



State College Area School District
Administrative Offices
240 Villa Crest Drive
State College, PA 16801
814-231-1021

To: Board of Directors VI-B2
 From: Bob O'Donnell, Randy Brown, Vernon Bock, Ed Poprik
 Date: October 20, 2016
 Subject: District Wide Facilities Master Plan - Elementary Options Update

Recommendation

The most recent recommendation from the administration coupled with input from the design team includes:

<u>Radio Park</u>	<u>Houserville</u>	<u>Corl Street</u>
Additions/Renovations	Additions/Renovations	Additions/Renovations
3 classrooms per grade	3 classrooms per grade	3 classrooms per grade
1 classroom per grade add alternate	N/A	N/A

This recommendation also includes the repurposing of the Lemont school. Following the Board's prior authorization, the administration and solicitor will schedule the Section 780 hearing for the school in the coming months.

The administration and design team support additions and renovations at all three elementary schools over new construction not only based upon cost estimates, but also lack of advantages in project design, phasing during construction, and resulting building. District architect Crabtree Rohrbaugh and Associates (CRA) provided a comparison chart of criteria in attachment A.

Evaluation criteria includes:

- Phasing considerations including compromise of educational experience during construction
- Adaptability of the current building and site through renovations to educational program needs
- Future program flexibility
- Site circulation and separation of vehicular and bus transportation traffic
- Facility entrance points for safety and access to playground
- Uncertainty of changes orders from renovation

Rationale

- **Additions/Renovations versus New Construction**
 - Crabtree Rohrbaugh Associates (CRA) provided a cost estimate on October 13, 2016 (see attachment B). At this point in the schematic design process CRA estimates the cost differential to be \$4 million to construct completely new buildings versus additions and renovations. A summary of the minimum, maximum, and recommended costs scenarios is provided (see attachment C).

Cost Comparison

In 2010 the District bid Elementary Projects at Ferguson Township and Mount Nittany. The costs per square for the proposed projects are lower than the inflation adjusted costs of the previous projects. However, the square footage of the proposed projects at Radio Park and Houserville are larger due to the addition of a separate cafeteria and gymnasium, along with smaller additional program elements such as a dedicated room for instrumental music and added small group instruction. Corl Street is being proposed with an All Purpose Room and is therefore closer to the program of the previous projects. The table below compares the projects:

Elementary Cost Comparison (Expressed as Total Project Cost)				
Actual Costs for Projects Bid in 2010:				
		Total in Millions	Square ft.	Cost/Square ft.
Ferguson Twp	Reno/Add	\$16.50	64,500	\$255
Mount Nittany	New	\$16.45	59,946	\$274
Actual Costs and Projected Cost estimates (Adjusted for inflation to 2017):				
Ferguson Twp	Reno/Add	\$19.37	64,500	\$300
Mount Nittany	New	\$19.30	59,946	\$322
Houserville	Reno/Add	\$17.98	70,977	\$253
Houserville	New	\$19.58	70,977	\$276
Corl St	Reno/Add	\$15.92	64,874	\$245
Radio Park	Reno/Add	\$18.81	78,374	\$240
Radio Park	New	\$21.28	78,374	\$272

Future Actions

As presented previously, the administration recommends the elimination of options 3, 5, and 7 from consideration.

	Radio Park	Houserville	Corl Street	Lemont
Option 1	Addition/Renovation	Addition/Renovation	Addition/Renovation	Repurpose
Option 3	New Construction	New Construction	Addition/Renovation	Repurpose
Option 5	Addition/Renovation	New Construction	Addition/Renovation	Repurpose
Option 7	New Construction	Addition/Renovation	Addition/Renovation	Repurpose

Note that each building design is a separate consideration and action item moving forward.

Potential Action Items Include:

- Approve move from schematic to design development of Corl Street Elementary School at three (3) classrooms per grade configuration as an addition and renovation project.
- Approve move from schematic to design development of Houserville Elementary School at three (3) classrooms per grade configuration as an addition and renovation project.
- Approve move from schematic to design development of Radio Park Elementary School at three (3) classrooms per grade configuration as an addition and renovation project.
 - Potential add alternate for 1 classroom per grade level to the Radio Park Elementary School addition and renovation project.

In addition to the action items related to the facility configuration, an Act 34 Hearing for each facility will be required during the design development process.

The design team and administration have worked with building principals to provide consistency and programmatic integrity to the schematic designs prepared to this point. Sessions with building faculty are scheduled for the next month in order to gain further input from those who will be use the instructional facility. Further reviews with the Board and community are provided in the design development process.

Based upon Board direction, action items for the projects will be presented on the November 14 meeting agenda.

Attachment A

DWFMP - Elementary Update

Category	Item	High, Medium,Low Reno/Add		High, Medium,Low New Construction		Comments
		Pros	Cons	Pros	Cons	
Safety						
	Traffic Control - eliminate mixing of car and bus traffic	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Provide secure outside spaces/access to/from building	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Security- Ability to lockdown sectors of facility and after hours utilization.	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Reduce number of access points to buildings	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Construction Safety for Students	High		High		This will be fully accommodated in both Add/Reno and New Construction. All contractors that typically bid school construction are aware that safety requirements are higher around educational projects and written into bidding documents.
	Accessibility	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Facility use and mgmt of spaces beyond regular school day	High		High		This will be fully accommodated in both Add/Reno and New Construction.
Academic Configuration						
	Appropriate number and size of learning spaces - classroom, small group, large group, teachers/staff	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Quality of educational Spaces	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Confidential meeting space	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Future program flexibility	High		High		This will be fully accommodated in both Add/Reno and New Construction.
	Future expansion capability	High		High		This will be fully accommodated in both Add/Reno and New Construction.
Cost						
	Limit minimize total project cost	High			Medium	Radio Park has 31,000 SF (40%) and Houseville has 16,500 SF (23%) that can be reused efficiently. Greatest savings for this construction relates to structure and foundation savings
	Limit site utility impact	High			Medium	By relocating the buildings on each site - utilities will need to be moved to the new locations, extension costs should be anticipated.
	Larger Stormwater retention during construction	High			Medium	After discussions with ELA, it should be anticipated that stormwater retention during design may be larger for new construction this is due to there being 2 buildings on site during construction that will need to be accommodated before the old building is removed at the end of the project.
	Lower long-term operational, maintenance, and utility costs	High		High		Due to reroofing, new windows and new mechanical systems in both renovation and new construction, it is anticipated life cycle costs will be efficient for both add/reno and new construction. This will be validated by LEED energy modeling during design.
Construction Disruption						
	Minimize time to occupancy		Medium		Medium	The Add/reno is expected to be 18 months of construction and the new construction is anticipate to be 15 months for the building itself. AS the design team has discussed further the new construction option, it has realized the existing building and site work will likely require an additional 3 months equally the add/reno option. This will make both projects equal in time.
	Optimize site phasing		Medium		Medium	The building demolition discussed below is a concern below to the design team in early discussions due to tight sites and limited parking and site access till this work is complete. (Different on each site.)
	Optimize phasing- movement		Medium	High		Add/ Reno will require, likely 2 phases within the building during construction. This would be avoided by new construction, and require one move of students and faculty at the end of construction.
	Potential for unforeseen conditions		Medium	High		Add/ Reno often creates the opportunity for slightly higher construction contingency during construction due to unforeseen conditions that may be discovered in walls under floor slabs etc. that were not documented in the past. This is minimized with new construction.

DWFMP - Elementary Update

Category	Item	High, Medium,Low		High, Medium,Low		Comments
		Reno/Add		New Construction		
		Pros	Cons	Pros	Cons	
	<i>Limit building demolition disruption</i>	Medium			Medium	This will need to be scheduled at the end of construction of the new buildings. Between demolition and associated site work this typically would be scheduled for a 3 month interval.
	<i>Minimize classroom disruption and relocation during construction phasing</i>		Medium	Medium		It should be noted that while there will be 2 primary phases in add/reno. There will be smaller overlaps of construction and students. These are typically done during summers or off hours. Examples include flooring surfaces and ceilings often removed early in the project for all areas of the building, or piping and electrical work being done after hours. Mobile temporary partitions are used to separate construction and education at all times and are typically planned months in advance with staff and the construction team. (Estimates range from 3 to 5% of construction costs between new vs. renovation.)
LEED						
	<i>(Re)use existing facilities and infrastructure</i>	High			Low	It is commonly stated the most environmentally friendly project is the building that can be reused. In this case it will lower construction materials coming to the site along with cost.
	<i>Limit Site Disturbance</i>	High			Low	Add/Reno will have less site disturbance than New Construction. This will be tracked during construction and part of LEED submission requirements
	<i>Minimize footprint of the building and impervious area</i>	High			Medium	Both add/reno and new construction will have efficient floor plans and sites. The only reason new construction is medium, is that during construction, there will be about a year while 2 buildings are on site.
	<i>Natural light in all learning spaces</i>	High		High		All learning spaces will be able to be naturally daylit in both add/reno and new construction. Design team has made sure to accommodate this in all layout and planning discussions.
	<i>Environmentally sustainable</i>	High		Medium	Medium	Both Buildings will be environmentally sustainable. New Construction is shown as both Medium for Pro & Con due to it being planned to long term being sustainable, but as stated above in other categories, requiring more materials to be brought onto site.

Attachment B



Crabtree, Rohrbaugh & Associates Architects

401 East Winding Hill Road
Mechanicsburg, Pennsylvania 17055
phone: (717) 458-0272 - fax: (717) 458-0047

October 13, 2016

Mr. Randy Brown
Business Administrator
State College Area School District
131 W. Nittany Avenue
State College, PA 16801

RE: State College DWFMP - Elementary School Update
CRA Project # 2957
Cost Analysis Update of Elementary Schools- New Construction & Additions/ Renovations

Dear Randy,

As requested, we're providing an update to the current budgets for the (3) elementary schools being evaluated in the District Wide Facility Master Plan (DWFMP) Elementary School Update. The current floor plans and educational programs that have developed throughout the summer currently are as follows:

Additions/ Renovation Options

Radio Park Elementary School	\$18.81 Million	(3 Classrooms/ Grade, 78,374 SF)
Radio Park Elementary School	\$20.34 Million	(4 Classrooms/ Grade, 85,942 SF)
Houserville Elementary School	\$17.98 Million	(3 Classrooms/ Grade, 70,977 SF)
Corl Street Elementary School	\$14.66 Million	(2 Classrooms/ Grade, 57,874 SF)
Corl Street Elementary School	\$15.92 Million	(3 Classrooms/ Grade, 64,874 SF)

New Construction Options

Radio Park Elementary School	\$21.28 Million	(3 Classrooms/ Grade, 78,374 SF)
Radio Park Elementary School	\$22.81 Million	(4 Classrooms/ Grade, 85,942 SF)
Houserville Elementary School	\$19.58 Million	(3 Classrooms/ Grade, 70,977 SF)

Please note that if the additions/ renovation options are selected, the level of renovation is planned to be equal to new construction. Our team is anticipating that the renovated areas will be taken down to building structure, floor slabs and roof deck. All new mechanical, electrical, plumbing systems, finishes, roofing, windows and doors will be installed so that at the end of the project there will be no differentiation between new construction and renovations.

Please also not that if new construction options are selected for Radio Park and Houserville ES's, reimbursement will decrease by approximately \$213,000, due to not receiving the PlanCON reimbursement increase for renovation projects.

Sincerely,

A handwritten signature in blue ink, consisting of several overlapping, fluid strokes that form a stylized, somewhat abstract shape.

R. Jeffrey Straub, AIA, REFP, CPD, LEED AP BD&C
Principal I Studio Director

Cc: Ed Poprik, Director of Physical Plant, State College Area School District

Attachment C

State College Area School District
DWFMP - EU Estimates
In Millions

	Min - Cost	Cost of Recommendation	Alt Max-Cost	Max - Cost
Scenario	A	B	C1	C2
Corl Street	2 Add/Reno	3 Add/Reno	3 Add/Reno	3 Add/Reno
Radio Park	3 Add/Reno	3 Add/Reno	4 Add/Reno	4 New
Houersville	3 Add/Reno	3 Add/Reno	3 Add/Reno	3 New
Estimated Cost	\$ 51.45	\$ 52.71	\$ 55.84	\$ 58.31
Less:				
PlanCon /				
Grant Funding	\$ 7.00	\$ 7.00	\$ 7.00	\$ 7.00 (1)
Net Cost	\$ 44.45	\$ 45.71	\$ 48.84	\$ 51.31
Net Borrowing	\$ 44.00	\$ 45.00	\$ 48.00	\$ 50.00

(1) Estimated PlanCon Reimbursement and Grant Fund between \$6 and 8 million, final estimate to be calculated when bids accepted.

Alt Max-Cost is provided based upon comments at previous Board meeting regarding additional capacity at Radio Park.



SCASD DISTRICT-WIDE FACILITIES MASTER PLAN - ELEMENTARY SCHOOL UPDATE

School Board Meeting Update, October 24, 2016



ARCHITECTS



Crabtree, Rohrbaugh & Associates Architects
421 East Windy Hill Road
Mechanicsburg, Pennsylvania 17055
Phone: (717) 438-0212 • Fax: (717) 438-0047

MEP ENGINEERS



MOORE ENGINEERING COMPANY

CM SERVICES



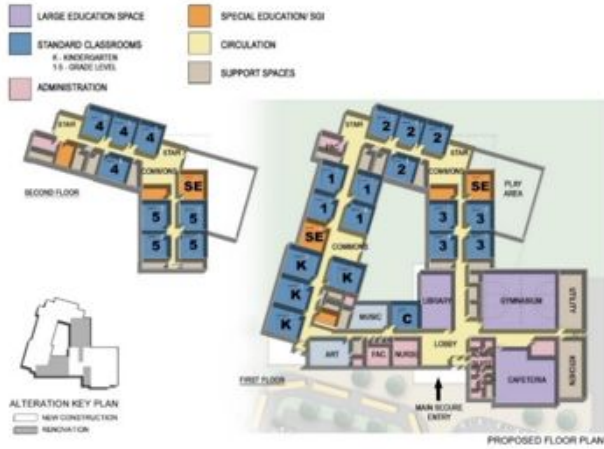
Massaro
CM SERVICES, LLC

CIVIL ENGINEERS



EA GROUP, INC.

- 01** PROCESS SINCE SPRING 2016
- 02** EDUCATIONAL PROGRAM
- 03** UPDATED FLOOR PLANS
- 04** UTILIZATION OF EXISTING BUILDINGS
- 05** GEOTECHNICAL REPORTS
- 06** SITE PLANS (NEW & ADD/RENO)
- 07** PHASING
- 08** FLOOR PLAN DETAILS
- 09** SCHEDULE
- 10** EDUCATIONAL LEARNING COMMUNITIES



Spring 2016- Preliminary Options for PDE



Summer 2016- Program under Development

Evaluation of Program for all 3 Buildings is being completed for all 3 buildings with input from recent SCASD Elementary School Buildings.

Balanced Program across all Buildings.

Program is then able to be utilized for both New Construction and Renovation & Additions Option Development.

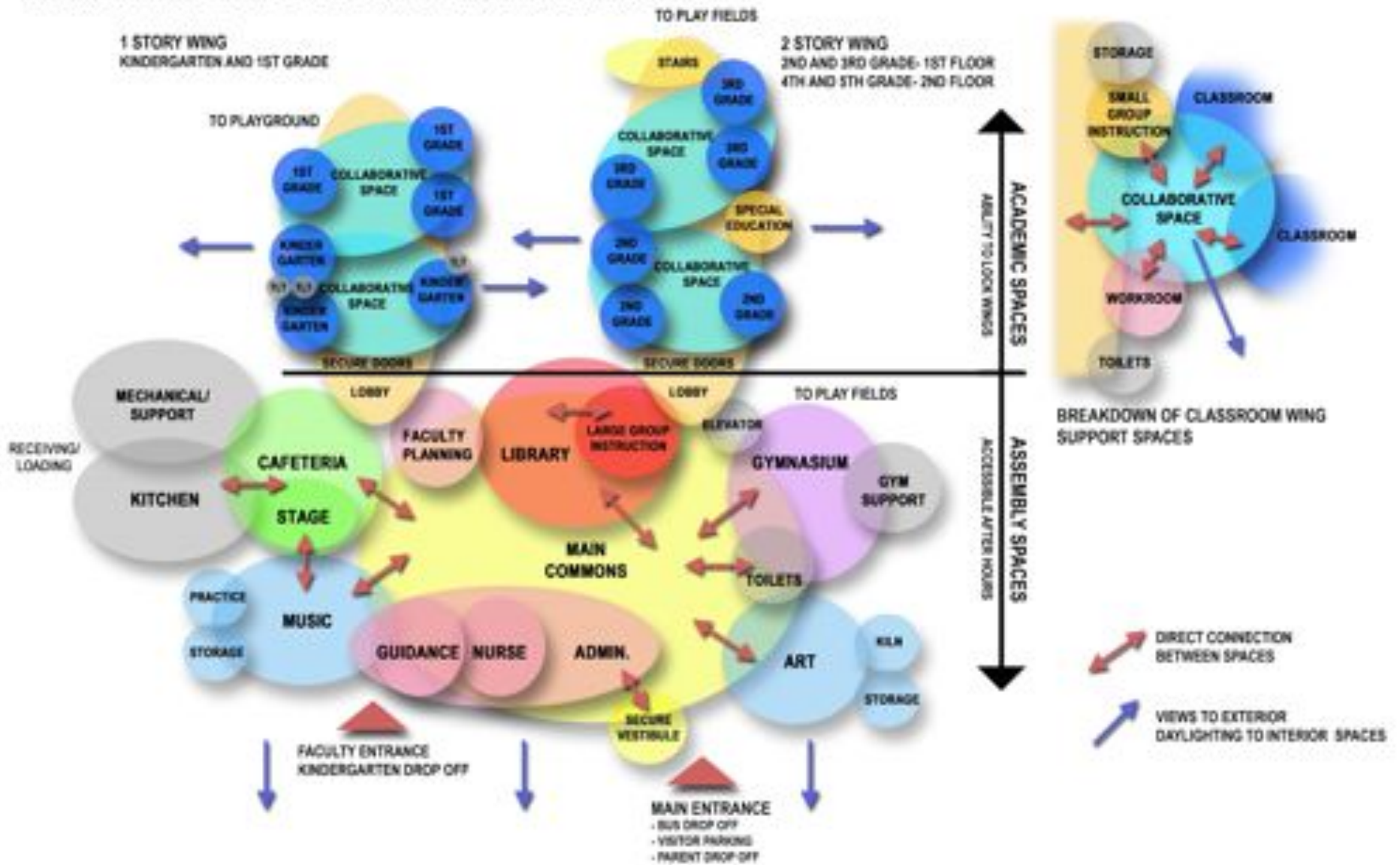
State College Area School District		Project No. 2993, 2994, 2995	
State College Area Elementary Schools: Existing Vs. Proposed		Updated 9/18/2018	
Crabtree, Rohrbaugh & Associates			
Total Gross SF:	81,503 SF		
Total Net SF:	74,255 SF		
Total Scheduled Area Net SF:	49,378 SF		
Total Architectural Area Net SF:	24,877 SF		
Net to Gross SF =	1.65 SF		
PDE Standard Net to Gross SF =	1.58 SF		

RADIO PARK PROPOSED		PROPOSED NET SF (AVG)	
SCHEDULE		SCHEDULE	
1 STANDARD EDUCATIONAL SPACES	19,444		
Kindergarten Classrooms (3 Total)	3,447		
1 Kindergarten Classroom	1,149		
2 Kindergarten Classroom	2,298		
3 Kindergarten Classroom	3,447		
Standard Classrooms (15 Total)	15,997		
1 Classroom	1,066		
2 Classroom	2,133		
3 Classroom	3,200		
4 Classroom 2nd floor	4,267		
5 Classroom 2nd floor	5,334		
6 Classroom 2nd floor	6,401		
7 Classroom 2nd floor	7,468		
8 Classroom 2nd floor	8,535		
9 Classroom 2nd floor	9,602		
10 Classroom	10,669		
11 Classroom 2nd Floor	11,736		
12 Classroom	12,803		

PROPOSED EDUCATIONAL SPECIFICATION		Project No. 2993, 2994, 2995	
Crabtree, Rohrbaugh & Associates		Updated 9/18/2018	
SUMMARY			
	Students	Students	Students
	QTY (BID 2918) MT. NITTANY	QTY (BID 2919) FERDINAND	QTY SCHEMATIC RADIO PARK
	Students	Students	Students
	QTY SCHEMATIC HOUSERVILLE	QTY SCHEMATIC CORN STREET	Students
Total Gross SF:	81,503 SF	64,500 SF	81,503 SF
Total Net SF:	55,306 SF	59,043 SF	74,255 SF
Total Scheduled Area Net SF:	40,206 SF	40,162 SF	49,378 SF
Total Architectural Area Net SF:	15,190 SF	18,661 SF	24,877 SF
Net to Gross SF =	1.84 SF	1.61 SF	1.65 SF
PDE Standard Net to Gross SF =	1.58 SF	1.58 SF	1.58 SF

1 STANDARD EDUCATIONAL SPACES		SCHEDULED AREA	
Kindergarten Classrooms (3 Total)	18,455 SF	18,988 SF	19,444 SF
Standard Classrooms (15 Total)	16,766 SF	15,946 SF	15,997 SF
Open Classrooms (+1,000 SF)	3,206 SF	3,654 SF	3,447 SF
Large Group Instruction (+1,000 SF)	3,206 SF	3,654 SF	3,447 SF
Small Group Instruction	- SF	- SF	- SF
Art Classroom	1,624 SF	2,520 SF	2,819 SF
Art Storage	2,485 SF	2,686 SF	2,819 SF
Music Classroom	1,146 SF	1,288 SF	1,702 SF
Media Center	1,006 SF	1,182 SF	1,323 SF
Media Storage	2,344 SF	2,192 SF	2,388 SF
Media Storage	1,480 SF	1,754 SF	1,869 SF
Media Storage	8,590 SF	6,982 SF	7,310 SF
Administration Suite	- SF	2,209 SF	2,625 SF
Nurse Suite (3 each proposed)	1,896 SF	4,487 SF	5,099 SF
Faculty Planning (2 grades for ext)	702 SF	288 SF	346 SF
Storage	993 SF	1,048 SF	1,140 SF
Faculty Dining	- SF	1,140 SF	1,323 SF

ELEMENTARY SCHOOL ORGANIZATIONAL DIAGRAM



02 Elementary School Organizational Diagram



RADIO PARK



HOUSERVILLE



 = RENOVATION EXTENTS

PROGRAM WITHIN EXISTING BUILDINGS

- Classrooms
- Cafeteria/ Kitchen
- Administration
- Small Group Instruction
- Music
- Support & Mechanical



RADIO PARK



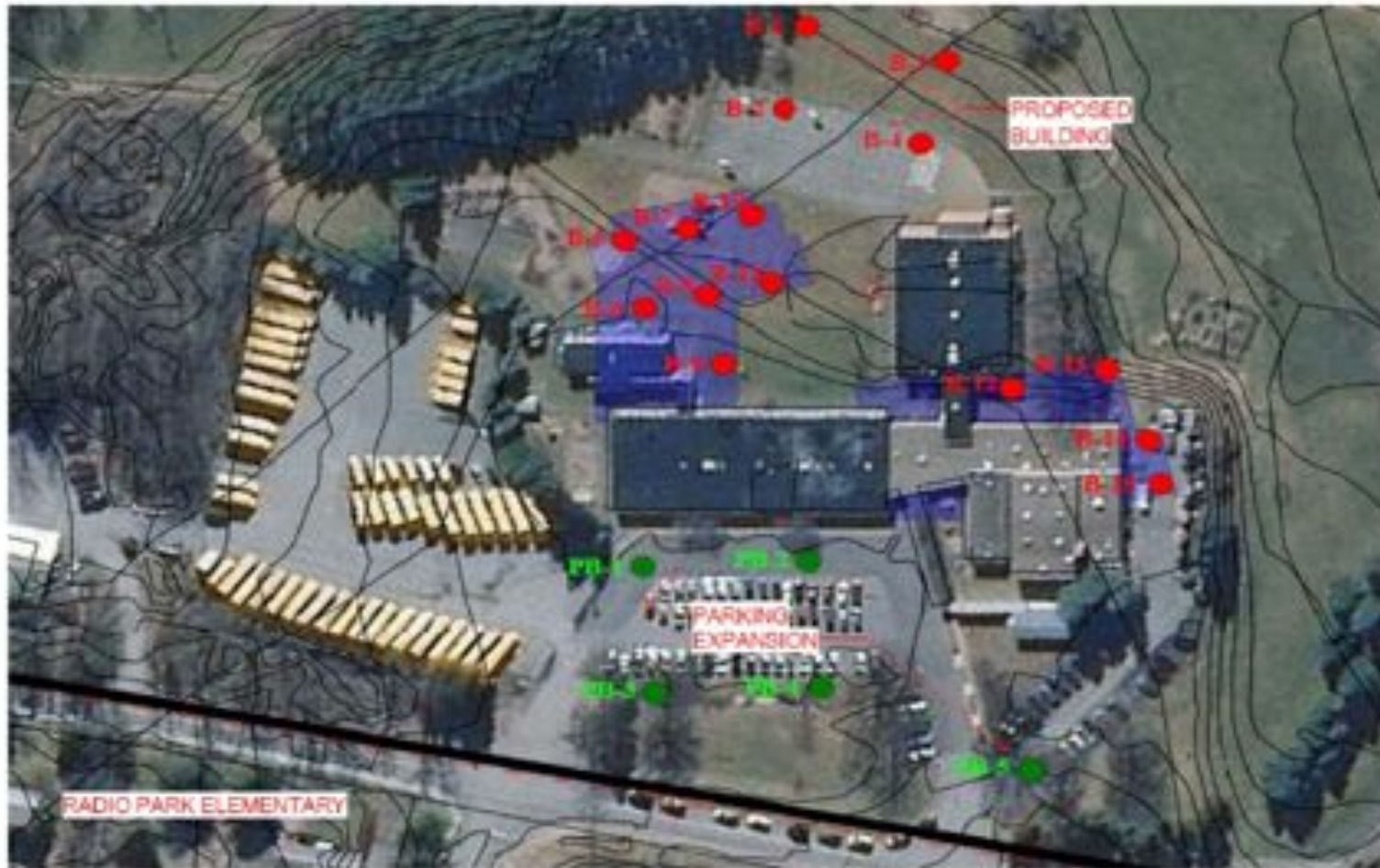
HOUSERVILLE




PDE Reports- 74% of Projects in Pennsylvania are Addition and Renovation

- At this time, the use of the existing buildings will allow a \$4 Million Cost Savings over New Construction
- This is due to the reuse of the existing building shell.
- \$43 per square foot savings between renovation and new construction.





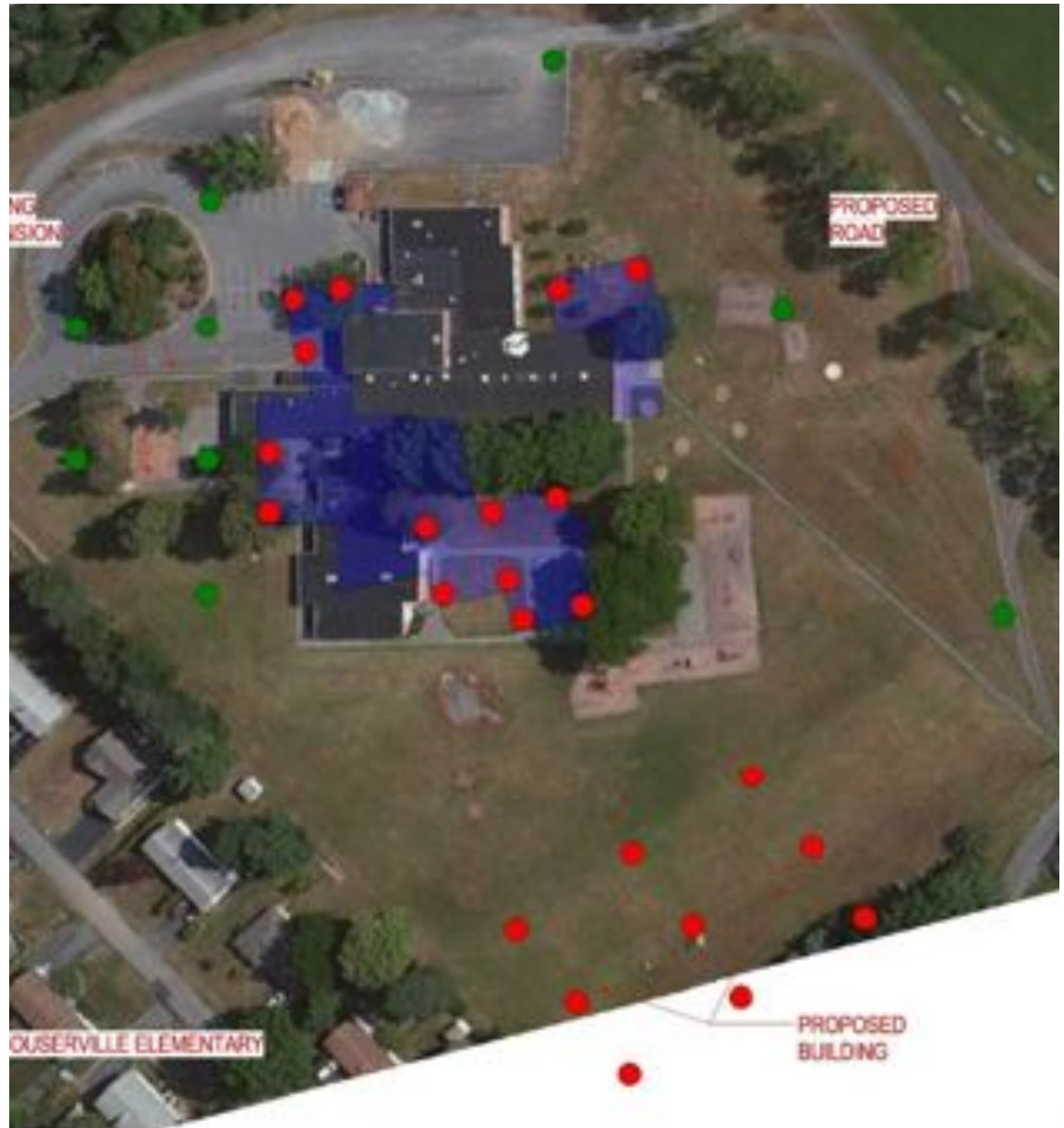
Notes: Drawing prepared by others. Not for construction. Not to scale.

 cmt LABS <small>CMT Laboratories, Inc. 2701 Carolean Industrial Dr. State College, PA 16801</small>	<small>COMMERCIAL ENGINEERING CONSTRUCTION SURVEY & TESTING SOIL BORING SPECIALTY FOUNDATION DESIGN</small>	TITLE: TEST BORING LOCATION PLAN	CMT PROJECT #: 1624900	DRAFTSPERSON: NOT APPLICABLE
		PROJECT: RADIO PARK ELEMENTARY SCHOOL UPGRADES	PROJECT ENGINEER: PAUL R. THOMAS, PE	DATE: SEPTEMBER 1, 2016

Preliminary Geotechnical Reports indicate standard construction can be accommodated for both New Construction & Renovation.

Onsite investigations occurred late summer 2016 at all 3 schools, which investigated Add/Reno and New Construction locations.

There was two borings that found unsuitable soil at Radio Park ES and one boring at Houserville for rock, which are both manageable at this time.

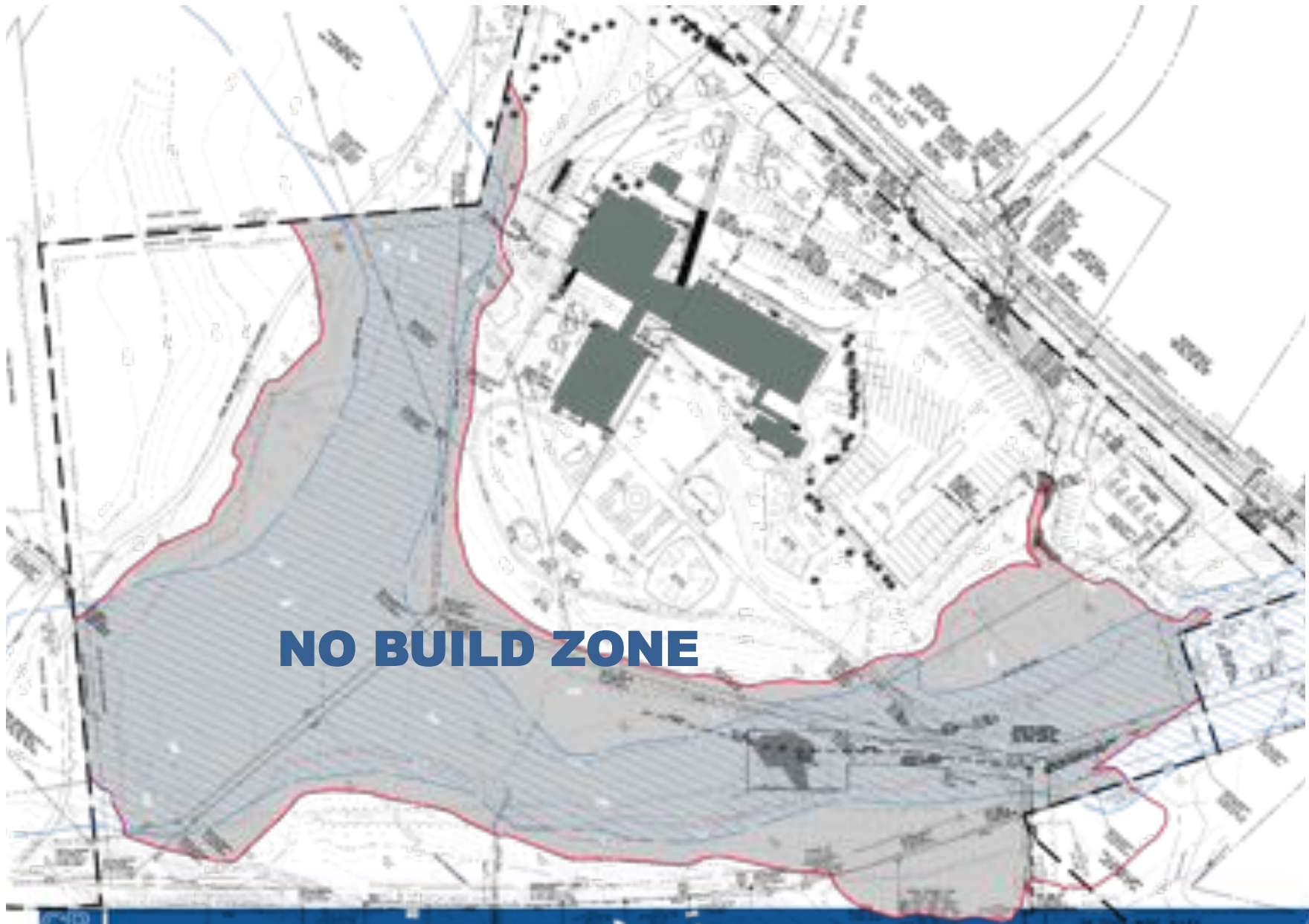


RADIO PARK



HOUSERVILLE





NO BUILD ZONE

RADIO PARK

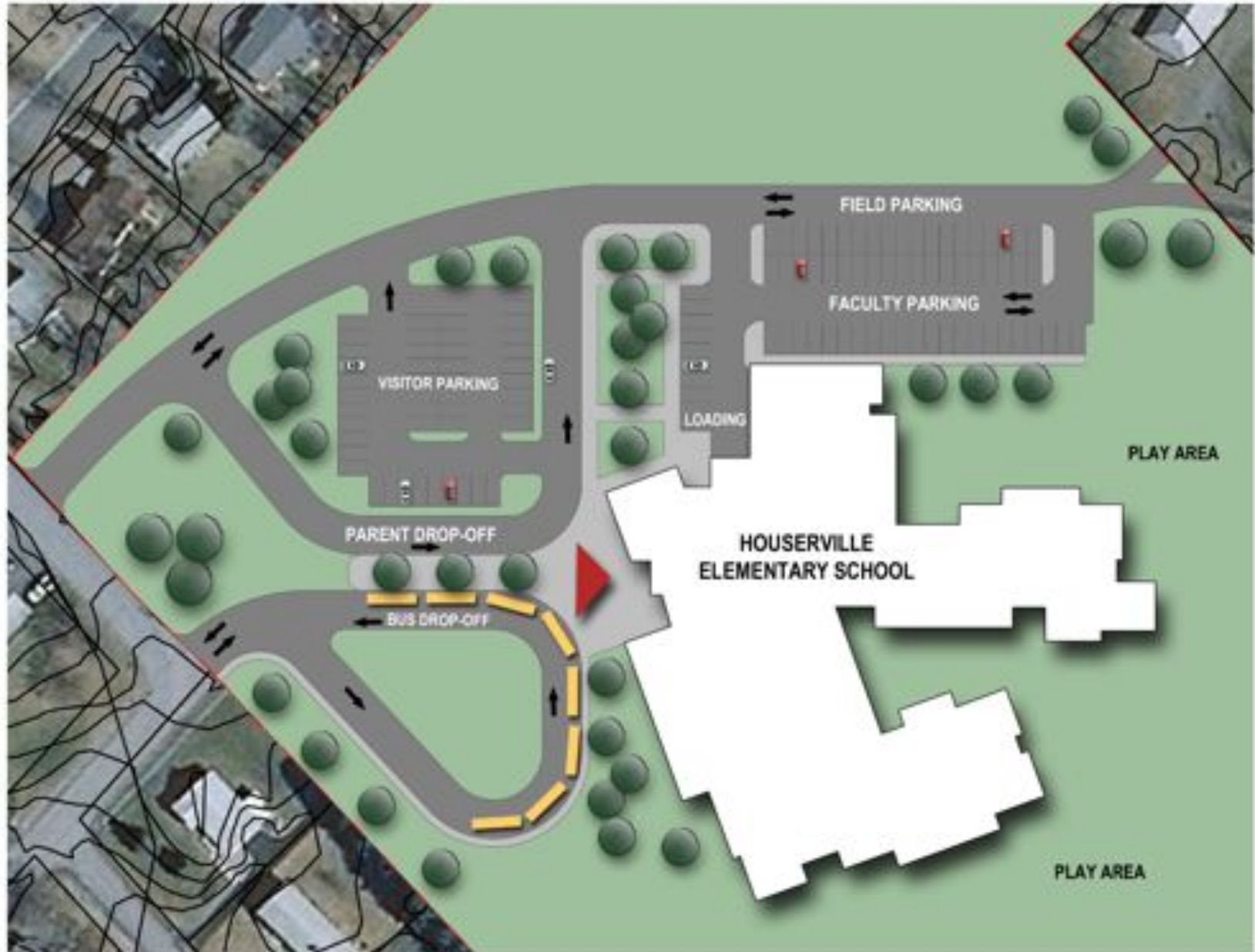


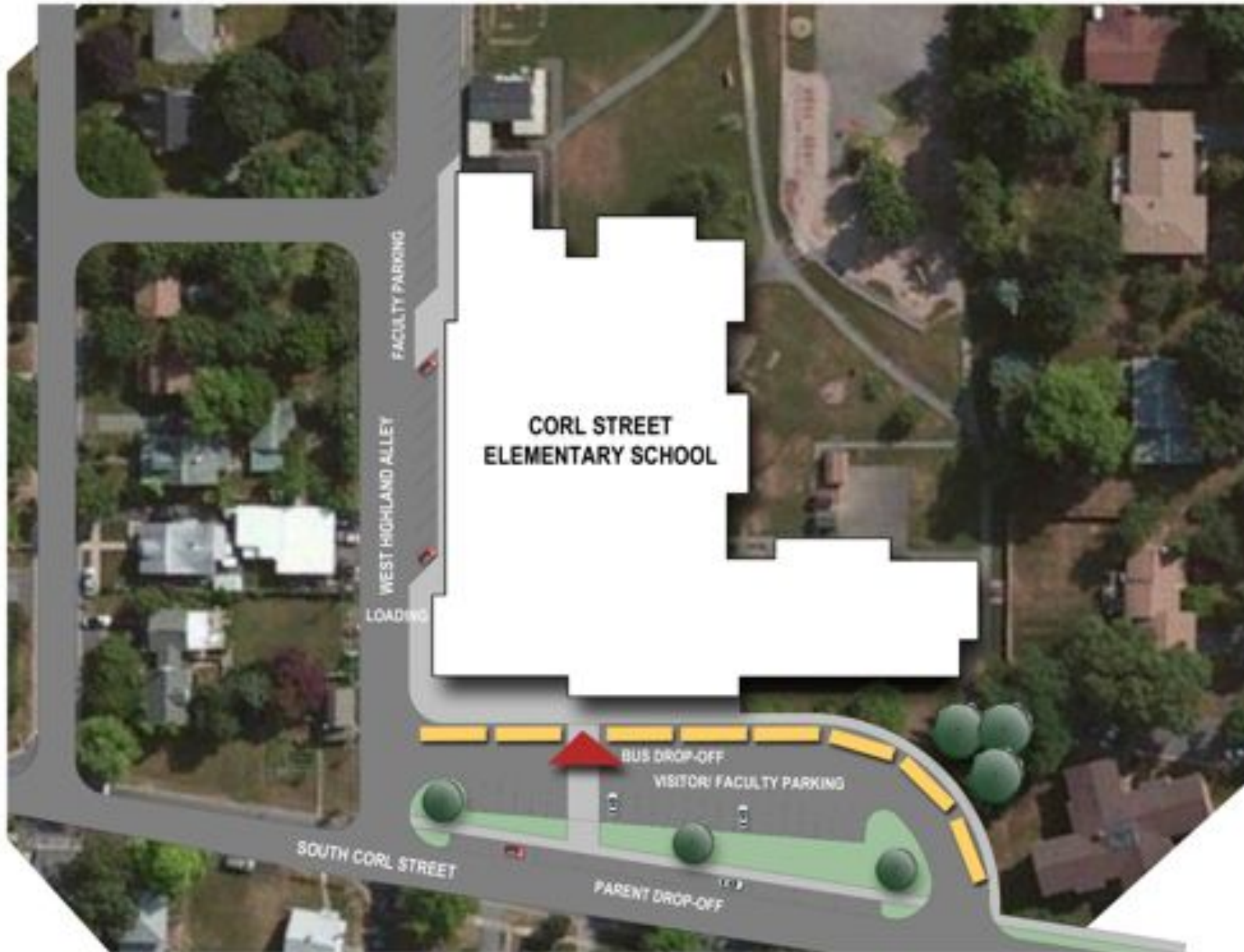
HOUSERVILLE



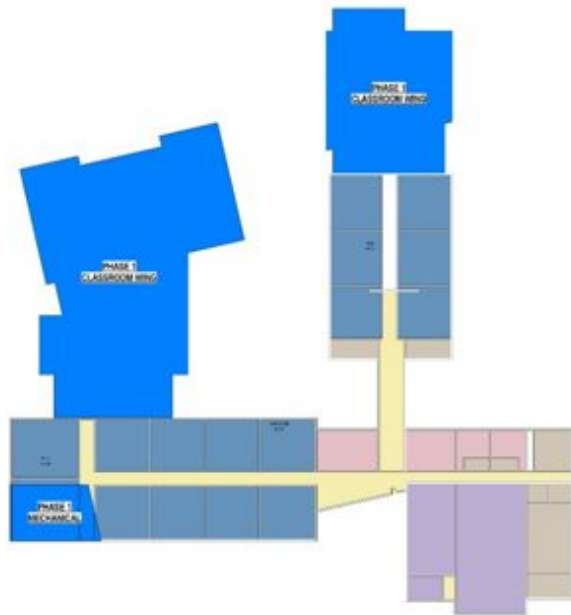
06 Site Plan- Potential **New Building** Locations







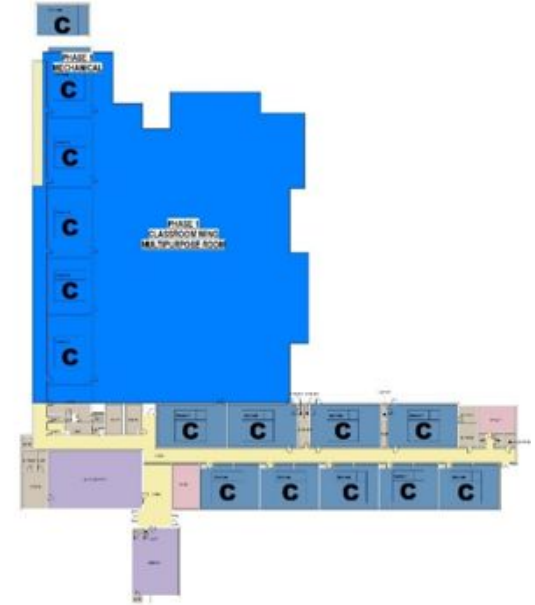
RADIO PARK



HOUSERVILLE



CORL STREET



Phase 1 - Construct New Additions to Move Students into

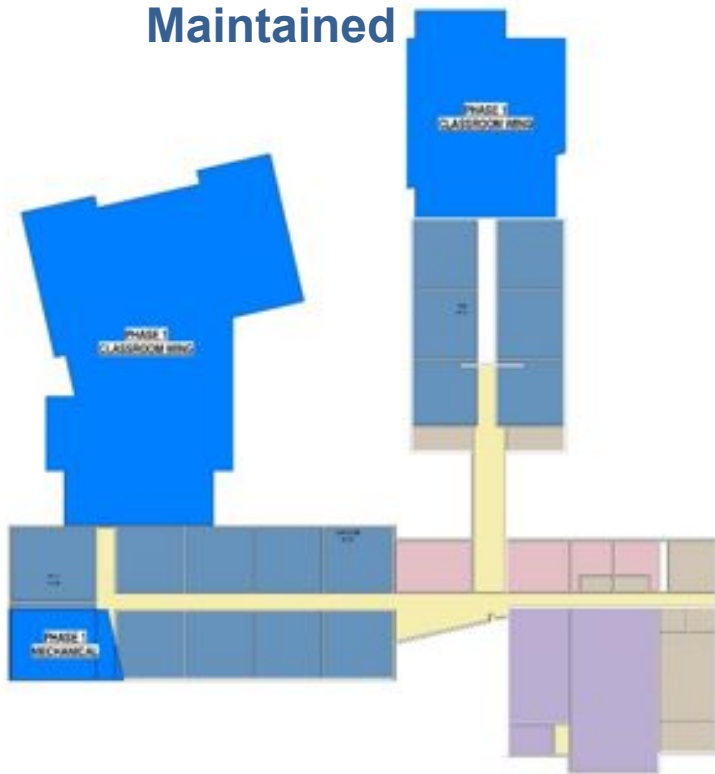
Phase 2 - Renovate Existing Buildings



07 Phasing- 18 to 20 Months (2 Phase Projects)



Phase 1 - 21 Classrooms Maintained



Phase 1A - 19 Classrooms Maintained



Phase 1 - Fall 2017- July 2018 Construct New Additions

10 New Classrooms

3-5 New Small Group Instruction

Phase 1A - Summer 2018 – Renovate 2 Story Addition- 9 Classrooms

Ready for Start of School 2018

Start of 18/19 School Year 19 Classrooms Available



07 Phasing- Radio Park- Phase 1 (18 Classrooms Needed for 3 Deep Classrooms





Phase 2 - Fall 2018- March 2019 Core Program
 Library, Administration, Gymnasium, Music Cafeteria/Kitchen

May be potential to complete some areas sooner, but this is a conservative approach to begin at schematic level.

**Phase 1 - 8 Classrooms
Maintained, 2 potential modulars**



Phase 1A - 14 Classrooms Available



Phase 1 - Fall 2017- July 2018 Construct New 2 Story Addition

14 New Classrooms

Art Room, Small Group Instruction

Phase 1A - Summer 2018 – Renovate/ Construct/ Complete 2 Story

Classroom Wing, Library and Gym

Start of 18/19 School Year 14 Classrooms Available



07 Phasing- Houserville- Phase 1 (9 Classrooms Needed for 3 Deep Classrooms

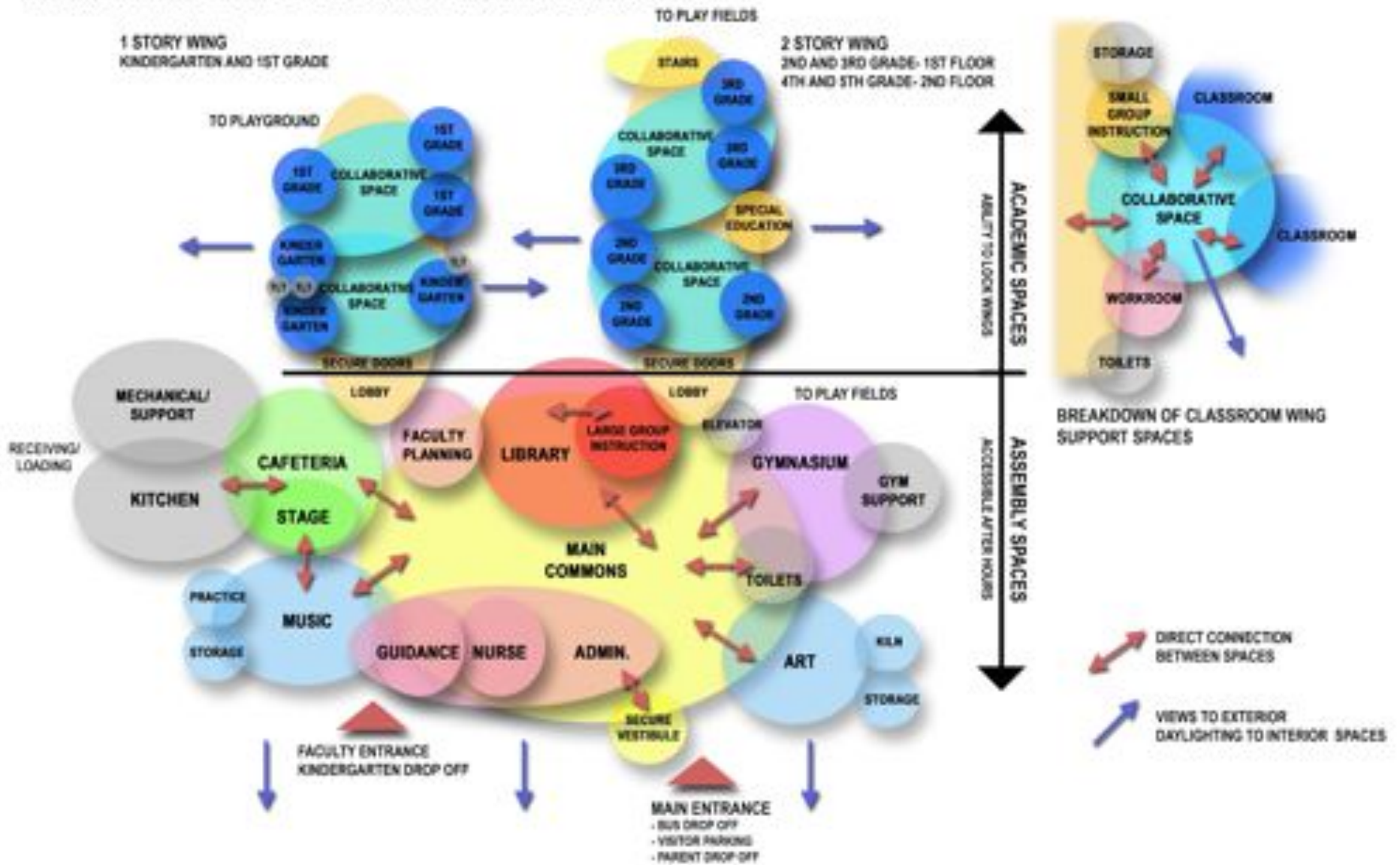




Phase 2 - Fall 2018- March 2019 Core Program
 Library, Administration, Gymnasium, Music Cafeteria/Kitchen

May be potential to complete some areas sooner, but this is a conservative Approach to begin at schematic level.

ELEMENTARY SCHOOL ORGANIZATIONAL DIAGRAM



08 Elementary School Organizational Diagram







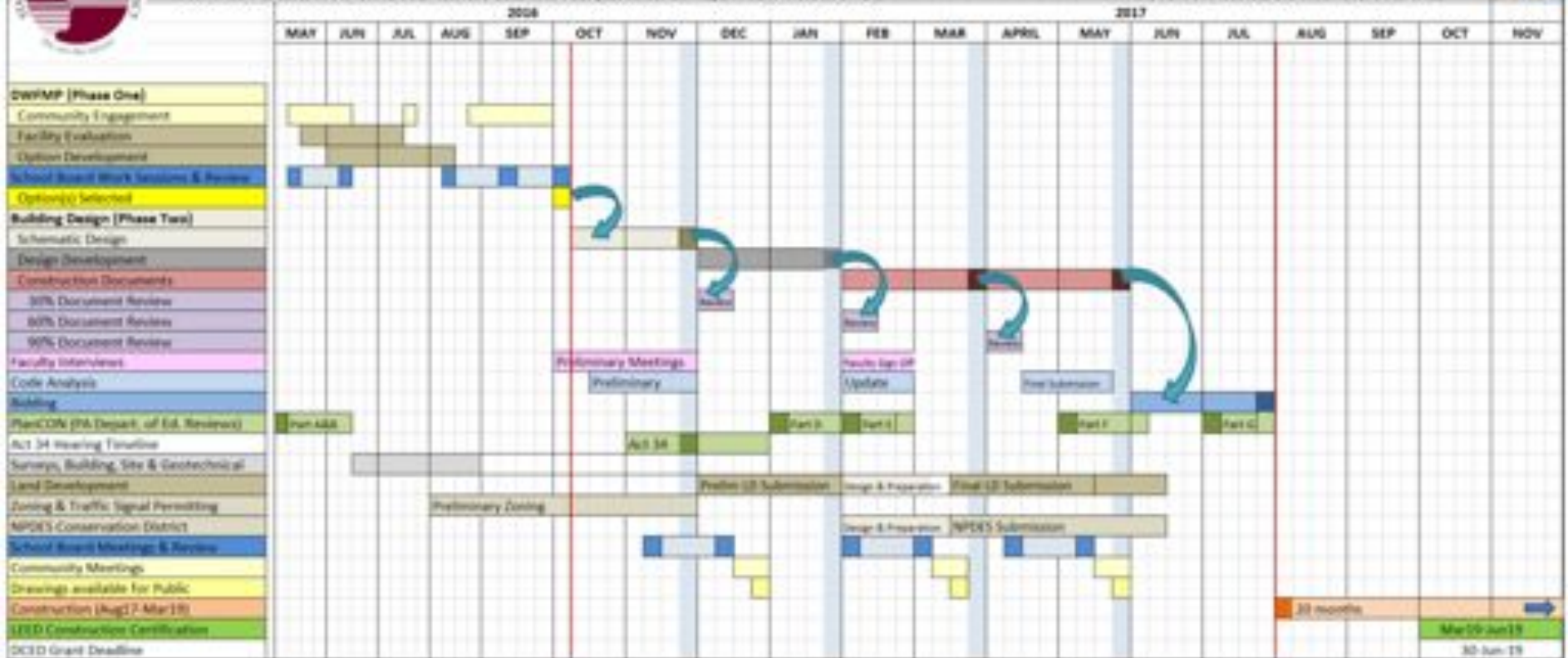




STATE COLLEGE AREA SCHOOL DISTRICT

PROPOSED DESIGN SCHEDULE- District Wide Facility Master Plan (Phase One and Two)

Caldree, Ruhbaugh & Associates Architects



09 UPDATED SCHEDULE



