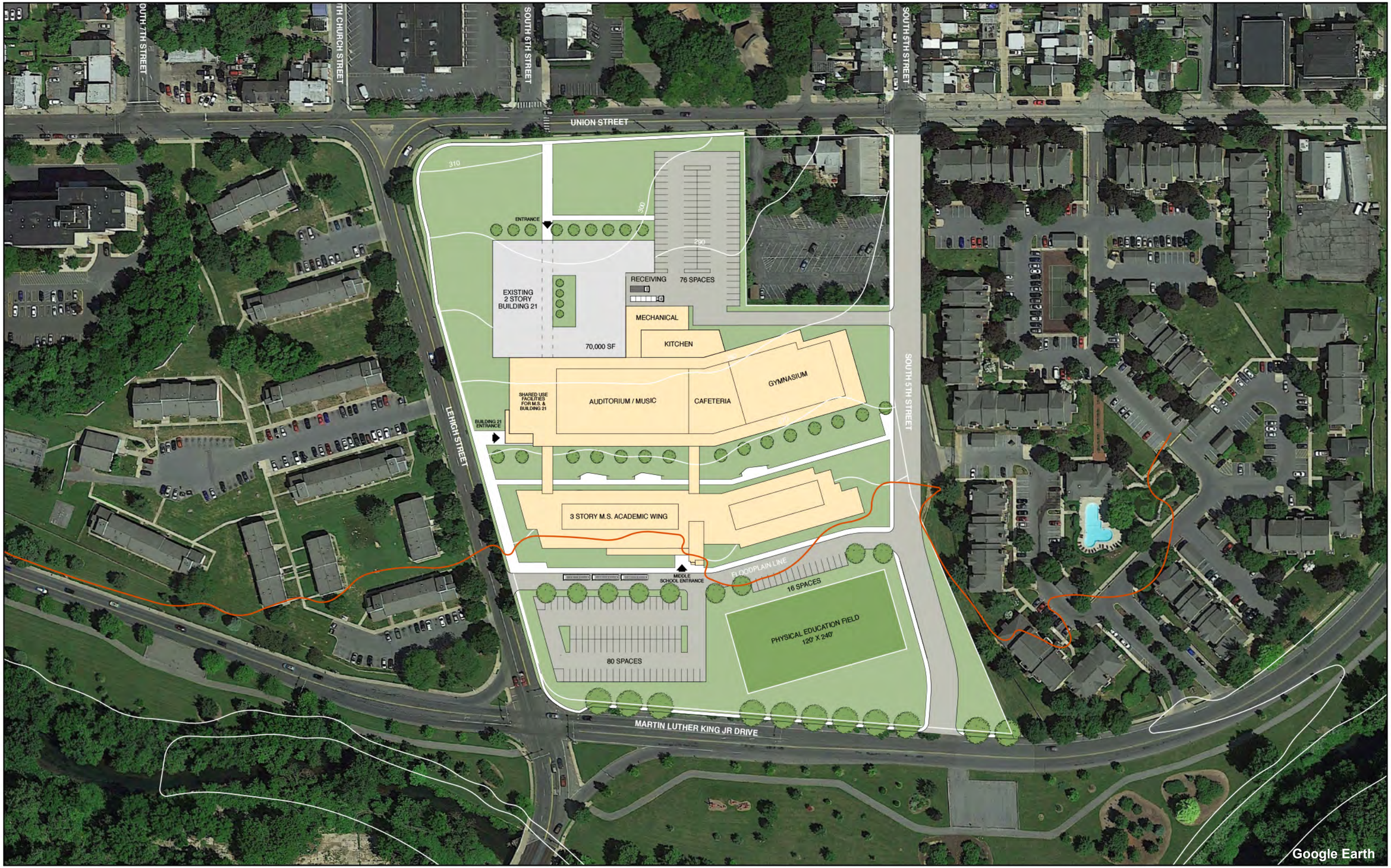
NEW M.S. SITE AREA	6.40 acres	NEW BUILDING	190,000 sq. ft.	This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.
REMAINING PARK AREA	2.50 acres	STUDENT CAPACITY	900 students	
TOTAL SITE AREA	8.90 acres	PARKING	36 spaces	

SITE VIABILITY PLAN — OPT IIIA

BUCKY BOYLE PARK

North

0 100 200 300



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

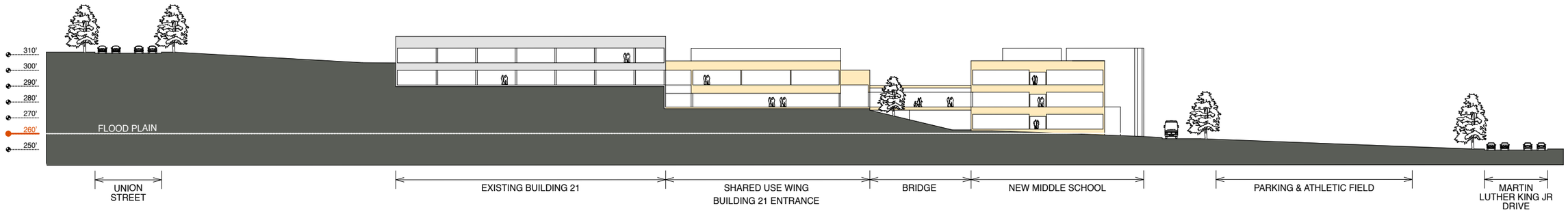
NEW SITE AREA	0 acres	NEW M.S.BUILDING	206,000 sq. ft.	This Exhibit represents an Architectural Evaluation.
EXISTING SITE AREA	11 acres	STUDENT CAPACITY	1,000 students	Further Site & Zoning Analysis will be required.
TOTAL SITE AREA	11 acres	PARKING	172 spaces	

SITE VIABILITY PLAN — OPT. IIB & IIIC

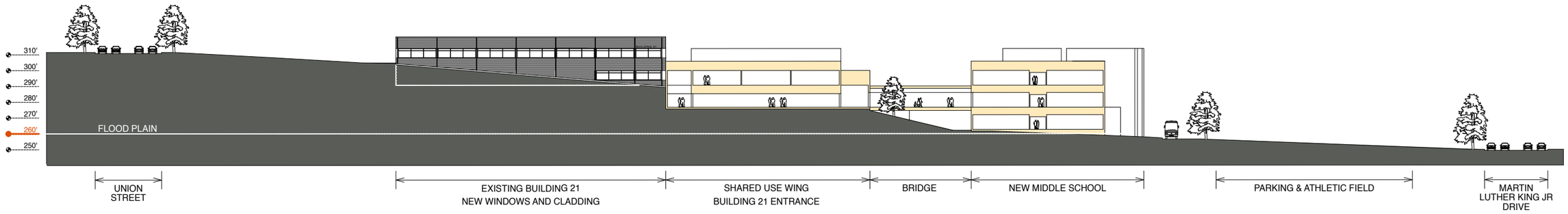
BUILDING 21

North

0 50 100 200



NORTH / SOUTH SITE SECTION



NORTH / SOUTH SITE SECTION

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	NEW M.S.BUILDING	206,000 sq. ft.
EXISTING SITE AREA	11 acres	STUDENT CAPACITY	1,000 students
TOTAL SITE AREA	11 acres	PARKING	172 spaces

This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

NORTH / SOUTH SITE SECTIONS

BUILDING 21

OPT. IIB & IIIC

0 25 50 100

Additional Options		Cost
1.	Construct New **600 Student Magnet School** on State Hospital Site	**$63,760,000**
2.	Expand Building 21 to accommodate CTE Programming	**$8,493,400**
3.	Expand Building 21 to accommodate District Administration Building	**$16,719,800**
4.	Replace Jefferson Elementary on existing site (**700 Student Capacity**)	**$38,000,000**
5.	Renovate Jefferson Elementary for **525 Students**	**$28,500,000**

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

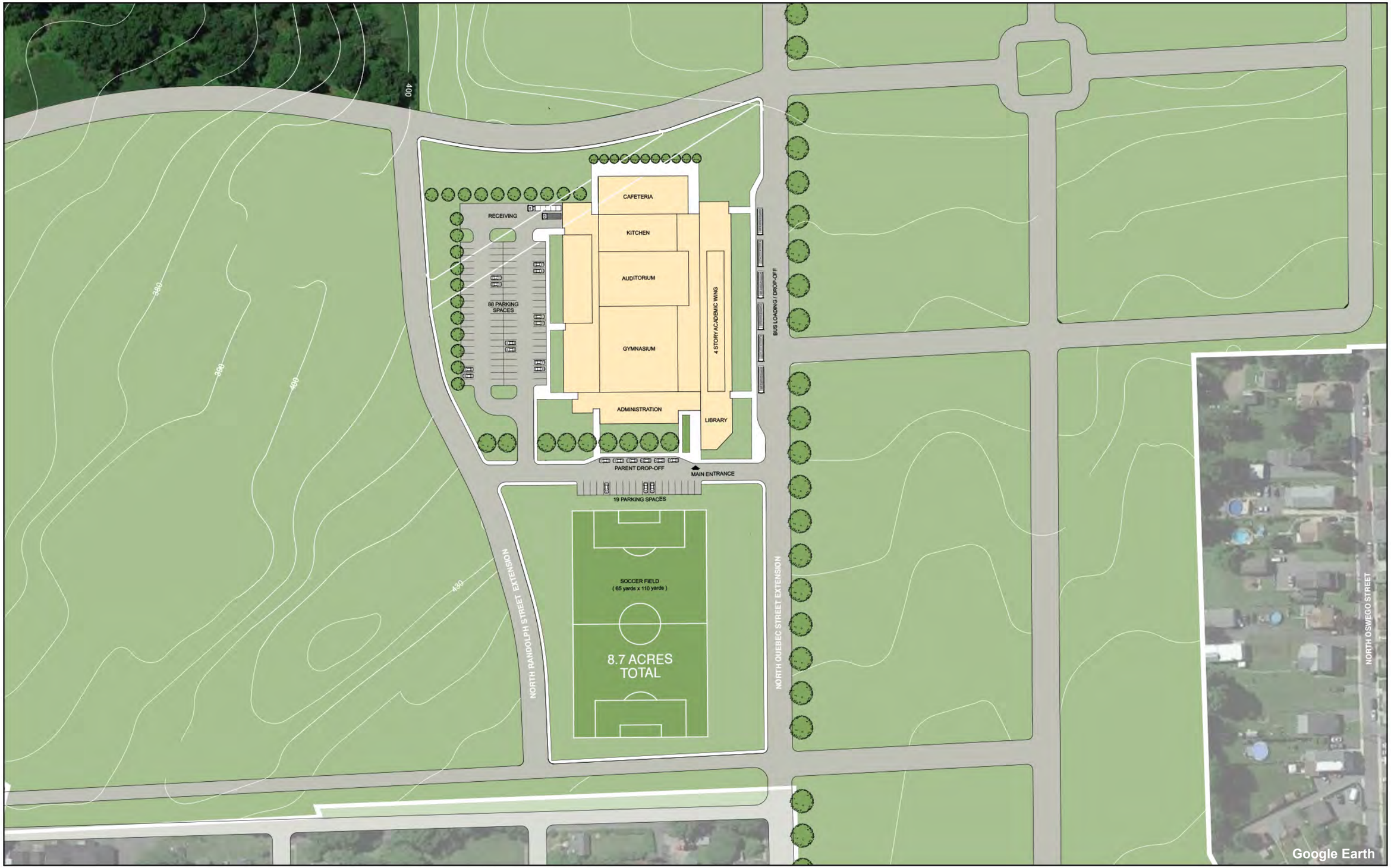
BUILDING SITE AREA	8.7 acres*	NEW BUILDING	160,000 sq. ft.	This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.
EXISTING SITE AREA	186.3 acres	STUDENT CAPACITY	600 students	
TOTAL SITE AREA	195.0 acres	PARKING	107 spaces	

* (includes 3 acre soccer field)

SITE VIABILITY PLAN ADDITIONAL OPT 1

STATE HOSPITAL
TOWN SQUARE OPTION

North
0 200 400 800



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

BUILDING SITE AREA	8.7 acres*	NEW BUILDING	160,000 sq. ft.	This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.
EXISTING SITE AREA	186.3 acres	STUDENT CAPACITY	600 students	
TOTAL SITE AREA	195.0 acres	PARKING	107 spaces	

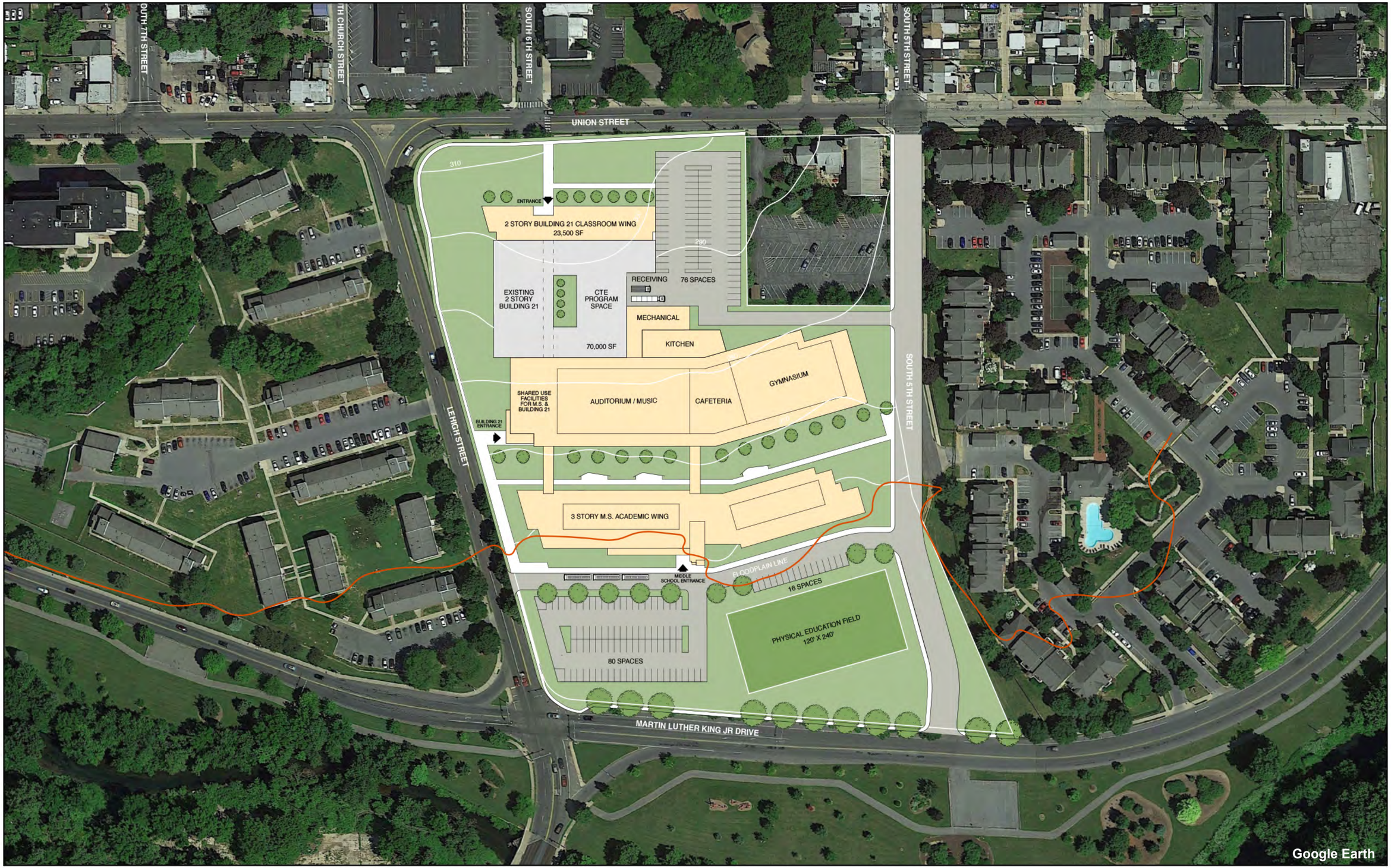
* (includes 3 acre soccer field)

SITE VIABILITY PLAN ADDITIONAL OPT 1

STATE HOSPITAL

TOWN SQUARE OPTION

North 0 50 100 200



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres
EXISTING SITE AREA	11 acres
TOTAL SITE AREA	11 acres

NEW M.S.BUILDING	206,000 sq. ft.
STUDENT CAPACITY	1,000 students
BUILDING 21 ADDITION	23,500 sq. ft.
PARKING	172 spaces

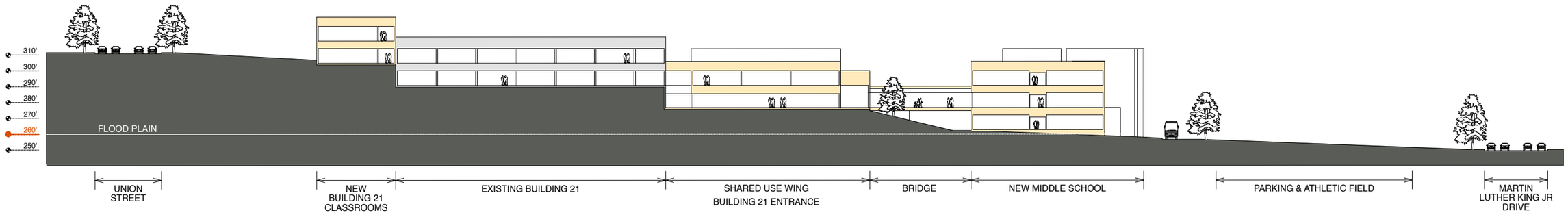
This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

SITE VIABILITY PLAN — ADDITIONAL OPT. 2

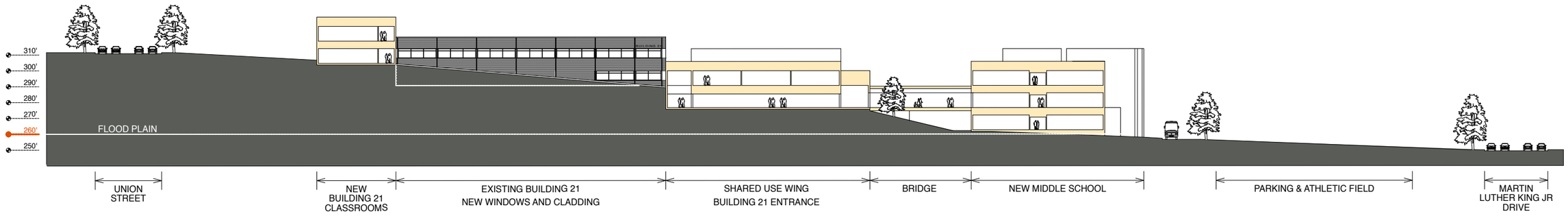
BUILDING 21

North

0 50 100 200



NORTH / SOUTH SITE SECTION



NORTH / SOUTH SITE SECTION

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres
EXISTING SITE AREA	11 acres
TOTAL SITE AREA	11 acres

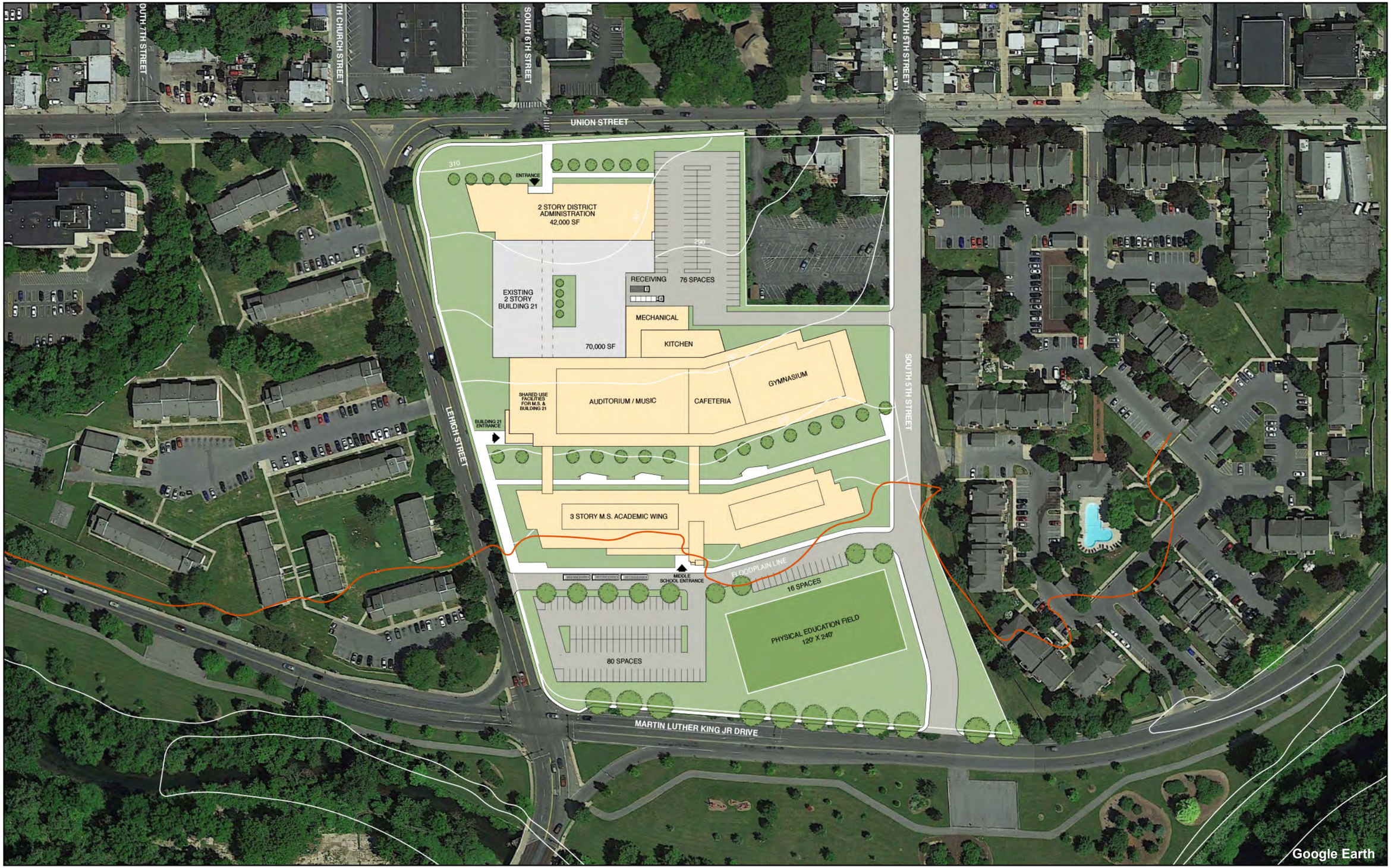
NEW M.S.BUILDING	206,000 sq. ft.
STUDENT CAPACITY	1,000 students
BUILDING 21 ADDITION	23,500 sq. ft.
PARKING	172 spaces

This Exhibit represents an Architectural Evaluation.
Further Site & Zoning Analysis will be required.

NORTH / SOUTH SITE SECTIONS ADDITIONAL OPT. 2

BUILDING 21

0 25 50 100



MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

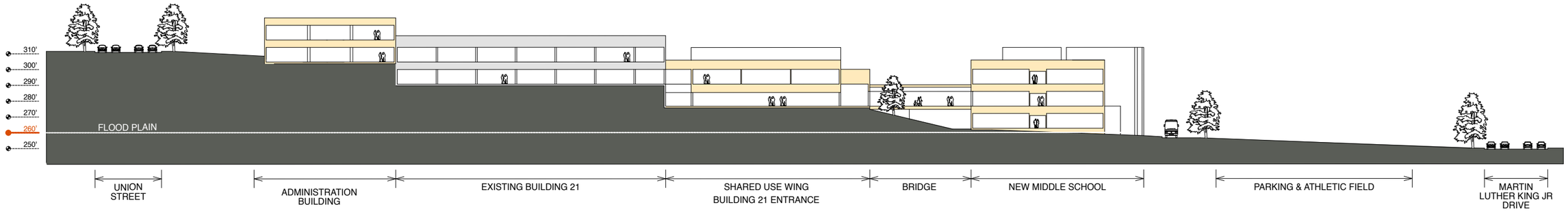
NEW SITE AREA	0 acres	NEW M.S.BUILDING	206,000 sq. ft.	This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.
EXISTING SITE AREA	11 acres	STUDENT CAPACITY	1,000 students	
TOTAL SITE AREA	11 acres	DISTRICT ADMIN.	42,000 sq. ft.	
		PARKING	172 spaces	

SITE VIABILITY PLAN ADDITIONAL OPT. 3

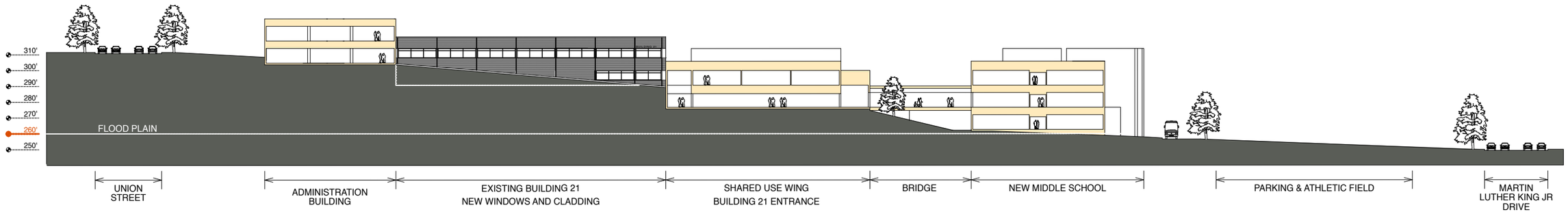
BUILDING 21

North

0 50 100 200



OPTION V - NORTH / SOUTH SITE SECTION



OPTION V - NORTH / SOUTH SITE SECTION

MIDDLE SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres
EXISTING SITE AREA	11 acres
TOTAL SITE AREA	11 acres

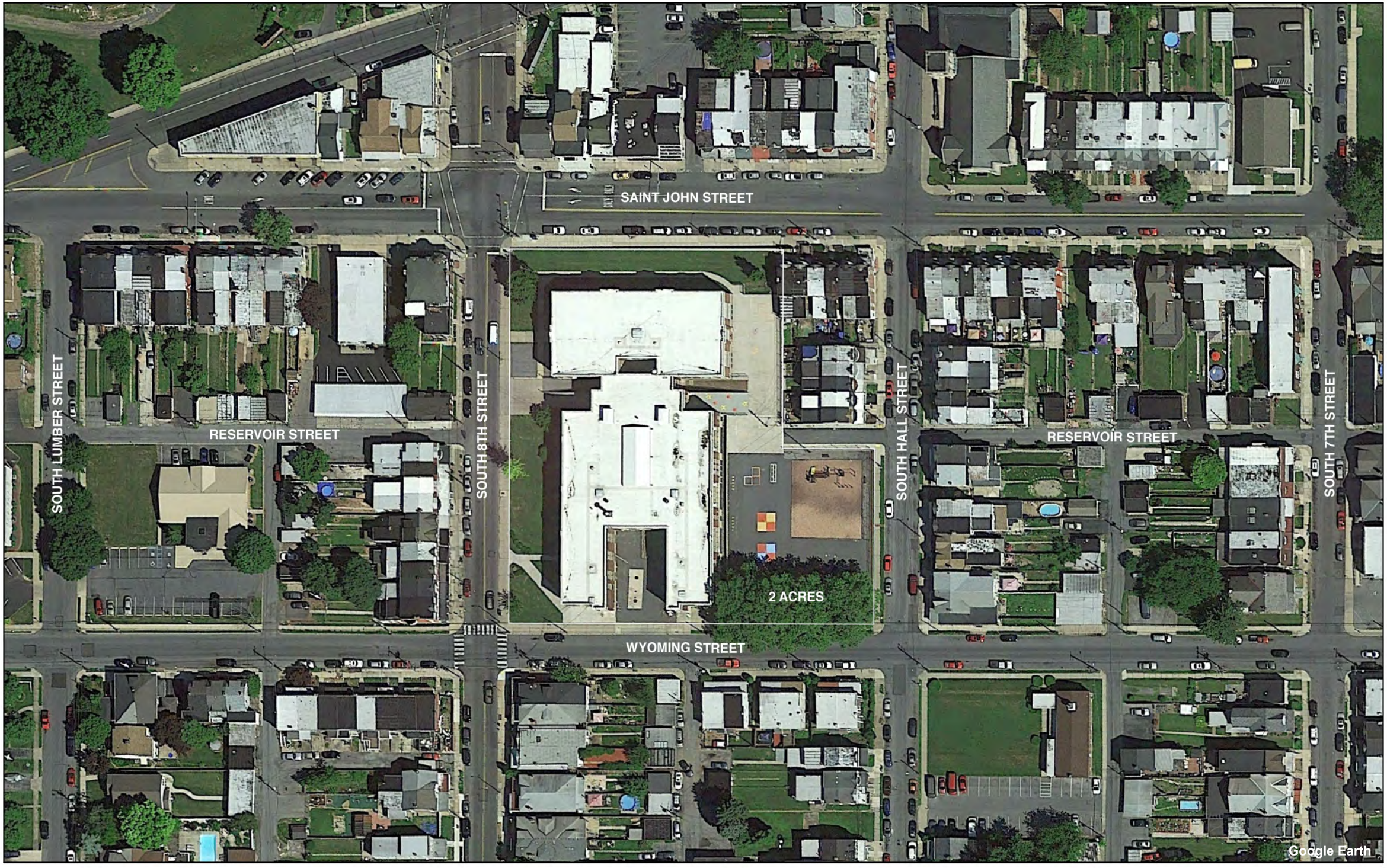
NEW M.S.BUILDING	206,000 sq. ft.
STUDENT CAPACITY	1,000 students
DISTRICT ADMIN.	42,000 sq. ft.
PARKING	172 spaces

This Exhibit represents an Architectural Evaluation. Further Site & Zoning Analysis will be required.

NORTH / SOUTH SITE SECTIONS ADDITIONAL OPT. 3

BUILDING 21

0 25 50 100



ELEMENTARY SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

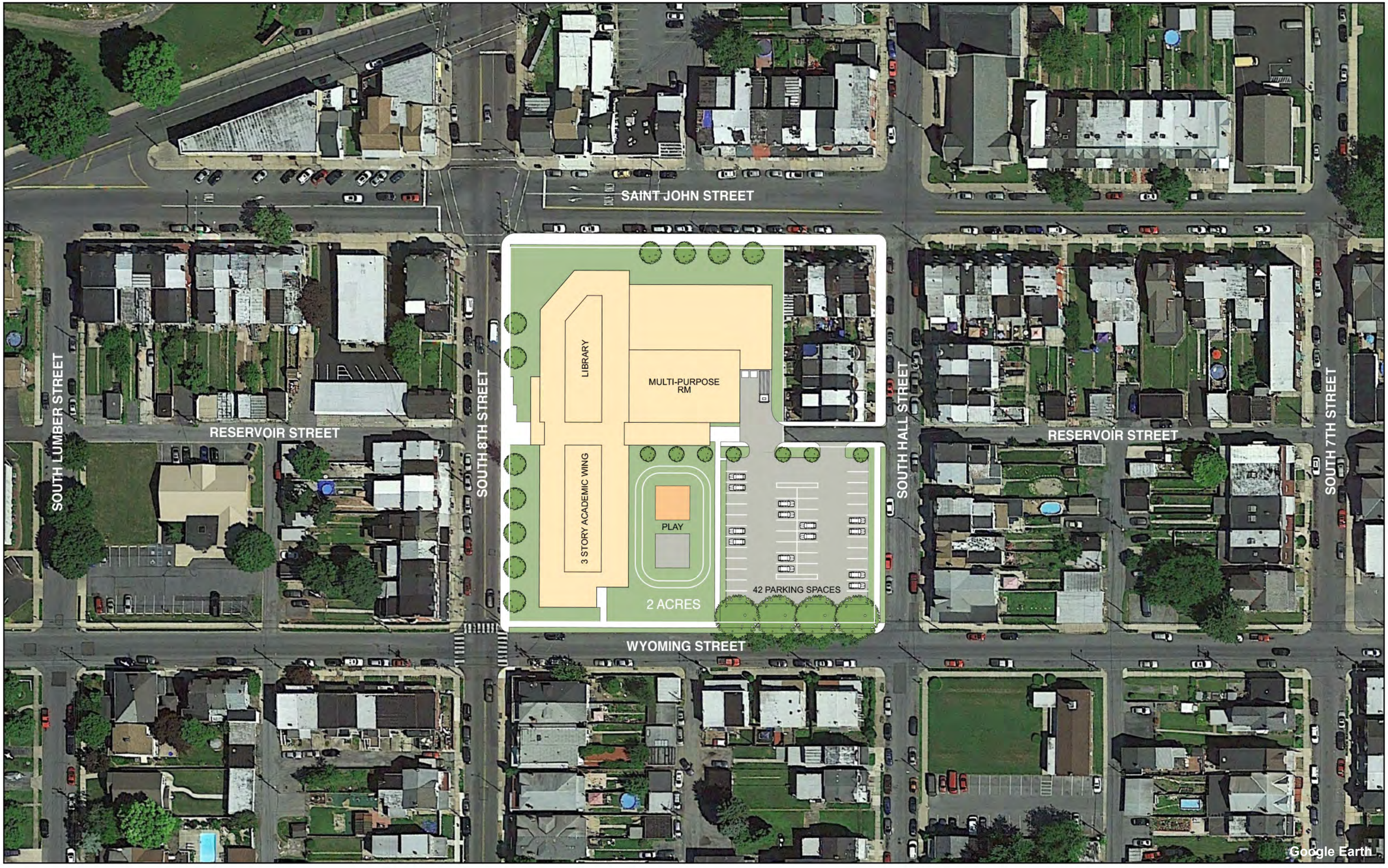
NEW SITE AREA	0 acres	EXISTING BUILDING	105,114 sq. ft.	This Exhibit represents an Architectural Evaluation.
EXISTING SITE AREA	2 acres	STUDENT CAPACITY	525 students	Further Site & Zoning Analysis will be required.
TOTAL SITE AREA	2 acres	EXISTING PARKING	8 spaces	

SITE VIABILITY PLAN — OPT. 4

JEFFERSON ELEMENTARY

North

0 30 60 120



ELEMENTARY SCHOOL STUDY

BRESLIN RIDYARD FADERO ARCHITECTS

STATISTICS

NEW SITE AREA	0 acres	NEW E.S.BUILDING	85,000 sq. ft.	This Exhibit represents an Architectural Evaluation.
EXISTING SITE AREA	2 acres	STUDENT CAPACITY	700 students	Further Site & Zoning Analysis will be required.
TOTAL SITE AREA	2 acres	PARKING	42 spaces	

SITE VIABILITY PLAN OPT. 4

JEFFERSON ELEMENTARY

North

0 30 60 120

APPENDIX

ELEMENTARY BUILDING CAPACITY

District/CTC: Allentown School District | Project Name: PDE Capacity | Grades: K - 5

#1 NAME OF SPACE	#2 UNIT FTE CAP	SCHOOL: Jefferson Elementary — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP	SCHOOL: — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP
HALF-TIME KINDRGRTN	50								
FULL-TIME KINDRGRTN	25	4	100	4	100				
REG CLSRM 660+ SQ FT	25	19	475	17	425				
OTHER: ESOL		1		1					
OTHER: Special Education									
BUILDING TOTAL	XX	XXXXXX	575	XXXXXX	525	XXXXXX		XXXXXX	

#1 NAME OF SPACE	#2 UNIT FTE CAP	SCHOOL: — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP	SCHOOL: — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP
HALF-TIME KINDRGRTN	50								
FULL-TIME KINDRGRTN	25								
REG CLSRM 660+ SQ FT	25								
OTHER:									
BUILDING TOTAL	XX	XXXXXX		XXXXXX		XXXXXX		XXXXXX	

#1 NAME OF SPACE	#2 UNIT FTE CAP	SCHOOL: — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP	SCHOOL: — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP
HALF-TIME KINDRGRTN	50								
FULL-TIME KINDRGRTN	25								
REG CLSRM 660+ SQ FT	25								
OTHER:									
BUILDING TOTAL	XX	XXXXXX		XXXXXX		XXXXXX		XXXXXX	

#1 NAME OF SPACE	#2 UNIT FTE CAP	SCHOOL: — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP	SCHOOL: — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP
HALF-TIME KINDRGRTN	50								
FULL-TIME KINDRGRTN	25								
REG CLSRM 660+ SQ FT	25								
OTHER:									
BUILDING TOTAL	XX	XXXXXX		XXXXXX		XXXXXX		XXXXXX	

Only kindergarten and regular classrooms 660 square feet or greater should be reported. Although special education rooms and pre-school rooms may be eligible for capacity, these spaces should not be included in the room counts reported above. The following spaces do not receive reimbursable capacity and therefore should not be included in the capacities for an elementary school building: science labs, computer rooms, art rooms, music rooms, small and large group instruction rooms, and multi-purpose rooms.

REVISED JULY 1, 2010 FORM EXPIRES 6-30-12 PLANCON-A07

MIDDLE/SECONDARY BUILDING CAPACITY

District/CTC: Allentown School District | Project Name: PDE Capacity | Grades: 6 - 8

#1 NAME OF SPACE	#2 UNIT FTE CAP	SCHOOL: Harrison-Morton Middle — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP	SCHOOL: Raub Middle — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP
REG CLSRM 660+ SQ FT	25	24	600			33	825	30	750
SCIENCE CLSRM 660+ SQ FT	25	1	25						
SCIENCE LAB 660+ SQ FT	20	7	140			6	120	6	120
PLANETARIUM W/CLSRM 660+ SQ FT	20								
ALTERNATIVE ED ROOM 660+ SQ FT	20								
BUSINESS CLSRM 660+ SQ FT	25								
BUSINESS LAB 660+ SQ FT	20								
COMPUTER LAB 660+ SQ FT	20	1	20			1	20	1	20
TV INSTRUCTIONAL STUDIO 660+ SQ FT	20								
ART CLASSROOM 660+ SQ FT	20	2	40			1	20	1	20
MUSIC CLASSROOM 660+ SQ FT	25					1	25	1	25
BAND ROOM 660+ SQ FT	25	1	25			1	25	1	25
ORCHESTRA ROOM 660+ SQ FT	25								
CHORAL ROOM 660+ SQ FT	25	1	25						
FAMILY/CONSMR SCIENCE 660+ SQ FT	20	1	20						
IA/SHOP 1800+ SQ FT	20								
TECH ED COMP. LAB	20	1	20			1	20	1	20
VO AG SHOP W/CLSRM 660+ SQ FT	20								
DRIVER'S ED 660+ SQ FT	20								
GYM 6500-7500 SQ FT	66	1.0	66						
AUX GYM 2500 SQ FT	33					2	66	2	66
OTHER: Special Education Classroom		8				3		3	
OTHER: ESOL Classroom		2				1		1	
BUILDING TOTAL	XXX	XXXXXX	981	XXXXXX		XXXXX	1,121	XXXXXX	1,046
MS/SEC UTILIZATION (BLDG TOTAL X .8)	XXX	XXXXXX	785	XXXXXX	Phase Out	XXXXX	897	XXXXXX	837

#1 NAME OF SPACE	#2 UNIT FTE CAP	SCHOOL: South Mountain Middle — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP	SCHOOL: Trexler Middle — PRESENT #3 NUMBER OF UNITS	PRESENT #4 TOTAL FTE CAP	PLANNED #5 NUMBER OF UNITS	PLANNED #6 TOTAL FTE CAP
REG CLSRM 660+ SQ FT	25	38	950	36	900	27	675	25	625
SCIENCE CLSRM 660+ SQ FT	25	1	25	1	25	2	50	2	50
SCIENCE LAB 660+ SQ FT	20	6	120	6	120	4	80	4	80
PLANETARIUM W/CLSRM 660+ SQ FT	20								
ALTERNATIVE ED ROOM 660+ SQ FT	20								
BUSINESS CLSRM 660+ SQ FT	25								
BUSINESS LAB 660+ SQ FT	20								
COMPUTER LAB 660+ SQ FT	20	1	20	1	20	1	20	1	20
TV INSTRUCTIONAL STUDIO 660+ SQ FT	20								
ART CLASSROOM 660+ SQ FT	20	1	20	1	20	1	20	1	20
MUSIC CLASSROOM 660+ SQ FT	25					1	25	1	25
BAND ROOM 660+ SQ FT	25	1	25	1	25				
ORCHESTRA ROOM 660+ SQ FT	25								
CHORAL ROOM 660+ SQ FT	25								
FAMILY/CONSMR SCIENCE 660+ SQ FT	20	1	20	1	20	1	20	1	20
IA/SHOP 1800+ SQ FT	20								
TECH ED COMP. LAB	20	1	20	1	20	1	20	1	20
VO AG SHOP W/CLSRM 660+ SQ FT	20								
DRIVER'S ED 660+ SQ FT	20								
GYM 6500-7500 SQ FT	66	1.0	66	1.0	66	1.0	66	1.0	66
AUX GYM 2500 SQ FT	33	1	33	1	33				
OTHER: Special Education Classroom		9		9		10		10	
OTHER: ESOL Classroom		2		2		1		1	
BUILDING TOTAL	XXX	XXXXXX	1,299	XXXXXX	1,249	XXXXX	976	XXXXXX	926
MS/SEC UTILIZATION (BLDG TOTAL X .8)	XXX	XXXXXX	1,039	XXXXXX	999	XXXXX	781	XXXXXX	741

REVISED JULY 1, 2010 FORM EXPIRES 6-30-12 PLANCON-A08

pennsylvania
DEPARTMENT OF EDUCATION

Enrollment Projections
Prepared by the Pennsylvania Department of Education
(717) 787-2644

Allentown City SD 121390302

YEAR	K	1	2	3	4	5	6	7	8	9	10	11	12	Total
Actual														
2015 - 2016	1165	1370	1414	1429	1365	1225	1155	1107	1197	1730	1076	938	935	16106
2016 - 2017	1200	1280	1366	1415	1409	1306	1158	1140	1123	1736	1289	1103	1103	16628
2017 - 2018	1207	1280	1290	1306	1318	1331	1123	1126	1110	1669	1252	1140	1082	16234
2018 - 2019	1287	1288	1303	1387	1395	1436	1326	1234	1173	1577	1303	1159	1078	16946
2019 - 2020	1267	1284	1225	1271	1365	1415	1352	1289	1178	1534	1287	1155	1108	16730
Projection														
2020 - 2021	1288	1303	1276	1227	1261	1367	1324	1321	1284	1668	1175	1197	1110	16801
2021 - 2022	1305	1342	1295	1278	1218	1263	1279	1294	1316	1818	1277	1093	1150	16928
2022 - 2023	1306	1360	1333	1297	1268	1220	1182	1250	1289	1864	1392	1188	1050	16999
2023 - 2024	1329	1361	1351	1335	1287	1270	1142	1155	1245	1826	1427	1295	1141	17164
2024 - 2025	1321	1386	1352	1354	1325	1289	1188	1116	1151	1763	1398	1328	1244	17215
2025 - 2026	1313	1377	1377	1355	1344	1327	1206	1161	1112	1630	1350	1301	1276	17129
2026 - 2027	1305	1369	1368	1380	1345	1346	1242	1178	1157	1575	1248	1256	1250	17019
2027 - 2028	1297	1360	1360	1371	1370	1347	1259	1214	1173	1639	1206	1161	1207	16964
2028 - 2029	1290	1352	1351	1363	1361	1372	1260	1230	1209	1661	1255	1122	1116	16942
2029 - 2030	1282	1344	1343	1354	1353	1363	1284	1231	1225	1712	1272	1168	1078	17009

Allentown City SD
121390302

Tuesday, September 8, 2020
Department of Education, Data Quality Office

Various Grade Groupings of the Enrollment Projections

YEAR	K-4	K-5	K-6	K-7	K-8	K-9	K-12	5-8	6-8	7-8	6-9	7-9	7-12	8-12	9-12	10-12
2019 - 2020	6412	7827	9179	10468	11646	13180	16730	5234	3819	2467	5353	4001	7551	6262	5084	3550
2024 - 2025	6738	8027	9215	10331	11482	13245	17215	4744	3455	2267	5218	4030	8000	6884	5733	3970
2029 - 2030	6676	8039	9323	10554	11779	13491	17009	5103	3740	2456	5452	4168	7686	6455	5230	3518

Notes:
1. Excludes students in full-time out-of-district special education, comprehensive AVTSs, charter schools, state-owned schools, consortium-operated alternative high schools, and juvenile correctional institutions.
2. Enrollment projections beyond five years are subject to errors in the lower grades resulting from inconsistencies between actual and projected live births and should be reviewed closely.
3. Four year old kindergarten students, if any, added to K enrollments.
4. Elementary and secondary ungraded students were distributed among the grades. Therefore, enrollments by grade may differ from those reported by the local education agencies.

Sources:
1. Pennsylvania Information Management System (PIMS)
2. Resident Live Birth file supplied by the Division of Health Statistics, Pennsylvania Department of Health. The Department of Health specifically disclaims responsibility for any analyses, interpretations or conclusions.

Retention Rate by Grade by Year

	Birth to K	Birth to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	10 to 11	11 to 12
2015-16 to 2016-17	0.64137	0.68891	0.99708	1.00071	0.986	0.95678	0.94531	0.98701	1.01445	1.45029	0.74509	1.02509	1.17591
2016-17 to 2017-18	0.63095	0.68413	1.00781	0.95608	0.93145	0.94464	0.85988	0.97237	0.97368	1.4862	0.7212	0.88441	0.98096
2017-18 to 2018-19	0.67737	0.67329	1.01797	1.07519	1.06815	1.08953	0.99624	1.09884	1.04174	1.42072	0.78071	0.92572	0.94561
2018-19 to 2019-20	0.66196	0.67579	0.95109	0.97544	0.98414	1.01434	0.9415	0.9721	0.95462	1.30776	0.81611	0.88642	0.956
Average Rate	0.65291	0.68053	0.99349	1.00185	0.99243	1.00132	0.93573	1.00758	0.99612	1.41624	0.76577	0.93041	1.01462
Retention Rate Used	0.65291	0.68053	0.99349	1.00185	0.99243	1.00132	0.93573	0.97716	0.99612	1.41624	0.76577	0.93041	0.96086

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Births	1858	1871	1913	1900	1914	1972	1998	2000	2036	2023	2011	1999	1987	1975	1963

| - - - - - - - - - - - - - - - - - - Projected Births - - - - - - - - - - - - - - - - - - |

Allentown City SD
121390302

Tuesday, September 8, 2020
Department of Education, Data Quality Office

Option IA - Raub Middle School

Description:
Renovate existing Raub Middle School for 837 Students

Site Development		$	1,000,000 **
Renovations (180,500 sq. ft. x $180 per sq. ft.)		$	32,490,000
	Sub-Total	**$**	**33,490,000**
Architectural / Engineering Services		$	2,511,750
Construction Manager Services		$	1,800,000
Land Development Services		$	200,000
Furniture and Equipment		$	1,800,000
	Sub-Total	**$**	**6,311,750**
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$	600,000
Contingency		$	6,398,250
	Sub-Total	**$**	**6,998,250**
Financing Costs	**Sub-Total**	**$**	**1,200,000**
	TOTAL	**$**	**48,000,000 ***

Option IB - Harrison-Morton Middle School

Description:
Renovate existing Harrison-Morton Middle School for 725 Students

Site Development		$	1,500,000 **
Renovations (151,400 sq. ft. x $180 per sq. ft.)		$	27,252,000
	Sub-Total	**$**	**28,752,000**
Architectural / Engineering Services		$	2,156,400
Construction Manager Services		$	2,000,000
Land Development Services		$	200,000
Furniture and Equipment		$	1,600,000
	Sub-Total	**$**	**5,956,400**
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$	800,000
Contingency		$	5,891,600
	Sub-Total	**$**	**6,691,600**
Financing Costs	**Sub-Total**	**$**	**1,000,000**
	TOTAL	**$**	**42,400,000 ***

* Estimate by Architect based on recent bidding for similar projects.
** Further Analysis of existing site conditions is required to finalize the site development estimate.

Option IC - Mosser Woods Site

Description:
Construct a New 600 Student Magnet Middle School on the Mosser Woods Site

Site Development		$	4,000,000 **
New Construction (160,000 sq. ft. x $300 per sq. ft.)		$	48,000,000
	Sub-Total	**$**	**52,000,000**
Architectural / Engineering Services		$	3,120,000
Construction Manager Services		$	2,200,000
Land Development Services		$	500,000
Furniture and Equipment		$	1,800,000
	Sub-Total	**$**	**7,620,000**
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$	1,000,000
Demolition of Existing Structures and Features		$	400,000
Contingency		$	2,580,000
	Sub-Total	**$**	**3,980,000**
Financing Costs	**Sub-Total**	**$**	**1,600,000**
	TOTAL	**$**	**65,200,000 ***

Option IIA - American Parkway Site

Description:
Construct a new Middle School for 900 Students on the American Parkway Site to replace Harrison-Morton Middle School

Site Development		$	5,000,000 **
New Construction (190,000 sq. ft. x $290 per sq. ft.)		$	55,100,000
	Sub-Total	**$**	**60,100,000**
Architectural / Engineering Services		$	3,606,000
Construction Manager Services		$	2,500,000
Land Development Services		$	400,000
Furniture and Equipment		$	1,800,000
	Sub-Total	**$**	**8,306,000**
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$	800,000
Site Acquisition Costs (Estimated)		$	5,000,000
Demolition of Existing Structures and Features		$	3,000,000
Contingency		$	2,994,000
	Sub-Total	**$**	**11,794,000**
Financing Costs	**Sub-Total**	**$**	**1,800,000**
	TOTAL	**$**	**82,000,000 ***

* Estimate by Architect based on recent bidding for similar projects.
** Further Analysis of existing site conditions is required to finalize the site development estimate.

Options IIB & IIIC - Building 21 Site

Description:
Construct a New Middle School for 1,000 Students to replace Raub Middle School and Renovate Building 21

Site Development		$	4,000,000 **
New Construction (206,000 sq. ft. x $290 per sq. ft.)		$	59,740,000
Renovations (70,000 sq. ft. x $120 per sq. ft.)		$	8,400,000
	Sub-Total	**$**	**72,140,000**
Architectural / Engineering Services		$	4,454,400
Construction Manager Services		$	3,000,000
Land Development Services		$	500,000
Furniture and Equipment		$	2,400,000
	Sub-Total	**$**	**10,354,400**
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$	1,000,000
Demolition of Existing Structures and Features		$	500,000
Contingency		$	3,305,600
	Sub-Total	**$**	**4,805,600**
Financing Costs	**Sub-Total**	**$**	**2,000,000**
	TOTAL	**$**	**89,300,000 ***

Option IIIA - Bucky Boyle Site

Description:
Construct a new Middle School for 900 Students on the Bucky Boyle Site to replace Harrison-Morton Middle School

Site Development		$	5,000,000 **
New Construction (190,000 sq. ft. x $290 per sq. ft.)		$	55,100,000
	Sub-Total	**$**	**60,100,000**
Architectural / Engineering Services		$	3,606,000
Construction Manager Services		$	2,500,000
Land Development Services		$	400,000
Furniture and Equipment		$	1,800,000
	Sub-Total	**$**	**8,306,000**
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$	800,000
Site Acquisition Costs (Estimated)		$	0
Demolition of Existing Structures and Features		$	400,000
Contingency		$	2,994,000
	Sub-Total	**$**	**4,194,000**
Financing Costs	**Sub-Total**	**$**	**1,700,000**
	TOTAL	**$**	**74,300,000 ***

* Estimate by Architect based on recent bidding for similar projects.
** Further Analysis of existing site conditions is required to finalize the site development estimate.

Additional Option 1 - State Hospital Site

Description:
Construct a New 600 Student Magnet Middle School on the State Hospital Site

Site Development		$ 3,000,000	**
New Construction (160,000 sq. ft. x $300 per sq. ft.)		48,000,000	
	Sub-Total	**$ 51,000,000**	
Architectural / Engineering Services		$ 3,060,000	
Construction Manager Services		$ 2,000,000	
Land Development Services		$ 400,000	
Furniture and Equipment		$ 1,800,000	
	Sub-Total	**$ 7,260,000**	
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$ 800,000	
Demolition of Existing Structures and Features		$ 500,000	
Contingency		$ 2,700,000	
	Sub-Total	**$ 4,000,000**	
Financing Costs	**Sub-Total**	**$ 1,500,000**	
	TOTAL	**$ 63,760,000**	*

Additional Option 2 - Building 21 Site

Description:
Construct a Classroom Addition for 270 Students (12 CR's) to accommodate CTE Program Renovations in the existing building

Site Development		$ 75,000	**
New Construction (23,500 sq. ft. x $290 per sq. ft.)		$ 6,815,000	
	Sub-Total	**$ 6,890,000**	
Architectural / Engineering Services		$ 413,400	
Construction Manager Services		$ 280,000	
Land Development Services		$ 50,000	
Furniture and Equipment		$ 100,000	
	Sub-Total	**$ 843,400**	
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$ 80,000	
Contingency		$ 500,000	
	Sub-Total	**$ 580,000**	
Financing Costs	**Sub-Total**	**$ 180,000**	
	TOTAL	**$ 8,493,400**	*

* Estimate by Architect based on recent bidding for similar projects.
** Further Analysis of existing site conditions is required to finalize the site development estimate.

Additional Option 3 - Building 21 Site

Description:
Construct a District Administration Building on the North side of the Building 21 Facility

Site Development		$ 150,000	**
New Construction (42,000 sq. ft. x $290 per sq. ft.)		12,180,000	
	Sub-Total	**$ 12,330,000**	
Architectural / Engineering Services		$ 739,800	
Construction Manager Services		$ 500,000	
Land Development Services		$ 100,000	
Furniture and Equipment		$ 1,000,000	
	Sub-Total	**$ 2,339,800**	
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$ 200,000	
Contingency		$ 1,500,000	
	Sub-Total	**$ 1,700,000**	
Financing Costs	**Sub-Total**	**$ 350,000**	
	TOTAL	**$ 16,719,800**	*

Additional Option 4 - Jefferson Elementary Site

Description:
Construct a New 700 Student Elementary School on the existing Jefferson Elementary Site

Site Development		$ 2,800,000	**
New Construction (85,000 sq. ft. x $280 per sq. ft.)		$ 23,800,000	
	Sub-Total	**$ 26,600,000**	
Architectural / Engineering Services		$ 1,596,000	
Construction Manager Services		$ 1,200,000	
Land Development Services		$ 400,000	
Furniture and Equipment		$ 1,800,000	
	Sub-Total	**$ 4,996,000**	
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$ 800,000	
Demolition of Existing Structures and Features		$ 2,000,000	
Contingency		$ 2,104,000	
	Sub-Total	**$ 4,904,000**	
Financing Costs	**Sub-Total**	**$ 1,500,000**	
	TOTAL	**$ 38,000,000**	*

* Estimate by Architect based on recent bidding for similar projects.
** Further Analysis of existing site conditions is required to finalize the site development estimate.

Additional Option 5 - Jefferson Elementary School

Description:
Renovate existing Jefferson Elementary School for 525 Students

Site Development		$	1,000,000 **
Renovations (105,114 sq. ft. x $180 per sq. ft.)		$	18,920,520
	Sub-Total	**$**	**19,920,520**
Architectural / Engineering Services		$	1,494,039
Construction Manager Services		$	1,000,000
Land Development Services		$	50,000
Furniture and Equipment		$	1,600,000
	Sub-Total	**$**	**4,144,039**
Additional Construction-Related Costs (Permits and Reviews; Agency Reviews and Approvals; Geotechnical, Environmental and Construction Testings; etc.)		$	600,000
Contingency		$	3,235,441
	Sub-Total	**$**	**3,835,441**
Financing Costs	**Sub-Total**	**$**	**600,000**
	TOTAL	**$**	**28,500,000 ***

* Estimate by Architect based on recent bidding for similar projects.
** Further Analysis of existing site conditions is required to finalize the site development estimate.

Jefferson Elementary School

I. EXISTING CONDITIONS

Site:
The site includes sidewalks, paved playground, parking and grass areas, which are in good condition. The east perimeter concrete retaining wall is badly deteriorating. The south concrete retaining wall has a major crack. A downspout empties at the top of the south stair creating a winter ice hazard. The building does not have an Americans with Disabilities Act (ACT) accessible entrance into the building.

Building Exterior:
The above grade exterior envelope is brick veneer with cast stone copings, window heads and sills and aluminum windows. The aluminum windows have reached their life expectancy. Other openings are aluminum windows with glass block. The brick wall exterior is in fairly good condition and is well maintained. There are a few cracks in the brick walls that will need to be addressed. Overall, the building envelope was not designed to meet minimum current ASHRAE thermal requirements. The below grade exterior concrete envelope is deteriorating. The reinforced concrete roof structure below the parking pavement is highly deteriorated. Water is infiltrating along all of the basement walls.

Building Interior:
The building interior is in poor condition and lacks a security entrance. The terrazzo floors and plaster walls are cracked throughout. Maintenance spends a considerable amount of time fixing cracks in the plaster walls. Overall, the building does not comply with Americans with Disabilities Act (ADA) requirements. It lacks total handicapped access, ADA toilet facilities, ADA door hardware, accessible water fountains, ADA sink bases and ADA signage.

Jefferson Elementary School

The building does not meet the 2009 International Building Code Allowable Height and Building Areas. An automatic sprinkler system would need to be installed to meet the minimum safety standards.

See the asbestos report data identified in the Capitol Improvement Plan.

Lead and radon testing reports are pending.

Food Service:
Jefferson Elementary School consists of a prep kitchen including storage, preparation and serving of meals for the students. There is an exhaust hood currently at the school but no cooking is being performed. The school currently has an enrollment of over 600 students with an average of 170 meals being served at breakfast and 550 meals being served at lunch over 5 periods.

The kitchen currently has reach-in refrigeration, exhaust hood (that is not being utilized), two straight line serving lines, three-compartment sink, dish machine, prep space, storage and a mop closet located in the hallway.

Finishes include the following:

Servery:
1. Quarry tile flooring
2. Ceramic tile coved base
3. Walls are ceramic tile and painted drywall
4. Ceilings are drop ceilings and painted hard ceilings
5. Shielded fluorescent lighting in the serving area

Kitchen:
1. VCT and quarry tile flooring
2. Vinyl coved base
3. Walls are ceramic tile and painted drywall
4. Ceilings are drop ceiling with perforated ceiling tiles
5. Shielded fluorescent lighting in the kitchen area

Storage Area:
1. VCT flooring
2. Painted drywall
3. Ceilings are drop ceilings with perforated ceiling tiles
4. Shielded lighting

Comments received and observations made during our walk through were as follows:

1. Hood is currently not being used for cooking.

Jefferson Elementary School

2. The mop closet is in the hallway, needs to be dedicated to use for the kitchen only to meet code.
3. The staff currently uses a ramp to bring bulk product in, it is a safety issue.
4. The hand sink coverage is insufficient.

There is a 2" concrete curb where the hood is, this should be removed for safety and operational purposes.

Heating, Ventilating and Air Conditioning:
Heat is provided to the building by two (2) combination gas-oil fired, cast iron, hot water boilers that were installed in 2004. The boilers are in good condition and with continued maintenance should last another ten to twelve years.

All of the boiler trim, including the circulating pumps, expansion tank, air separator, and chemical shot feeder, were replaced in the 1989 renovation. The pumps have been rebuilt within the past three years. The boiler trim is in good condition and with proper maintenance should last as long as the boilers.

The original underground fuel oil storage tank was replaced in 2004 with a new underground double wall fiberglass tank. A Veeder-Root tank monitoring and inventory control system was also installed. The tank is good condition and is compliant with current environmental regulations.

The two-pipe hot water distribution system is a mixture of schedule 40 steel pipe and copper tubing. When the new boilers were installed some of the piping network in the boiler room was replaced to accommodate the installation; however most of the piping network dates back to 1990 or before. The pipe insulation, except limited areas where it was replaced, is in poor condition. In general the pipe distribution network needs immediate attention.

Classrooms are heated and ventilated through two pipe hot water unit ventilators. The corridors and other ancillary spaces are heated with surface mounted or semi-recessed hot water radiant heaters or hot water forced air unit heaters. All of the terminal equipment was installed in the late 1980's or early 1990's and is in poor condition.

Window type air conditioners are utilized for cooling in administrative areas, computer labs, and various classrooms that are utilized for special education. These units range in condition from good to fair but typically have limited life expectancies.

The exhaust systems serving the facility are in poor condition. The kitchen exhaust hood is in fair condition, however, it has no fire protection system.

The automatic temperature control system is a Johnson pneumatic system. The air compressor and air dryer are relatively new and are in good conditioning. The terminal controllers and device actuators are in poor condition and need replacement.

Jefferson Elementary School

Plumbing:
There are two water services serving the facility. One service is for domestic use and the other service is for fire protection standpipes. The backflow prevention and main isolation for these water services has been recently relocated to the boiler room. The piping from the point of entry into the building up to the backflow prevention is new.

Water distribution piping for the domestic water is a combination of copper tubing and galvanized steel. All of the piping, except the previous mentioned service piping, dates at least back to 1990 and in general needs attention. All pipe insulation is in poor condition.

Hot water is provided by 240-gallon oil fired water heater that was installed in 2011. The water heater is in good condition and has at least 8-10 years of life remaining. The distribution system is a two-temperature system with a pneumatic tempering valve. The tempering valve is not code compliant and is in poor condition.

The fire protection piping is black steel and was installed the late 1980's or early 1990's and is in good condition. The fire hose cabinets are in satisfactory condition but likely don't meet current standards. If major renovations are considered for the building, a fire sprinkler system should be considered.

Plumbing Fixtures throughout the facility are not up to current water efficiency standards. Most of the water closets are round, not elongated fixtures. There are a few locations where stall urinals are still in place; however they don't appear to be utilized anymore. Classroom sinks are in poor condition. Most of the drinking fountains are china without refrigerated water.

The kitchen fixtures are in good condition. There is a grease trap recessed in the floor of the kitchen area to receive waste from the scullery sink and floor drains in the cooking area. The grease trap is in good condition.

Sanitary piping serving the building is extra heavy cast iron and appears to be original to the facility. Where this piping is exposed the exterior surfaces show signs of significant corrosion and the piping is in poor condition. The internal condition of this piping could not be ascertained but it is believed to be poor.

Rainwater conductors serving the building are extra heavy cast iron and appear to be original to the facility. Where this piping is exposed the exterior surfaces show signs of significant corrosion and the piping is in poor condition. The internal condition of this piping could not be ascertained but it is believed to be poor.

It appears that not all of the rainwater from the facility is piped to the municipal collection system; some of it may be directed to onsite cisterns for retention and infiltration. These systems appear to be failing as evidenced by water infiltration on the south side of the building.

Jefferson Elementary School

Electrical:
The electric service is fed overhead from PPL pole mounted transformers, through building mounted CT's, to an 800A main switch located in a closet off the Art Room, and main fusible distribution panel located in a room off the Boiler Room. The building voltage is 120/208V, 3-phase. The service and panels are in fair condition. There is a pipe above the 800A main switch which appears to have leaked and is deteriorating.

It was reported that fuses to one of the panels have been replaced multiple times due to overload.

The emergency generator is an Onan 15 kW, 120/240V, single phase, 3 wire natural gas unit with a 60 amp automatic transfer switch and 10 zone area protection panel. The generator serves emergency lighting and a sump pump. The normal/emergency panel is a Square D split bus panel. The service voltage tag on the panel is mislabeled. The emergency generator and transfer switch are in good condition.

Most of the lighting in the school is fluorescent, with some incandescent fixtures found in stairs, toilet rooms, and storage rooms. Fluorescent lamps are T-8, 32W, 4100K. The Gym / Auditorium has both metal halide fixtures, and incandescent fixtures with compact fluorescent lamps. In all areas sufficient lighting levels exist. The lighting levels generally are within IES Guidelines.

Exterior lighting consists of high-pressure sodium fixtures for security lighting, and incandescent fixtures for emergency egress lighting. Some of the emergency lighting fixtures do not have a lamp in the fixture.

Exit signs appear to be located properly. However, the first floor corridor near the auditorium is deficient of exit signage.

The fire alarm system consists of a Simplex 4020 control panel, manual pull stations and horn/strobe units. The indicating appliances appear to be located properly. No smoke detection exists. System is in good condition.

The master clock system is a Simplex 6400, and feeds the Standard clocks and the Standard / Edwards bell system. Clock system is in fair condition.

The intercom system is a single zone central amplifier connected to Bogen surface box speakers throughout the building. System is fair condition.

The telephone system is a district-wide IP-based NEC system, uses Category 3 cabling, and is in good condition. There are phones in the classrooms.
The data cabling is Category 5e, CMP and is in good condition.

Jefferson Elementary School

The security system has motion sensors in the corridors, and is in good condition. There is an Aiphone door entry system at the main entrance. CCTV cameras exist in the stairs, corridors, and cafeteria. The DVR and monitor are located in the main office. The current security panel is not addressable, cannot transmit in contact ID, and does not call out to central monitoring station.

Cable T.V. is distributed to some classrooms.

II. RECOMMENDATIONS

Site:
The perimeter playground retaining walls and fencing should be replaced. The downspout dumping water onto the exterior steps should be connected to the storm water system. The railings at the light wells do not meet IBC safety standards. Recommend installing chain-link fence fabric.

Building Exterior:
All exterior windows are at the end of their service life and should be replaced. Many of the operable windows do not function. Built in 1910, the building envelope was not designed to meet today's minimum R-Value standards. An entire building envelope evaluation, design and reconstruction would need to be undertaken in order to see energy cost savings. The reinforced concrete deck of the occupied basement under the paved surface is in need of repairs/replacement. Leaking concrete foundation walls need to be addressed from the outside. Recommended excavating around the building and installing a waterproof membrane with a perimeter foundation drainage system. While the perimeter is excavated, 2" perimeter rigid insulation board can easily be installed which is required on all new construction.

Building Interior:
The entire building should be upgraded to comply with Americans with Disabilities Act (ADA) accessibility standards including but not limited to toilet rooms, water fountains, room signage, and door hardware. A security entrance addition with an elevator should be built and related to administration. The library, administration, health suite, gym/auditorium, cafeteria and serving areas should be renovated.

Food Service:
Most of the food service equipment is at or near the end of their life expectancy and should be replaced. Floor finishes are in fair to poor shape including the quarry tile floors. All floor finishes should be replaced. The Servery and Kitchen ceilings need cleanable ceiling tiles to meet code. The walls and floors in the storage area should be refinished with epoxy paint and new VCT flooring. Additional hand sinks are required by code. Also, prep sinks, utility sinks and three-compartment sinks require indirect drainage per code. Currently these sinks are directly drained; an air gap is required. All exhaust hoods need be replaced along with the associated fire suppression systems to be brought up to current IMC codes. Hoods are currently required to automatically start up when the cooking equipment is turned on.

Jefferson Elementary School

The layout of the space should be reviewed for better flow and operational efficiencies. The recommendation would be to keep the straight line-serving set-up but look at cooking at the location due to the number of students attending the school.

Heating, Ventilating and Air Conditioning:
The existing boilers, boiler trim and boiler room piping are in good condition and with proper maintenance should have at least 10-12 years of useful life remaining.

The entire heating, ventilating and air conditioning system outside of the boiler room is in poor condition and should be replaced. We recommend replacement in kind with a new two pipe hot water distribution system with all new terminal units.

All of the building's automatic temperature controls should be replaced with new direct digital controls and energy management system. The new control system should be connected to the district wide energy management head end.

The addition of air conditioning throughout the facility should be considered as part of any heating, ventilating and air conditioning system upgrades.

Plumbing:
All distribution piping and insulation outside of the boiler should be replaced at this time. Consideration should be given to replacing the incoming water service to meet current standards.

All plumbing fixtures should be upgraded to meet the latest water efficiency standards. Bathroom layouts should be evaluated for ADA accessibility and ability to meet the building's population.

A video evaluation should be conducted on the building's internal sanitary piping system and the main to the street to determine their internal condition. A resin liner should be added to the piping should it be determined through the video evaluation that it is in acceptable condition otherwise it should be replaced with new.

A video evaluation should be conducted on the building's internal storm piping system to determine their internal condition. A resin liner should be added to the piping should it be determined through the video evaluation that it is in acceptable condition otherwise it should be replaced with new. All site storm water piping should be replaced.

A complete fire sprinkler system should be considered for the facility at this time.

Electrical:
The electrical distribution and power wiring is near the end of its rated life. Except for the newer Square D panels, the system should be replaced. The service size is adequate for the present

Jefferson Elementary School

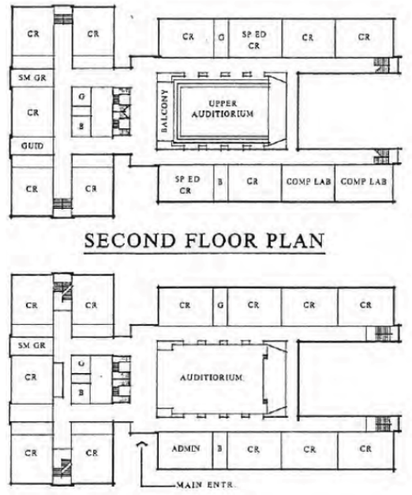
loads. However, if cooling is provided throughout the building, the service size will need to be increased.

Consideration should be given to replacing the lighting fixtures with LED fixtures, and adding automatic lighting controls to rooms and throughout the building. The energy savings will recoup the replacement costs in a reasonable period of time.

Add exit signs in first floor corridor near the auditorium.

The cable T.V. outlets should be replaced with standard "F" type outlets.

Jefferson Elementary School



Harrison-Morton Middle School

I. EXISTING CONDITIONS

Site:
The site is in fair/poor condition. Concrete sidewalks and stairs in front of the building are cracking. The paved service area in back of the building is in fair condition. Downspouts, draining water onto the pavement in the back, should be tied into the storm water system. There is one (1) Americans with Disabilities Act (ADA) accessible entrance to the building. The school lacks of sufficient off-street parking.

Building Exterior:
The building's structure is of good sound construction. All windows should be replaced. Portions of the roof have been replaced. Additional roof replacement projects are being considered. Cracks in the brick walls need to be addressed in addition to repointing of certain areas. The building envelope was not designed to meet minimum current ASHRAE thermal requirements.

Building Interior:
The building interior is in poor condition and lacks a secure entrance. The terrazzo floors and plaster walls are badly cracked throughout. Maintenance spends a considerable amount of time fixing cracks in the plaster walls. The building does have an elevator, however, not all areas of the building areas are accessible. Overall, the building does not comply with Americans with Disabilities Act (ADA) requirements. It lacks total handicapped access, ADA toilet facilities, ADA door hardware, accessible water fountains, ADA sink bases and ADA signage. Classroom corridor vestibules also do not meet ADA requirements.

Harrison-Morton Middle School

The building does not meet the 2009 International Building Code Allowable Height and Building Areas. An automatic sprinkler system would need to be installed to meet the minimum safety standards. A fire protection system was installed in 1985 to feed the existing fire hose cabinets throughout the school, to provide standpipes in each of the stair towers and to sprinkler the basement, boiler room, all storage rooms and the auditorium stage.

See the asbestos report data identified in the Capitol Improvement Plan.

Lead and radon testing reports are pending.

Food Service:
Harrison – Morton Middle School consists of a full service kitchen including cooking, storage, preparation and serving of meals for the students. The school currently has an enrollment of over 800 students with an average of 140 meals being served at breakfast and 700 meals being served at lunch over 3 periods.

The kitchen currently has 10 full time staff members and includes walk in refrigeration, exhaust hoods, two straight line serving lines, three-compartment sink, prep space and a mop closet. The grease trap appears to be new and in good working condition.

Finishes include the following:

Servery:
1. VCT flooring in the serving area
2. Plastic coved base on the floors in the serving area
3. Walls are ceramic tile and painted drywall in the serving area
4. ACT ceilings are in the serving area, they do not appear to be washable type tiles
5. Shielded fluorescent lighting in the serving area

Kitchen:
1. Quarry tile flooring in the kitchen
2. Coved tile base on the floors in the kitchen
3. Walls are ceramic tile and painted drywall in the kitchen
4. The ceilings are hard painted ceilings with exposed piping in the kitchen
5. Shielded lights in the kitchen

Storage Area:
5. Painted block walls in the storage area
6. Concrete floors in the storage area
7. The ceilings are hard painted ceilings with exposed piping in the storage area

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Comments received during our walk through were as follows:

1. They are currently operating with no regular maintenance staff and equipment is not being properly maintained.
2. There are many extension cords and power strips being used to operate the equipment, this is not to code.
3. There was a request for more refrigerated storage space; freezer space appears to be more than adequate.
4. There currently is no public address system, which is an issue during lock down situations.
5. The parking lot and surrounding area is a safety concern.

Heating, Ventilating and Air Conditioning:
Building heat is generated by three (3) oil fired cast iron hot water boilers. All the classrooms including the cafeteria are heated and ventilated with unit ventilators. The two classrooms without windows, choral 105 and science/computer room 211 and the health suite are heated, ventilated and air conditioned by ceiling hung unit ventilators with roof mounted condensing units. The library and instructional planning are heated, ventilated and air conditioned by packaged rooftop units. The Auditorium is served by a rooftop air handler that heats and ventilates. Large volume ceiling hung air handlers heat and ventilate the gymnasium and the boys locker room.

The administration offices have through the wall air conditioners with hot water heating coils. Most if not all of these units have had heating coils broken through freezing and they do not function at all. The remaining areas of the building are furnished with cabinet heaters, radiation and unit heaters.

Two base mounted pumps (one is standby) circulate hot water to all terminal heating equipment.

Fans exhaust the toilet rooms, health suite, dishwasher, kitchen, locker rooms, art room, shops and faculty dining. In addition, the building has roof mounted relief vents.

The automatic temperature control system is pneumatic as manufactured by Johnson Control. The hot water is on a temperature reset schedule. There is an air drier and duplex air compressor.

Plumbing:
The plumbing facilities are adequate. The incoming water service is fed by the municipal system.

Domestic hot water was originally generated by boiler water passing through a heat exchanger in a horizontal storage tank. During the summer, when the boilers were off, an oil fired storage water heater generated the hot water. A pump circulated hot water from the heater into the large horizontal storage tank. This system is not functional. A gas fired storage water heater was installed to provide the domestic hot water. It is anticipated a second gas-fired unit will be added this summer to increase capacity.

Harrison-Morton Middle School

There is a grease trap as well as a garbage disposal and hot water booster heater serving the kitchen.

A natural gas system feeds the emergency generator and the teacher lab tables in three science rooms. There are manual shut off valves in the science rooms.

The plumbing fixtures and trim appear in good condition. In 1985, the lavatories in several toilet rooms were renovated; sinks were added in many classrooms and the girls locker room renovated. The sanitary and rain water systems connect to municipal systems.

A fire protection system was installed in 1985 to feed the existing fire hose cabinets throughout the school, to provide standpipes in each of the stairtowers and to sprinkler the basement, the boiler room, all storage rooms and the auditorium stage.

Electrical:
The incoming service is fed underground from pole mounted transformers to a 1600A bolted pressure switch and 1600 amp, 120/208V, 3 phase, 4 wire circuit breaker switchboard. This switchboard subfeeds a fusible 600A panel and a 1200A switchboard. Most of the panels throughout the school are Square D Company and are in fair condition. The service conduits are in poor condition.

There is a booster transformer boosting the 208V to 240V for the kitchen equipment.

The classrooms, library, cafeteria, corridors, offices, toilet rooms, stairs, kitchen and boiler contain fluorescent fixtures. Fluorescent lamps are T-8, 32W, 4100K. Some stairs have incandescent fixtures for emergency lighting. The lighting levels generally are within IES Guidelines. Lighting throughout the building is in fair condition. HID source fixtures are provided in the gymnasium, wrestling room, and auditorium. The auditorium also has recessed incandescent fixtures, served through a dimmerboard.

The auditorium dimmerboard was manufactured by Lehigh Electric, and is in good condition. Stage lighting consists of 2 rows of borderlights and 2 side tormentors, each with 6 ellipsoidal spot lights.

The Space lab science room has fluorescent dimming fixtures controlled by a Leviton lighting control system.

The emergency system consists of an Onan 15 kW, natural gas generator, 120/240 volt, 1 phase. The generator serves lighting, fire alarm and a freezer via a split bus panelboard. The transfer switch appears to be a newer vintage compared to the generator.

The fire alarm system is a Simplex 4100U, which consists of detectors in the corridors and kitchen and manual pull stations at the exits. The system is zoned. Audio/visual appliances are located in the egress paths and large group areas. The system is in good condition.

The clock system is a Simplex 6400. Each room has a Standard clock and there are program bells throughout the building as well as outside. System is in fair condition. Secondary clocks should be replaced.

The intercom system is a Bogen single zone central amplifier located in the man office, and connected to Bogen surface wallbox speakers and some recessed speakers throughout the building. System is fair condition.

Local sound reinforcement systems in the gymnasium and auditorium.

The telephone system is a district-wide IP-based NEC system, uses Category 3 cabling, and is in good condition. There are phones in the classrooms.

The data cabling is Category 5e, CMP and is in good condition.

The security system has motion sensors in the stairs and corridors. System is in good condition. There is an Aiphone door entry system at the main entrance. CCTV cameras exist in the stairs, corridors, and cafeteria. The current system, does not call out or report to the central monitoring station.

Coaxial cable TV is distributed throughout the School.

II. RECOMMENDATIONS

Site:
Replace cracked sidewalks and deteriorating concrete stairs and railings. Downspouts releasing water onto hard surfaces should be tied directly into the storm water collection system. The lack of off-street parking should be addressed.

Building Exterior:
All exterior windows are at the end of their service life and should be replaced. Many of the operable windows do not function. Built in 1874, the building envelope was not designed to meet today's minimum R-Value standards. An entire building envelope evaluation, design and reconstruction would need to be undertaken in order to see energy cost savings.

Building Interior:
The building should be fully upgraded to comply with Americans with Disabilities Act (ADA) standards. A secure entrance should be built to better protect the students and staff. Repairs to

Harrison-Morton Middle School

the plaster walls will need to continue. The library, administration and health suite areas should be expanded and renovated. The building's heating and ventilation systems should be replaced and a building air conditioning system should be installed. A new water service has been recently installed. The remaining plumbing services should also be replaced.

Food Service:
Most of the food service equipment is at or near the end of their life expectancy and should be replaced. Ceiling tiles need to be replaced with cleanable ceiling tiles to meet code. The walls and floors in the storage area should be refinished with epoxy paint and new VCT flooring. Additional hand sinks are required by code. Also, prep sinks, utility sinks and three-compartment sinks require indirect drainage per code. Currently these sinks are directly drained; an air gap is required. A three-compartment sink should be added to meet code for washing of pans. Currently no dish machine is used in the space. A dish machine should be added in order to get away from all disposable ware. All hoods should be replaced along with the associated fire suppression systems to be brought up to current IMC codes. Hoods are currently required to automatically start up when the cooking equipment is turned on.

The layout of the space should be reviewed for better flow and operational efficiencies. The recommendation would be to look at a scatter service for the middle school students to increase offerings and speed up service.

More bulk storage should be added in order to keep the space more self-sufficient.

Heating, Ventilating and Air Conditioning:
The facility is well maintained and there is clear evidence that the preventative maintenance program is very effective. The entire heating system was converted from steam to hot water in 1985 when the gymnasium was built. Only the boilers which were installed in 1975, the boys locker room air handler installed in 1971 and the unit ventilators in the cafeteria/home economics wing installed in 1960 were reused. The steam coil in the air handler of the boys locker room was abandoned and hot water duct coils added. The existing steam coils in the unit ventilators of the cafeteria wing were replaced with hot water coils. Several of the fans in these unit ventilators are noisy. In addition, several of the self contained control valves on the second floor corridor radiation are creating a continuous hammering noise. The wall grilles of the through the wall air conditioning units in the administration offices are smashed restricting air flow across the condenser coils.

Plumbing:
Preventative maintenance is excellent as demonstrated by the fine condition of all the plumbing systems. There are numerous areas where galvanized iron water piping was replaced with sections of copper piping. Sections of the galvanized iron water piping as well as the sanitary sewer piping in both the crawl spaces and below grade may need replacement within the next 10 years. There is no acid waste system for the Science Rooms.

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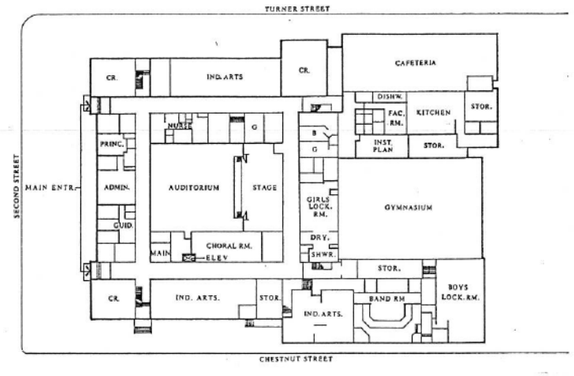
Electrical:
The electrical distribution and power wiring is near the end of its rated life, and should be replaced. The service size is adequate for the present loads. However, if cooling is provided throughout the building, the service size will need to be increased. The service conduit to the building should be replaced.
Consideration should be given to replacing the lighting fixtures with LED fixtures, and adding automatic lighting controls to rooms and throughout the building. The energy savings will recoup the replacement costs in a reasonable period of time.

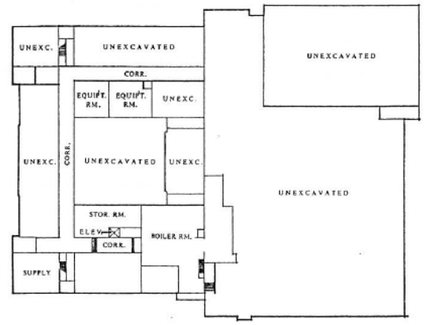
The auditorium house lighting should be replaced.

Secondary clocks for master clock system should be replaced.
Ground fault receptacles should replace existing receptacles where located within 6' of sinks.

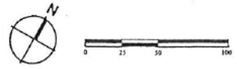
Harrison-Morton Middle School



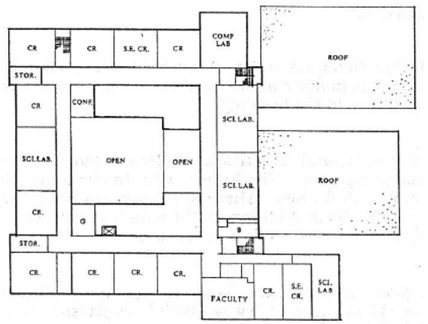
FIRST FLOOR PLAN



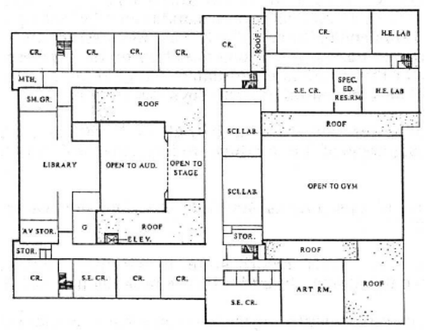
BASEMENT FLOOR PLAN



Harrison-Morton Middle School



THIRD FLOOR PLAN



SECOND FLOOR PLAN

I. EXISTING CONDITIONS

Site:
The site includes driveways, parking areas, concrete retaining walls and sidewalks, which are in good to fair condition. The deteriorating driveway and parking lot are scheduled to be replaced during the summer of 2016. The parking area retaining wall is in need of crack repair and the fence above the retaining wall should be replaced. The sidewalks are in good condition.

Building Exterior:
The original 1923 building and the 1931 addition are steel and concrete with brick veneer and concrete flooring. The 1964 addition is brick masonry cavity walls with concrete floors and prefabricated concrete roof panels. The building has aluminum windows with single panes in the 1964 addition and double pane in the remainder of the building. The panels above the windows seen in the picture above are made with transite (an asbestos-cement product). A roof replacement program will be completed during the summer of 2016. Cracks in the brick walls need to be addressed in addition to repointing of certain areas. The unused wood shop dust collection system should be removed. The building envelope was not designed to meet minimum current ASHRAE thermal requirements.

Building Interior:
The building interior is in poor condition and lacks a secure entrance. The terrazzo floors and plaster walls are cracked throughout. Maintenance spends a considerable amount of time fixing cracks in the plaster walls. Walls need to be refinished and painted. The building does not comply

Francis D. Raub Middle School

with Americans with Disabilities Act (ADA) requirements. It lacks total handicapped access, ADA toilet facilities, ADA door hardware, accessible water fountains, ADA sink bases and ADA signage. The library carpeting is badly worn and the shelves are delaminating. Interior casework is at the end of its useful life cycle. Lockers are in poor condition. A door replacement program was conducted in 2009 but did not address 100% of the doors.

The building does not meet the 2009 International Building Code Allowable Height and Building Areas. An automatic sprinkler system would need to be installed to meet the minimum safety standards.

See the asbestos report data identified in the Capitol Improvement Plan.

Lead and radon testing reports are pending.

Food Service:
Francis D. Raub Middle School consists of a full service kitchen including cooking, storage, preparation and serving of meals for the students. The school currently has an enrollment of over 700 students with an average of 175 meals being served at breakfast and 700 meals being served at lunch over 3 periods. An additional 1100 transport meals are prepped and cooked in this location for elementary schools in the district.

The kitchen currently has walk in refrigeration, exhaust hoods, two straight line serving lines, three-compartment sink, prep space, storage and a mop closet. All ware is disposable so no dish machine only a three-compartment sink is currently in the kitchen.

Finishes include the following:

Servery / Kitchen:
1. Quarry tile flooring
2. Quarry tile coved base
3. Walls are ceramic tile
4. Ceilings are open exposed ceilings with shielded lighting
5. Shielded fluorescent lighting in the serving area
6. Wood soffit at serving line

Storage Area:
1. Exposed block walls in the storage area
2. Concrete floors in the storage area
3. The ceilings are exposed in the storage area

Comments received and observations made during our walk through were as follows:

1. The floor trough at the kettle is too small and needs to be replaced.

2. There is currently no make up air to the hoods in the kitchen.
3. The equipment is all electric and there is no gas in the kitchen.
4. There are currently (2) hand sinks for the whole space, which does not meet code.
5. There is a 2" concrete curb where the pizza oven is under the hood, this should be removed for safety and operational purposes.
6. There is no fire suppression to the pizza oven or to the plenum of the hood where the convection ovens are located. This does not meet code.
7. The water filters for the steamers are not maintained properly.
8. There are currently not enough dedicated electrical outlets for all of the heated cabinets required to hold the transport meals.
9. There is a leak at the ceiling by the serving lines during a rain or snowstorm.
10. The floor drain in front of the main walk in refrigerator is pitched to the drain and makes it difficult to load carts.

Heating, Ventilating and Air Conditioning:
Heat is provided to the facility by three (3) combination gas-oil fired, cast iron, hot water boilers that were installed in 2006 as low pressure steam boilers that were fired on oil only. At that time a steam to hot water heat exchanger, installed in 1977, was utilized to make hot water for distribution to the heating terminals. Around 2011 the boilers were converted to hot water and the heat exchanger was removed. In 2014 natural gas was brought into the building and the burners were replaced with new dual fuel burners. The boilers are in good conditioning and with continued maintenance should last another 10-15 years.

All of the boiler trim, including the circulating pumps, expansion tank, air separator, and chemical shot feeder, was also replaced in 2006 along with the boilers. The pumps have been recently rebuilt. The boiler trim is in good condition and with proper maintenance should last as long as the boilers.

The original underground fuel oil storage tank was replaced in 2006 with a new underground double wall fiberglass tank. A Veeder-Root tank monitoring and inventory control system was also installed. The tank is good condition and is compliant with current environmental regulations.

The two-pipe hot water distribution system is a mixture of schedule 40 steel pipe and copper tubing. When the boilers were converted to hot water much of the piping network in the boiler room was replaced. Outside of the boiler room, most of the piping network dates back to when the original building and 1930's addition were converted from steam to hot water in 1977 or to when the library/cafeteria addition was constructed in 1964. The piping network is in poor condition. The pipe insulation, except limited areas where it was replaced, is in poor condition. In general the pipe distribution network needs immediate attention.

Classrooms in the original building and the 1930's addition are heated and ventilated through two pipe hot water unit ventilators that were installed at the time of conversion to hot water in 1977. The gymnasium is heated and ventilated by an air-handling unit with hot water heating coil that

Francis D. Raub Middle School

also was also installed in the 1977 conversion. Classrooms in the 1964 addition are heated and ventilated through two pipe hot water unit ventilators that are original to the addition. The library is heated by fin tube radiation and is ventilated by the through the wall air conditioning units that are original to the addition. The cafeteria is heated and ventilated by an air-handling unit with hot water heating coil that is also original to the addition. The corridors and other remaining spaces are heated with hot water radiant heaters or hot water forced air unit heaters. All of the terminal equipment is in poor condition.

Window type air conditioners are utilized for cooling in administrative areas, computer labs, and various classrooms in the original building and the 1930's addition. The library is cooled by the previously mentioned through the wall units. The window units range in condition from good to fair but typically have limited life expectancies. The through the wall units in the library are in poor condition.

The exhaust systems serving the facility are in general in poor condition. The kitchen exhaust hood is code compliant and in good condition.

The automatic temperature control system is a Johnson pneumatic system. The air compressor and air dryer are relatively new and are in good conditioning. The terminal controllers and device actuators are in poor condition and need replacement.

Plumbing:
There are two water services serving the facility. One service is for domestic use and the other service is for fire protection standpipes. The backflow prevention and main isolation for these water services are located in a meter pit in the front of the building.

Water distribution piping for the domestic water is a mostly galvanized steel pipe in the original building and 1930's addition combination with copper infill where sections have been replaced. The domestic piping to the 1964 addition is a combination of copper tubing and galvanized steel depending on size. All of the piping is in poor condition and in general needs attention. All the pipe insulation is in poor condition.

Hot water is provided by two 150-gallon water heaters. The first one is an oil-fired unit that was installed in 2006, is in good condition and has at least 6-8 years of life remaining. The second one is a gas-fired unit that was installed in 2015, is in excellent condition and has at least 10-12 years of life remaining. Only the gas fired unit is normally utilized; the oil-fired unit is only utilized as a back-up. The distribution system is a two-temperature system with a pneumatic tempering valve and recirculation system. The tempering valve is not code compliant and is in poor condition. The recirculation pumps were installed in 2006 and are in good condition.

The fire protection piping is black steel or galvanized steel and is in poor condition. The fire hose cabinets are in satisfactory condition but likely don't meet current standards. If major renovations are considered for the building a fire sprinkler system should be considered.

Plumbing Fixtures throughout the facility are not up to current water efficiency standards. Most of the water closets are round, not elongated, fixtures. There are a few locations where stall urinals are still in place; however they don't appear to be utilized anymore. Classroom sinks are in poor condition. Most of the drinking fountains are china without refrigerated water.

The kitchen fixtures are in good condition. There is a 500-gallon grease trap located outside of the kitchen in the parking area and receives waste from the scullery sink and floor drains in the cooking area. The grease trap is in good condition. The dishwashing unit is in good condition but is no longer utilized because the district uses all disposable-serving products.

Sanitary piping serving the building is extra heavy cast iron and appears to be original to the facility. Where this piping is exposed the exterior surfaces show signs of significant corrosion and the piping is in poor condition. The internal condition of this piping could not be ascertained but it is believed to be poor.

Rainwater conductors serving the building are extra heavy cast iron and appear to be original to the facility. Where this piping is exposed the exterior surfaces show signs of significant corrosion and the piping is in poor condition. The internal condition of this piping could not be ascertained but it is believed to be poor.

It appears that not all of the rainwater from the facility is piped to the municipal collection system. However some of this rainwater may not be directed to the street and may be being infiltrated on site.

Electrical:
The building is served by an aerial service from (3) 100kVA pole mounted transformers owned by PPL. The service enters at the first floor of the main building via a cable to busway transition to a main switchboard consisting of a 1600 ampere main bolted pressure contact switch and fuse section with 1600A fuses, plus three distribution sections. There is a 1000A Square D board in the boiler room, which is fed from 1000A busduct. The service voltage is 120/208 volt, three phase, four wire, wye. The main switchboard and distribution switchboard are in poor condition. The building panelboards are in fair to poor condition. The insulation on the aerial service cables has frayed and is deteriorating.

Newer Square D branch circuit panelboards have been installed in the corridors. These panels are in good condition. Breaker space in the older panels for additional load in the building is very limited.

The classrooms, library, cafeteria, corridors, offices, toilet rooms, stairs, kitchen and boiler contain fluorescent fixtures. Fluorescent lamps are T-8, 32W, 4100K. Some stairs have incandescent fixtures for emergency lighting. The lighting levels generally are within IES Guidelines. Lighting throughout the building is in fair condition. HID source fixtures are provided in the gymnasium

Francis D. Raub Middle School

and auditorium. The auditorium also has recessed incandescent fixtures, served through a dimmerboard. The dimmerboard is in poor condition.

The emergency generator is an Onan 15 kW, 120/208V, single phase, 3 wire, natural gas unit with a 60 amp automatic transfer switch. The emergency plant was installed in 1991, and serves emergency lighting fixtures.

The fire alarm system consists of a Simplex 4020 control panel, manual pull stations and horn/strobe units. Horn/strobes are located in the classrooms. The indicating appliances appear to be located properly. System is in good condition.

The master clock system is a Simplex 6400, feeds the Standard clocks and Simplex clocks. Clock system is in fair condition.

The intercom system is a single zone central amplifier connected to Bogen surface wallbox speakers throughout the building. System is fair condition.

The telephone system is a district-wide IP-based NEC system, uses Category 3 cabling, and is in good condition. There are phones in the classrooms.

The data cabling is Category 5e, CMP and is in good condition.

The security system with a digital communicator, and has motion sensors in the corridors. The system is in good condition. There is an Aiphone door entry system at the main entrance. CCTV cameras exist in the stairs, corridors, and cafeteria. The current security panel is not addressable, cannot transmit in contact ID, and does not call out to central monitoring station.

Coaxial cable TV is distributed throughout the School.

II. RECOMMENDATIONS

Site:
Driveways and parking areas are scheduled for repair and overlay paving completed this summer. The major crack in the parking area site wall should be repaired and the wall fence replaced. The site should be upgraded to comply with Americans with Disabilities Act (ADA) standards accessibility. The lack of off-street parking should be addressed.

Building Exterior:
All exterior windows are at the end of their service life and should be replaced. Many of the operable windows do not function. Built in 1923, the building envelope was not designed to meet today's minimum R-Value standards. An entire building envelope evaluation, design and reconstruction would need to be undertaken in order to see energy cost savings. There have

been ongoing brick/cast-stone restoration projects, which should continue due to the age of the building.

Building Interior:
The entire building should be upgraded to comply with Americans with Disabilities Act (ADA) standards and a security entrance attached to administration should be built. The library, administration, health suite, gym/auditorium and locker rooms all should be renovated. Home economics cabinets should be replaced. Lockers in the 1964 addition should be replaced. Repair plaster walls in classrooms and replace terrazzo floors in the corridor.

Food Service:
Most of the food service equipment is at or near the end of their life expectancy and should be replaced. Ceiling tiles need to be replaced with cleanable ceiling tiles to meet code. The walls and floors in the storage area should be refinished with epoxy paint and new VCT flooring. The wood non-code compliant soffit should be removed at the serving lines. Additional hand sinks are required by code. Also, prep sinks, utility sinks and three-compartment sinks require indirect drainage per code. Currently these sinks are directly drained; an air gap is required. A three-compartment sink should be added to meet code for washing of pans. Currently no dish machine is used in the space. A dish machine should be added in order to get away from all disposable ware. All hoods should be replaced along with the associated fire suppression systems to be brought up to current IMC codes. Hoods are currently required to automatically start up when the cooking equipment is turned on.

The layout of the space should be reviewed for better flow and operational efficiencies. The recommendation would be to look at a scatter service for the middle school students to increase offerings and speed up service.

Recommend looking at a way to streamline the prepping, cooking and loading of transport meals.

Heating, Ventilating and Air Conditioning:
The existing boilers, boiler trim and boiler room piping are in good condition and with proper maintenance should have at least 10-15 years of useful life remaining. The existing fuel oil storage tank shall remain.

The entire heating, ventilating and air conditioning system outside of the boiler room is in poor condition and should be replaced. We recommend replacement in kind with a new two pipe hot water distribution system with all new terminal units.

All of the building's automatic temperature controls should be replaced with new direct digital controls and energy management system. The new control system should be connected to the district wide energy management head end.

Francis D. Raub Middle School

The addition of air conditioning throughout the facility should be considered as part of any heating, ventilating and air conditioning system upgrades.

Plumbing:
All distribution piping and insulation should be replaced at this time. Consideration should be given to replacing the incoming water service.

All plumbing fixtures should be upgraded to meet the latest water efficiency standards. Bathroom layouts should be evaluated for ADA accessibility and ability to meet the building's population.

A video evaluation should be conducted on the building's internal sanitary piping system and the main to the street to determine their internal condition. A resin liner should be added to the piping should it be determined through the video evaluation that it is in acceptable condition otherwise it should be replaced with new.

A video evaluation should be conducted on the building's internal storm piping system to determine their internal condition. A resin liner should be added to the piping should it be determined through the video evaluation that it is in acceptable condition otherwise it should be replaced with new. All site storm water piping should be replaced.

A complete fire sprinkler system should be considered for the facility at this time.

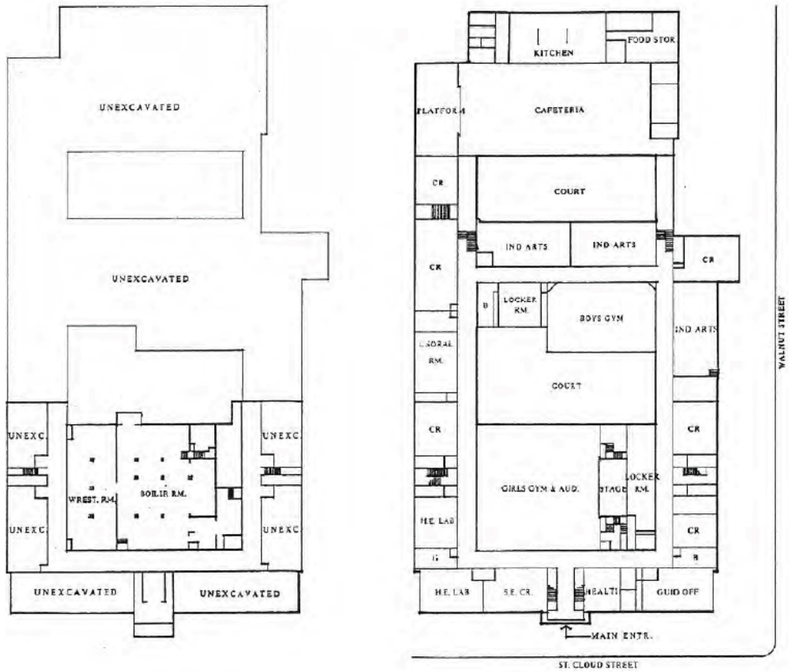
Electrical:
The electrical distribution and power wiring is near the end of its rated life. Except for the newer Square D panels, the system should be replaced. The service size is adequate for the present loads. However, if cooling is provided throughout the building, the service size will need to be increased. The aerial cables from PPL to the building should be replaced.

Consideration should be given to replacing the lighting fixtures with LED fixtures, and adding automatic lighting controls to rooms and throughout the building. The energy savings will recoup the replacement costs in a reasonable period of time.

Stage dimmerboard and lighting should be replaced.

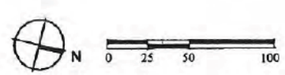
Ground fault receptacles should be installed where existing receptacles are within 6'-0" of sinks.

Francis D. Raub Middle School

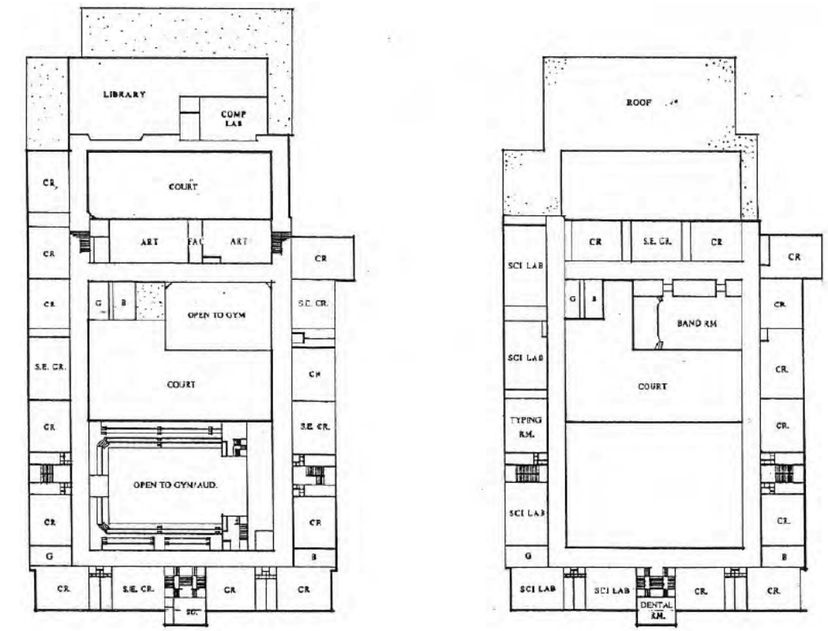


BASEMENT FLOOR PLAN

FIRST FLOOR PLAN

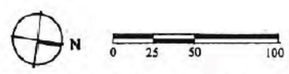


Francis D. Raub Middle School



SECOND FLOOR PLAN

THIRD FLOOR PLAN



DECISION|INSITE
Enrollment Impact Specialists

Student Enrollment Projections | Community Demographic Data | Consulting

ANALYSIS OF ENROLLMENT PROJECTIONS

FALL 2021

PREPARED FOR:
ALLENTOWN SCHOOL DISTRICT

PREPARED BY:
DECISION|INSITE
Enrollment Impact Specialists
101 PACIFICA, SUITE 380
IRVINE, CA

SUBMITTED: JANUARY 12, 2021

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Allentown School District

Executive Summary

Enrollment Projections - Fall 2021

DecisionInsite is pleased to present this report of findings to the Board of Education and Executive Staff of Allentown School District. Both a Conservative and Moderate projection have been generated for the district. Assuming district revenue is generated on a per pupil basis, the Conservative projection is more suitable for budget planning purposes while the Moderate projection is more suitable for facilities planning purposes.

Kindergarten Enrollment

In general, Kindergarten enrollment over the past three years has been somewhat erratic. The data also show that the difference between the graduating cohort and the incoming cohort has been somewhat erratic. Note that both studies project a significant increase at the Kindergarten level.

Cohort Patterns

A typical student cohort ages from grade to grade relatively unchanged from the previous year. Historically, 2 cohorts show more than a 5% annual change.

New Housing Development

No new residential units are projected to be occupied over the next 10 years.

District-wide Enrollment Projection

Overall the projections forecast a relatively stable trend across the 10-year period based upon the historical enrollment trends and any projected new residential development.

More Information

A richer and more comprehensive review of both studies is contained in the Final Report accompanying this Executive Summary. A wealth of more detailed information and analysis regarding both studies is also quickly and easily accessible online.

Respectfully Prepared and Submitted by:

The **Decision**Insite Team

January 12, 2021

Allentown School District

District Enrollment Projections

Recent Changes in Enrollment

Familiarity with recent historical enrollment patterns and trends establishes the foundation for understanding projected enrollment. Percentages in the table below compare the current year enrollment to that of three years ago.

4 Year History Change	
Kindergarten	86%
Gr K-5	96%
Gr 6-8	118%
Gr 9-12	100%
District (K-12)	102%

FIGURE 1

Kindergarten Impact

Kindergarten enrollment is a significant driver of overall future district-wide enrollment. A trend at Kindergarten from year to year, or a trend in the difference between the district's graduating cohort in a given year and the Kindergarten cohort the subsequent year, will eventually be reflected in the total district enrollment count.

In general, Kindergarten enrollment over the past three years has been somewhat erratic. The data in the table below also show that the difference between the graduating cohort and the incoming cohort has been somewhat erratic.

[More details: Enrollment > Historical > District-Wide > History Years Enrollment]

Percent Change of Previous Year			
	2018	2019	2020
Kindergarten	107%	100%	80%
Grade 12 to K	111%	114%	88%
Total K-12	104%	99%	99%

FIGURE 2

Live Birth Trends

Live birth trends have an impact in large geographies, and on long range projections. However, in smaller areas of study, such as a school district, population mobility is often a mitigating if not an overriding factor, thereby reducing the effectiveness of live births as a predictor of enrollment. Consequently, DecisionInsite has found that recent Kindergarten enrollment trends by sub-geographies to be a better, more reliable predictor of future Kindergarten enrollment.

Cohort Impact

A typical student cohort ages from grade to grade relatively unchanged from the previous year. By contrast, the cohort matriculating from Kindergarten to Grade 1 is a common example of a cohort increase, typically attributable to students returning from a private school.

In the following table, cohort changes with more than a 2% variance from static are marked accordingly. Those with more than a 5% changed are marked as 'Significant'.

Average Cohort Change Past Three Years			
Cohort	Percent	+/-	Significant
K > 1	102%	++++	
1 > 2	99%		
2 > 3	102%	++++	
3 > 4	101%		
4 > 5	103%	++++	
5 > 6	96%	----	
6 > 7	102%	++++	
7 > 8	99%		
8 > 9	114%	++++	SSSS
9 > 10	96%	----	
10 > 11	93%	----	SSSS
11 > 12	101%		

FIGURE 3

Incoming Out-of-District Transfer Impact

The number of students served from outside the district boundaries can impact enrollment. It is a factor over which the district may have some control. For the past two years, the number of out-of-district students served annually has been approximately 38, and has been increasing.

[More details: Enrollment > Historical > District-Wide > Out of District]

Key Variables in Projecting District Enrollment

Both a Conservative and Moderate projection have been generated for the district. Assuming district revenue is generated on a per pupil basis, the Conservative projection is more suitable for budget planning purposes while the Moderate projection is more suitable for facilities planning purposes.

As a matter of standard practice, DecisionInsite does not typically include specialized schools or programs such as Home and Hospital Programs, Community Day Schools or Independent Study Programs in the Enrollment Projections. Our work is focused on projecting grade level enrollment for typical schools that are reported to the state.

The major variables that distinguish the Conservative projection from the Moderate are described in the table below.

Key Variables Controlling the Projections Algorithm	
Kindergarten Enrollment Change	Applies the lesser or greater of 3-4 year history trend in each studyblock to the appropriate study.
Cohort Change	Applies the lesser or greater of 3-4 year history trend in each studyblock to the appropriate study.
K Enrollment Change Cap	Restricts the effect of anomalous spikes in Kindergarten history
K Enrollment Change Floor	Restricts the effect of anomalous spikes in Kindergarten history
Incoming Out-of-District Transfers	For each grade level span, applies the lesser or greater of 1-2 year history to the lograde; ages through existing students.
Dwelling Units	Moderate study assumes developer's phasing calendar. Conservative study shifts the developer's calendar toward the out-years.
Student Generation Rates	Typical of recent history by product type.

FIGURE 4

Projected Enrollment Changes by Level

The tables below display the five-year district-wide projections by grade level and allow a comparison to enrollment in the current year.

Conservative 5 Year District-wide Projection by Grade Level

Grade	2020	2021	2022	2023	2024	2025
K	1035	1257	1236	1226	1226	1202
1	1269	1277	1277	1256	1245	1245
2	1300	1254	1259	1262	1241	1238
3	1230	1304	1261	1264	1267	1244
4	1265	1221	1295	1252	1257	1264
5	1337	1292	1246	1323	1277	1270
6	1358	1273	1229	1196	1265	1227
7	1336	1349	1262	1215	1185	1259
8	1263	1312	1327	1238	1188	1175
9	1250	1450	1505	1524	1423	1376
10	1309	1186	1374	1428	1445	1386
11	1254	1205	1091	1261	1310	1387
12	1205	1251	1200	1087	1256	1308
Subtotals:	16411	16631	16562	16532	16585	16581
Pct Chg:	-1.4%	1.3%	-0.4%	-0.2%	0.3%	0.0%
SDC:	0	0	0	0	0	0
Totals:	16411	16631	16562	16532	16585	16581

FIGURE 5

MODERATE 5 YEAR DISTRICT-WIDE PROJECTION BY GRADE LEVEL

Grade	2020	2021	2022	2023	2024	2025
K	1035	1288	1267	1257	1257	1244
1	1269	1308	1316	1294	1284	1284
2	1300	1265	1301	1312	1290	1282
3	1230	1311	1279	1313	1325	1297
4	1265	1230	1313	1280	1318	1327
5	1337	1302	1266	1352	1316	1337
6	1358	1289	1253	1229	1307	1277
7	1336	1355	1284	1245	1223	1304
8	1263	1315	1337	1264	1221	1215
9	1250	1461	1520	1546	1463	1425
10	1309	1203	1403	1462	1487	1436
11	1254	1208	1111	1291	1346	1429
12	1205	1260	1211	1114	1295	1348
Subtotals:	16411	16795	16861	16959	17132	17205
Pct Chg:	-1.4%	2.3%	0.4%	0.6%	1.0%	0.4%
SDC:	0	0	0	0	0	0
Totals:	16411	16795	16861	16959	17132	17205

FIGURE 6

As the following graph illustrates, overall the projections forecast a relatively stable trend across the 10-year period based upon the historical enrollment trends and any projected new residential development.

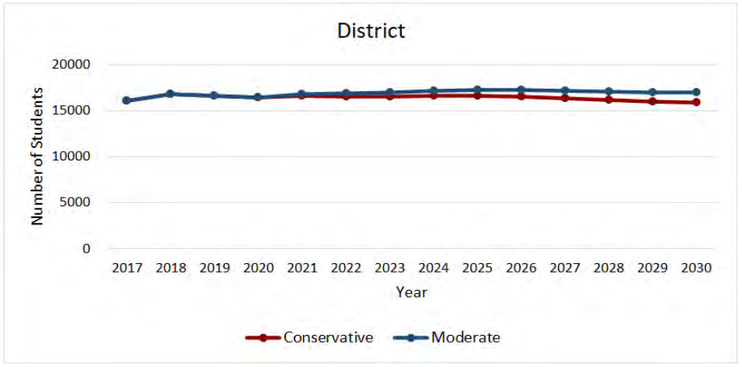

FIGURE 7

The tables below compare the Conservative and Moderate enrollment projections by key grade level groupings. Projected changes in enrollment at Kindergarten or lower grade level groupings will eventually impact total district enrollment.

5 YEAR ENROLLMENT TRENDS: MODERATE AND CONSERVATIVE COMPARED

Change by Level	Cnsv	Mod
Kindergarten	1202	1244
Change	116%	120%
Gr K-5	7463	7771
Change	100%	105%
Gr 6-8	3661	3796
Change	93%	96%
Gr 9-12	5457	5638
Change	109%	112%
District (K-12)	16581	17205
Change	101%	105%

FIGURE 8

Note that an averaging of both studies project a significant increase at the Kindergarten level.

The table below compares the ten-year projections. In the 10-year future at Kindergarten, both studies, averaged together, project an increase.

10 YEAR ENROLLMENT TRENDS: MODERATE AND CONSERVATIVE COMPARED

Change by Level	Cnsv	Mod
Kindergarten	1086	1183
Change	105%	114%
Gr K-5	6935	7446
Change	93%	100%
Gr 6-8	3567	3784
Change	90%	96%
Gr 9-12	5367	5737
Change	107%	114%
District (K-12)	15869	16967
Change	97%	103%

FIGURE 9

The graphs below compare the Conservative and Moderate enrollment projections by key grade level groupings.

ELEMENTARY SCHOOL LEVEL

The projected elementary school enrollment shows a slight decline.

[More details: Enrollment > Projections > Selected Schools > All Elementary Schools]

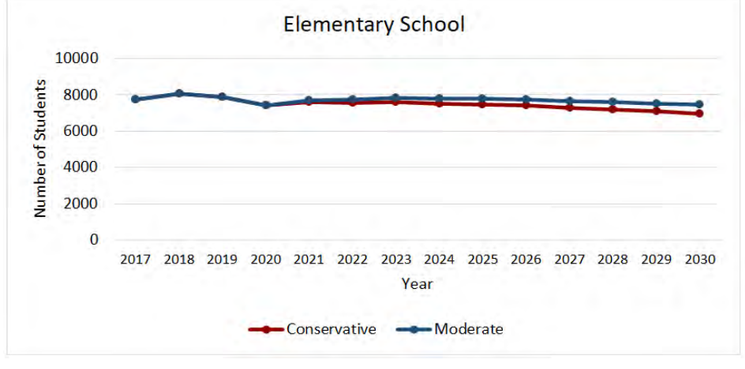

FIGURE 10

MIDDLE SCHOOL LEVEL

The projected middle school enrollment shows a decline.

[More details: Enrollment > Projections > Selected Schools > All Middle Schools]

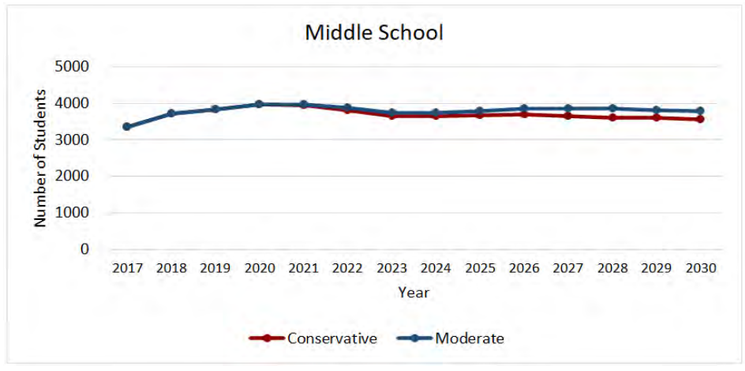

FIGURE 11

HIGH SCHOOL LEVEL

The projected high school enrollment shows a significant increase.

[More details: Enrollment > Projections > Selected Schools > All High Schools]

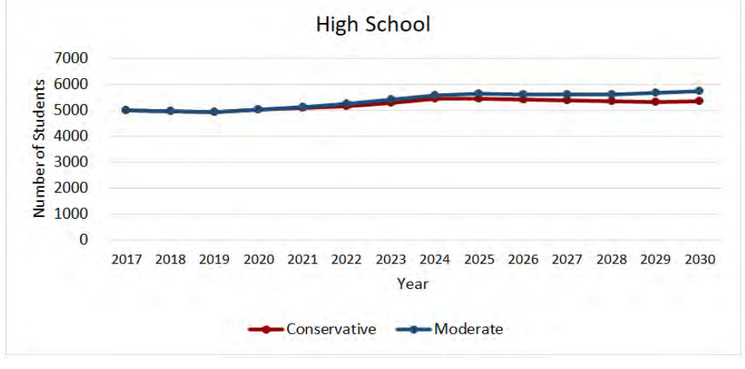

FIGURE 12

Summary of District Projections by Year

The complete district-wide projection table for each study is available online. Corresponding sets of individual School Projections are available online as well.

The tables below present a more detailed annual view of projected changes by grade level clusters for both projections. The "Pct Previous Year" row represents the percent of the previous year's enrollment in each grade cluster that is projected in the subsequent year. The "Five Year Change" row represents the percent change projected over the enrollment five years prior.

Conservative Projection

Change by Level	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kindergarten	1035	1257	1236	1226	1226	1202	1178	1154	1131	1109	1086
Pct Prev Yr	80%	121%	98%	99%	100%	98%	98%	98%	98%	98%	98%
5-Yr Change						116%					90%
Gr K-5	7436	7605	7574	7583	7513	7463	7394	7294	7195	7078	6935
Pct Prev Yr	94%	102%	100%	100%	99%	99%	99%	99%	99%	98%	98%
5-Yr Change						100%					93%
Gr 6-8	3957	3934	3818	3649	3638	3661	3684	3643	3613	3594	3567
Pct Prev Yr	103%	99%	97%	96%	100%	101%	101%	99%	99%	99%	99%
5-Yr Change						93%					97%
Gr 9-12	5018	5092	5170	5300	5434	5457	5411	5374	5340	5334	5367
Pct Prev Yr	102%	101%	102%	103%	103%	100%	99%	99%	99%	100%	101%
5-Yr Change						109%					98%
District (K-12)	16411	16631	16562	16532	16585	16581	16489	16311	16148	16006	15869
Pct Prev Yr	99%	101%	100%	100%	100%	100%	99%	99%	99%	99%	99%
5-Yr Change						101%					96%

NOTE: Gray column most recent history year.

FIGURE 13

Moderate Projection

Change by Level	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kindergarten	1035	1288	1267	1257	1257	1244	1232	1220	1207	1195	1183
Pct Prev Yr	80%	124%	98%	99%	100%	99%	99%	99%	99%	99%	99%
5-Yr Change						120%					95%
Gr K-5	7436	7704	7742	7808	7790	7771	7718	7644	7585	7522	7446
Pct Prev Yr	94%	104%	100%	101%	100%	100%	99%	99%	99%	99%	99%
5-Yr Change						105%					96%
Gr 6-8	3957	3959	3874	3738	3751	3796	3862	3855	3846	3819	3784
Pct Prev Yr	103%	100%	98%	96%	100%	101%	102%	100%	100%	99%	99%
5-Yr Change						96%					100%
Gr 9-12	5018	5132	5245	5413	5591	5638	5623	5618	5615	5662	5737
Pct Prev Yr	102%	102%	102%	103%	103%	101%	100%	100%	100%	101%	101%
5-Yr Change						112%					102%
District (K-12)	16411	16795	16861	16959	17132	17205	17203	17117	17046	17003	16967
Pct Prev Yr	99%	102%	100%	101%	101%	100%	100%	100%	100%	100%	100%
5-Yr Change						105%					99%

NOTE: Gray column most recent history year.

FIGURE 14

Grade Level Profile Comparison

Another view of grade level enrollment can be seen in the chart below. The current grade level enrollment profile is compared with the projected grade level profile in the five and ten-year future.

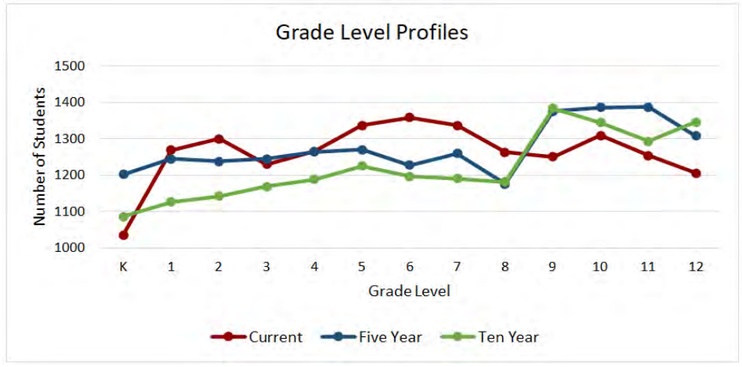

FIGURE 15

Projecting School Enrollment

School projections are primarily a function of the proportion of district students who enroll at a given school, modified by intra-district transfers within a given school level that may occur subsequent to initial enrollment, and augmented by inter-district transfer students.

School Draw Impact

A draw rate is the percentage of students who enroll in a grade level in a school from a specified geographic area. Open enrollment among district schools is projected using this concept. Except for changes in school boundaries or other changes in policy, historical draw rates from a given geographic area to a specific school (including out-of-district students) are assumed in the projections.

Intra-district Transfers

Transfers within the district are incorporated into the projections in order to anticipate the movement of students from one district school to another within the same level, e.g., transfer from a neighborhood school to a special school. Recent historical transfer patterns are typically assumed in the projections.

[More details: Enrollment > Historical > All Schools > Open Enrollment]

Inter-district Transfers

Transfers into the district by out-of-district students, sometimes referred to as 'permit students', are an integral part of the district and school projections. Recent historical transfer patterns are typically assumed in the projections.

[More details: Enrollment > Historical > District-Wide > Out of District]

Individual School Projection Tables

The complete set of individual school projection tables for each study is available online.

[More details: Enrollment > Projections > All Schools > Projections]

MySchoolLocator

MySchoolLocator is a web-based service accessible to DecisionInsite clients. This service allows Internet users to enter a residential address and find out which district schools are assigned to serve them. Public access to MySchoolLocator is via a unique URL on the District's web site. The URL for integration into your district's website can be found by opening the appropriate Locator study from within the DI system. Once open, select "Run MySchoolLocator" from the District Admin menu. The MySchoolLocator app will open in a new browser window and the link can be copied from the address bar in the browser. Specialized district users have access to customize the messages seen by those using MySchoolLocator.

Impact of the Projections on School Capacity

Facility challenges, if any, may exist if projected numbers exceed the current school capacity data. These challenges may also manifest differently in a Moderate or Conservative projection. The Moderate projection shows 2 schools with a potential capacity challenge.

[More details: Enrollment > Projections > All Schools > Over Capacity]

The table below lists up to five schools that are projected to experience the most change in enrollment in the 5-year future based on the Conservative projection.

[More details: Enrollment > Projections > All Schools >Ten Percent Change]

School	5-Yr Pct Change	10-Yr Pct Change
Jackson ECC	19%	8%
Washington ES	-18%	-24%
Allen HS	15%	17%
Trexler MS	-13%	-11%
HMMS	-12%	-18%

FIGURE 16

Impact of SDC Students on Capacity

Relative to the impact of SDC students on school capacity, note that SDC students are not included in the grade level counts, but are included in the capacity calculation as taking up one seat each.

Analyzing/Studying/Reviewing the Enrollment Projections

The projections of district and school enrollment are based on a complex mix of historical data, the projection of recent trends, and specific assumptions regarding the future. At DecisionInsite, we strongly encourage our clients to actively engage with the data with the aim of better understanding, further refining, and using the results to inform decisions about to be made. We believe increased effectiveness for both the district and DecisionInsite comes with increased and welcome dialogue.

Graphs or tables may be copied from the PDF version of this document using the Snapshot Tool inside PDF Reader.

Please do not hesitate to contact DecisionInsite regarding any questions or suggestions that may arise regarding these studies.

Respectfully Prepared and Submitted by:

The **DecisionInsite** Team

January 12, 2021

Appendix

Covid Statement

Since the beginning of the COVID-19 pandemic, schools have faced unprecedented challenges. With regard to student enrollment for the 2020-21 school year, we continue to see the deleterious effects across the country. An inherent assumption in any projections is that historical trends are likely to continue unless there is evidence to the contrary. The disruption of the COVID-19 pandemic resulted in anomalous enrollment patterns for nearly all of our clients this year.

While each district is unique, many have seen large enrollment declines especially in Kindergarten. In our projections this year, we have carefully reviewed your district's enrollment data to identify any anomalies or oddities. We have then adjusted our methodologies to account for these using the following assumptions:

1. with the proviso that medical advancements in the treatment and prevention of Covid-19 occur in the next twelve months, a return to on-site education is both desirable and probable for the majority of school districts across the country, and
2. many students who opted out of public education due to Covid-19 will return to schools over time as the health threat subsides.

In the next several years, the long-term impact of the pandemic will present itself in the data. For now, the key is in determining a new normal versus an annual anomaly. In the absence of reliable comparatives due to the unique nature of this event, we are proceeding cautiously but optimistically in our moderate and conservative projection studies.

Assumptions and Methodology

All projections are based on assumptions, and when read or shared are best prefaced with the phrase, "Based on these assumptions…", or "Based on these historical trends…". Particularly for projections more than 5 years out, "Enrollment Trend" is a far more accurate descriptor.

Three major factors drive district-wide student enrollment projections. These include:

1. recent kindergarten enrollment trends, modified by live birth data, if applicable,
2. changes in the grade level cohorts of students served as they age through, and
3. changes in the number of residential units within the district.

District-wide projections are disaggregated to school projections based on the historical patterns of:

1. the rates at which each school draws enrollment from various sections of the district, and
2. the pattern of transfers within the district at a given level from one school to another.

District Projections

Studyblocks

For enrollment projections the district is divided into studyblocks. A studyblock is a custom unit of geography created by DecisionInsite for the purpose of generating reliable projections. They are generally based on elementary boundaries or some portion thereof. A studyblock serves as the basis for the analysis of students served by the district and by schools. The objective is to do analysis with a small enough geographic unit to sense small area changes but large enough to allow for reliable projection. Studyblocks typically encompass 500–1000 students.

Kindergarten Enrollment
The projected Kindergarten enrollment is a key variable in projecting K–12 enrollment. The base Kindergarten projection is determined by the trend of Kindergartners served in each studyblock in the previous 3 or 4 years. Depending on the circumstances, a growth trend in Kindergarten enrollment may be capped. Steep straight-line trends are mathematically moderated to avoid unrealistic results.

School Capacities
School capacities provided by the district are compared to projected enrollments. Districts are invited to calculate school capacities in a manner that best serves the enrollment projection environment and provide them to DI staff for entry into our StudentView system.

A Special Day Class (SDC) student at the elementary level is calculated by default as requiring 1 seat. This value, at district option, may be changed to 3, on the assumption that a class of 10 SDC students will occupy a typical classroom.

Students in the Projections
Enrollment projections are limited to typical K–12 students. SDC students are projected as a stable percentage of the typical population unless all SDC students are mainstreamed. Excluded from the projections are students enrolled in Non-Public School (NPS), Adult High School, Home School, Adult Ed, Independent Study programs and other special schools.

Attendance Boundaries
Attendance boundaries are assumed to remain constant, unless otherwise noted by the district.

Closed Schools
Opportunities for open enrollment (intra-district) are assumed to remain unchanged, unless otherwise noted by the district.

Inter-district Enrollment
Students enrolled from other school districts are treated in aggregate in separate studyblocks. Students in Kindergarten and the initial grade at each level are projected only to the extent they exist in recent years. Students enrolled in other grade level cohorts are aged through to the highest grade at each level. These defaults may be modified at district request.

Cohort Percent Change
Cohort percentage changes are calculated in order to assure sensitivity to perennial changes in students served by the district as they age from one grade level to the next. If every cohort were stable as it ages, the cohort percent change, from one grade to the next in each studyblock, would be calculated as 100%. For each studyblock, a cohort weighted average percent change over a defined number of years is calculated based on the change in the enrollment served as it ages from the previous grade level.

Average cohort percentages above 100% might, for example, reflect students returning from private schools. Cohort percentages below 100% might reflect drop-outs.

Growth studyblocks are those showing unusually high increases in enrollment and/or cohort percent change in recent years—due, typically, to new housing development. Once growth studyblocks are identified, their default cohort percent change rate is set to 100% so as not to over-project new residential growth. By default, growth is not predicted to continue unless new occupied dwelling units are projected.

Dwelling Unit Impact

The predicted impact of new dwelling units on school enrollment is based on three factors: 1) new dwelling units, 2) the student generation rate for each unit type, and 3) the grade level distribution of newly generated students.

1. Dwelling Units
New dwelling units are categorized into 3 housing types: Single Family Detached, Single Family Attached, and Multifamily. Developers and builders are contacted for information relative to their plans for occupancy of new dwelling units.

2. Student Generation
Student generation rates are determined for each product type for each level: elementary, middle school and high school. Student generation rates are based on similar products types where such exist; otherwise, a default generation rate is used.

3. Grade Level Distribution
For each level, students generated by new dwelling units are distributed across grade levels. These percentages are based on historical patterns where they exist; otherwise, default percentages are used.

School Projections

Projecting enrollment at the school level is based on the concept of a school draw rate, i.e., the percent of students from a given studyblock who enroll in a given school at its lowest grade. Draw rates reflect the impact of open enrollment within a district. For example, if one-half the sixth graders from a given studyblock enroll in a particular 6–8 middle school, that school has a draw rate of 50% from that studyblock.

The draw rate for the most recent year is applied by default to the projected district enrollment for that grade from a given studyblock. The draw rate ages with the cohort. In this way, if the underlying cohort changes, the number of students enrolled at the school will change accordingly.

Draw rates can be adjusted if necessary. Manipulation of draw rates is used, for example, to project the impact of changes in attendance boundaries, or the impact of closing a school to open enrollment.

Intra-district Transfers
Grade-level transfers within or across schools are included in the projections to accommodate fluctuations like retention, transfer to continuation school, or any other special programs a district may offer that result in students changing schools at other than the typical grade configuration shifts. Transfers are calculated by applying the percent of a grade level population at one school that is transferred in the following year to another school or continued at the same grade level at a given school in the following year.

Caveats on Projections and Methodology

On Projections
Enrollment projections are based upon two critical factors: the student and school data from the school district and the mathematical formulas that are applied to those data. Projections fundamentally look at recent history as reflected in the student data and assume that past patterns and trends will continue. The calculations assume that the historical data provided is at one-year intervals based on enrollment at the beginning of each school year.

DecisionInsite takes great care in preparing a district's projections. A range of unpredicted anomalies, however, can cause reality to vary from the historical patterns. These include, but are not limited to, rapid changes in the economy, mortgage interest rates, the housing market, the job market, residential development plans, rental rates, etc. Anomalous changes that occur between the last set of student data and the first projection are not reflected in the projections unless the district works with DecisionInsite to amend the projections.

In the projections, calculations are mathematically precise. Each result is rounded to a whole number for ease of reading. This rounding sometimes results in the displayed whole numbers in a column not adding exactly to the displayed total of the column. This phenomenon, which is a result of rounding and not of any inaccuracy in the calculations, occurs both in the enrollment projections and in the community demographics.

On Student Data

DecisionInsite obtains historical student data files from the district. To the extent that the student data files are internally inconsistent from year to year, or the count of students in the files does not reflect the count of actual enrollees, errors are introduced to the projection calculations. For optimum results, the student data files must also consistently capture the same categories of students annually.

The calculations assume that the historical data provided is at one-year intervals based on enrollment at the beginning of each school year. It is important that the student files obtained from the district are close to a common date each year, typically near the beginning of the school year. The snapshot of historical data near the beginning of the school year is best suited to our goal of projecting enrollment for the beginning of subsequent school years. To the extent the historical student data provided is not at one year intervals or is not at a common date near the beginning of the school year, projections may reflect monthly fluctuations in enrollment that will diminish the accuracy of the projections.