

**State College Area School District
Office of Physical Plant
Ed Poprik, Director**

To: Board of School Directors

From: Ed Poprik and Vernon Bock

RE: **Approve revised floor plans for the Elementary School Projects**

Date: March 13, 2017

Recommend that the State College Area School District Board of School Directors approve the attached 30% floor plans for the Corl Street, Houserville, and Radio Park projects.

Background:

On February 27, the Board of School Directors accepted the 30% submission package for the Elementary School projects. In addition, they provided the following direction to the design team and administration:

- In order to control costs, authorize administration to work with the design team to identify reductions in building square footage. These reductions should focus on efficiencies, non-dedicated program space (e.g. small group instruction), and any specific areas that may be larger than previous projects.

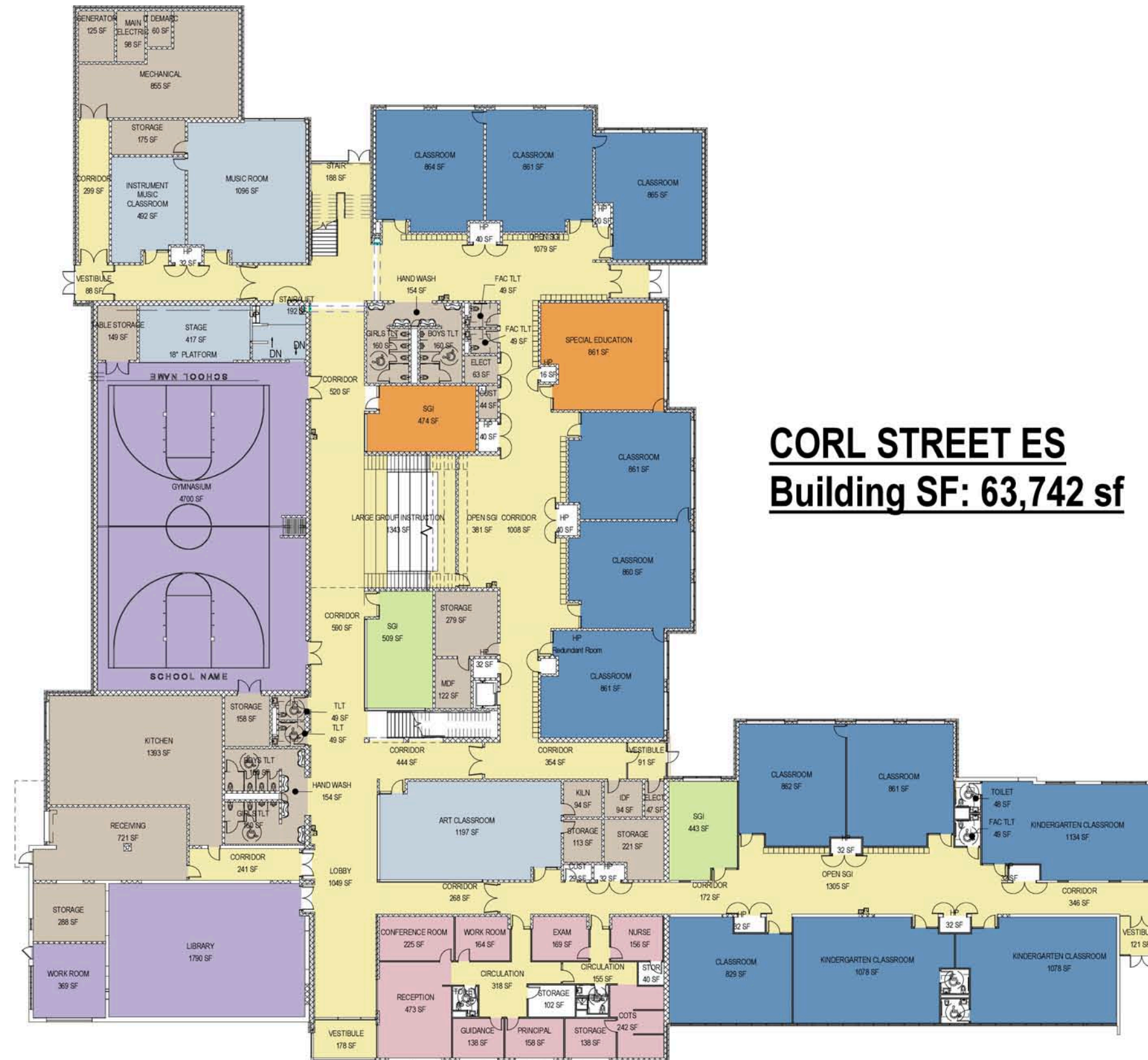
The attached floor plans represent work to date on that process. While designs will continue to evolve and mature throughout the design process, administration is seeking approval of these revised 30% floor plans as significant floor plan changes at 60% are problematic to the project schedule.

In the attached PowerPoint, the revised floor plans are presented along with additional information that was requested during Board discussion of the item.

While new formal estimates were not completed at this time, the square foot reductions would lower Crabtree Rohrbaugh's estimate total for the 3 projects to a number that is within 1% of the original budget.

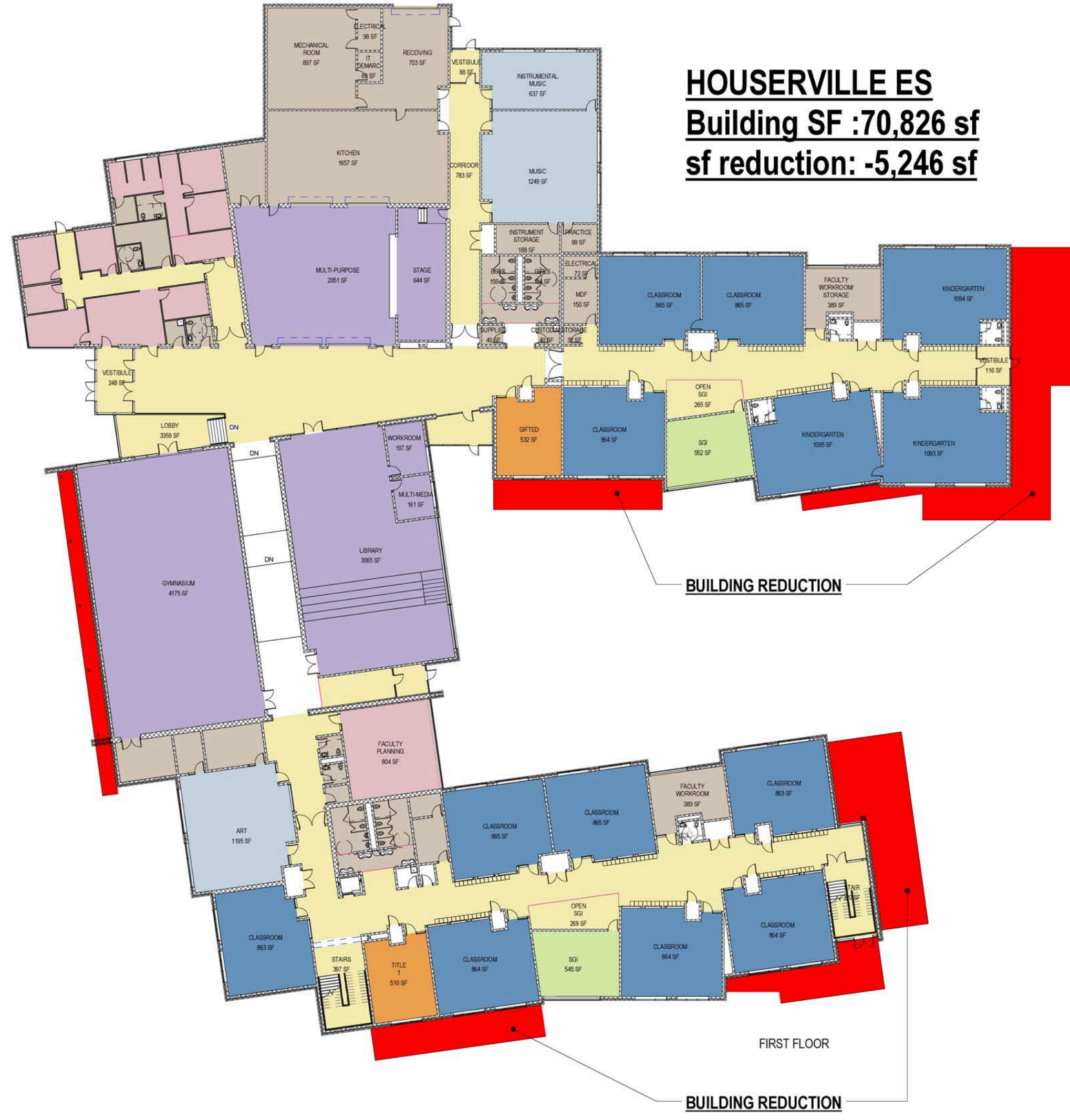
Attachments

- Revised floor plans (3)
- PowerPoint presentation



CORL STREET ES
Building SF: 63,742 sf

HOUSERVILLE ES
Building SF :70,826 sf
sf reduction: -5,246 sf





RADIOPARK ES
3 DEEP: 79,180 sf
sf reduction: -3,330 sf
4 DEEP: ADD 7,883 sf

SCASD DISTRICT-WIDE FACILITIES MASTER PLAN - ELEMENTARY SCHOOL UPDATE

School Board Meeting, March 13, 2017



ARCHITECTS

CR Crabtree, Rohrbaugh & Associates
Architects
401 East Winding Hill Road
Mechanicsburg, Pennsylvania 17055
phone: (717) 458-0272 - fax: (717) 458-0047

MEP ENGINEERS

MEC
MOORE
ENGINEERING
COMPANY

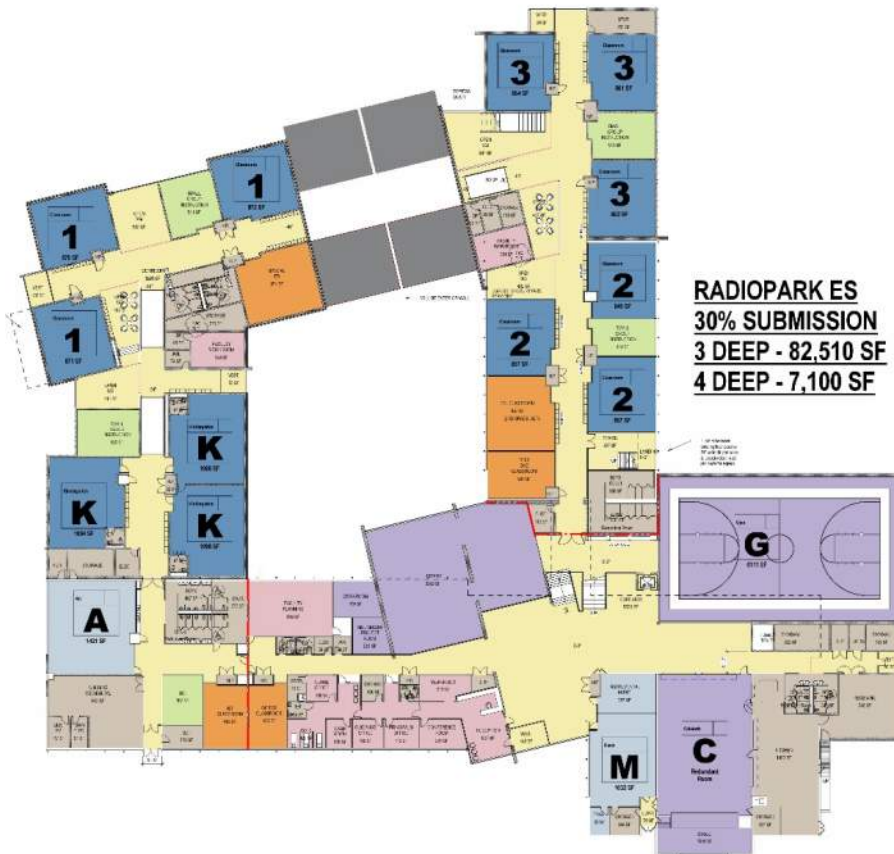
CM SERVICES

Massaro
CM SERVICES, LLC

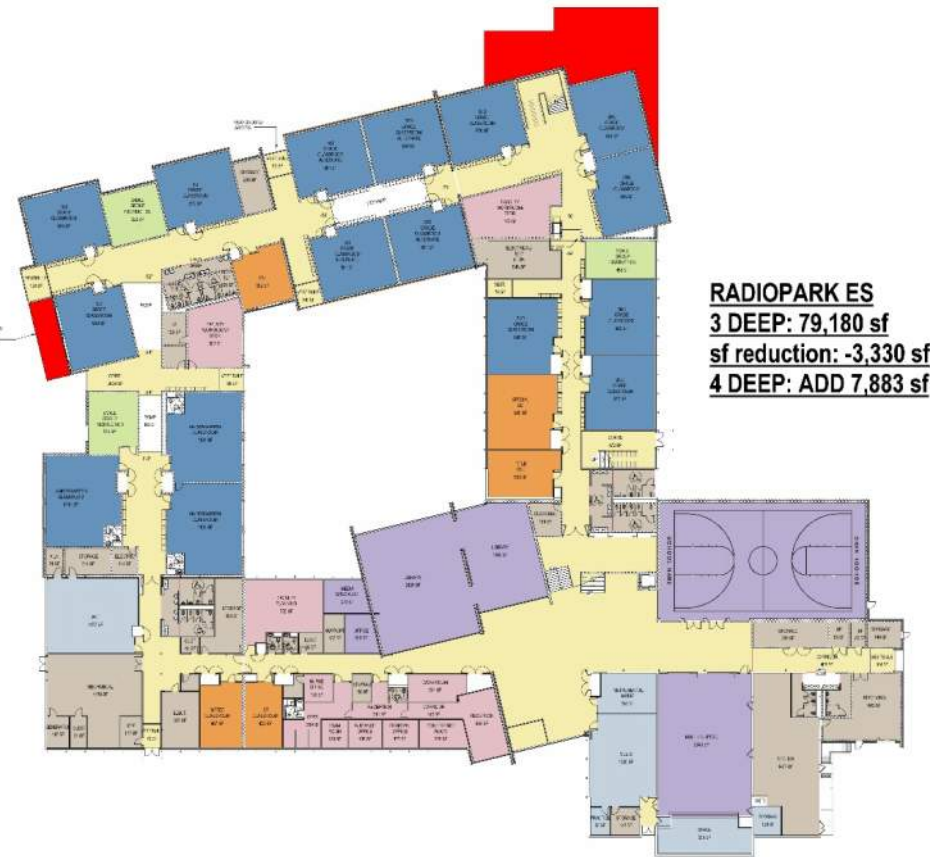
CIVIL ENGINEERS

EA
group, inc.
ENGINEERS & LANDSCAPE ARCHITECTS

- 1.0 PROPOSED SQUARE FOOTAGE REDUCTIONS**
- 2.0 COST ESTIMATE UPDATE**
 - DWFMP- NOVEMBER. 7 2016**
 - 30% SUBMISSION**
 - AFFECT OF REIMBURSEMENT**
 - & GRANT UPON OVERALL BUDGET**
 - BEYOND 30% SUBMISSION**
- 3.0 COMPARABLE NEW CONSTRUCTION COSTS**
- 4.0 DISCUSSION OF CRA & MASSARO ESTIMATE PROCESS**

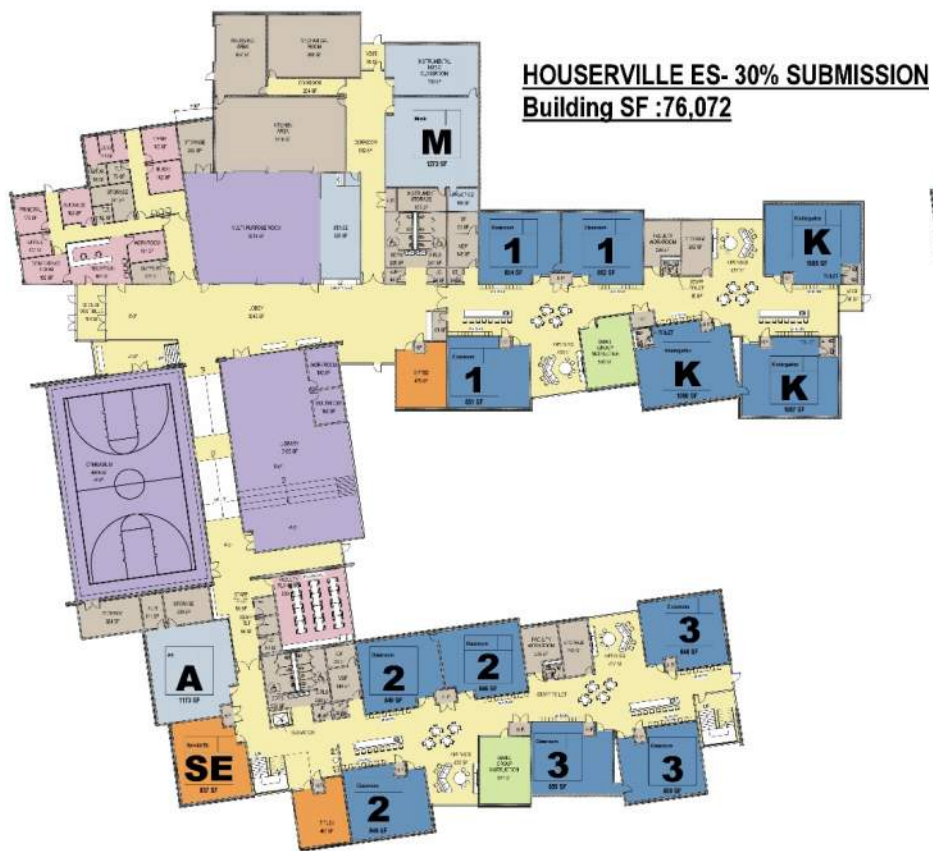


30% Submission

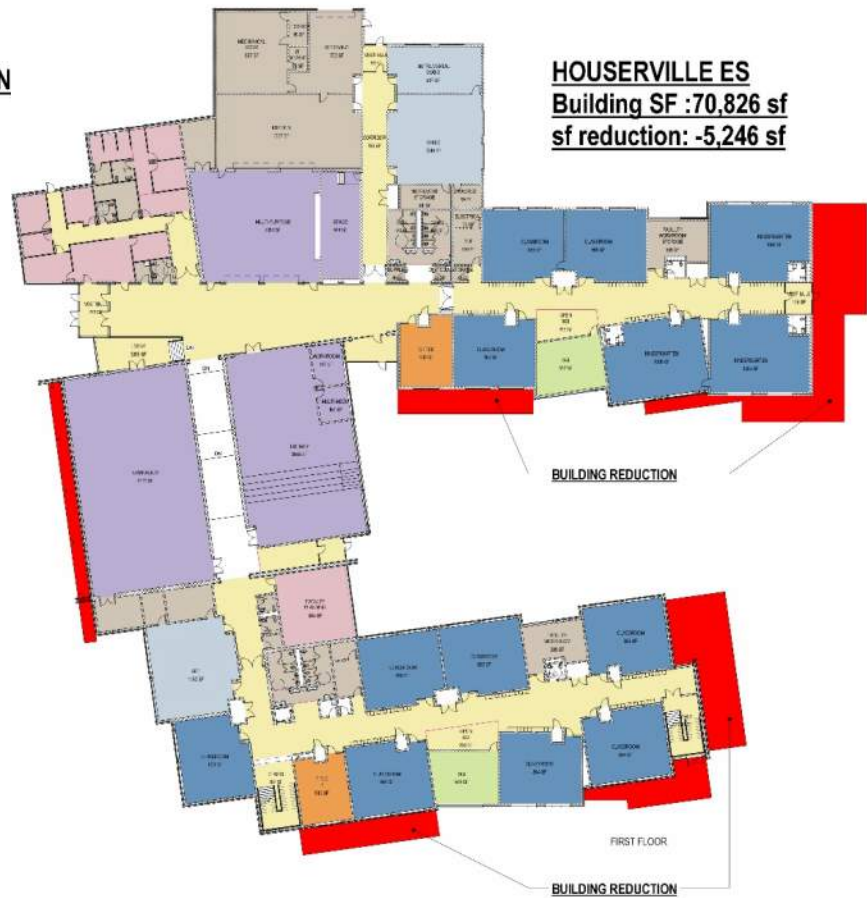


Proposed 30% Revisions

Design team is proposing to reduce square footage at Radio Park by approximately 3,300 SF. The areas highlighted in **RED** above are the areas of reductions. Reductions are predominantly limited to Open Small Group Instruction and Small Group Instruction. Proposed savings is discussed in Slide 2.3.

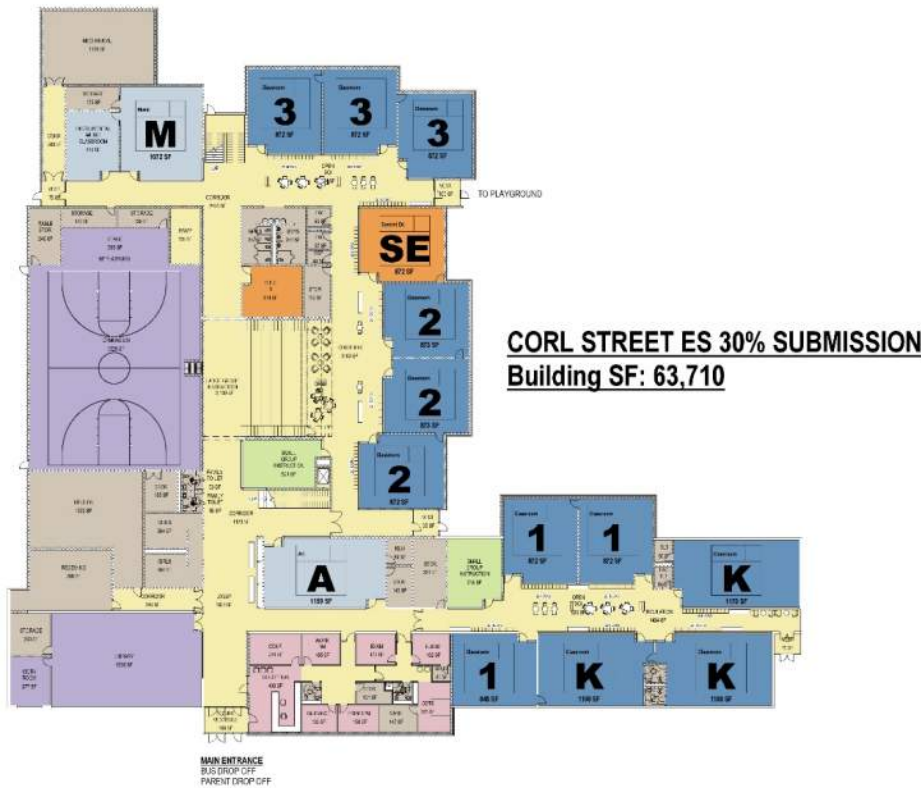


30% Submission

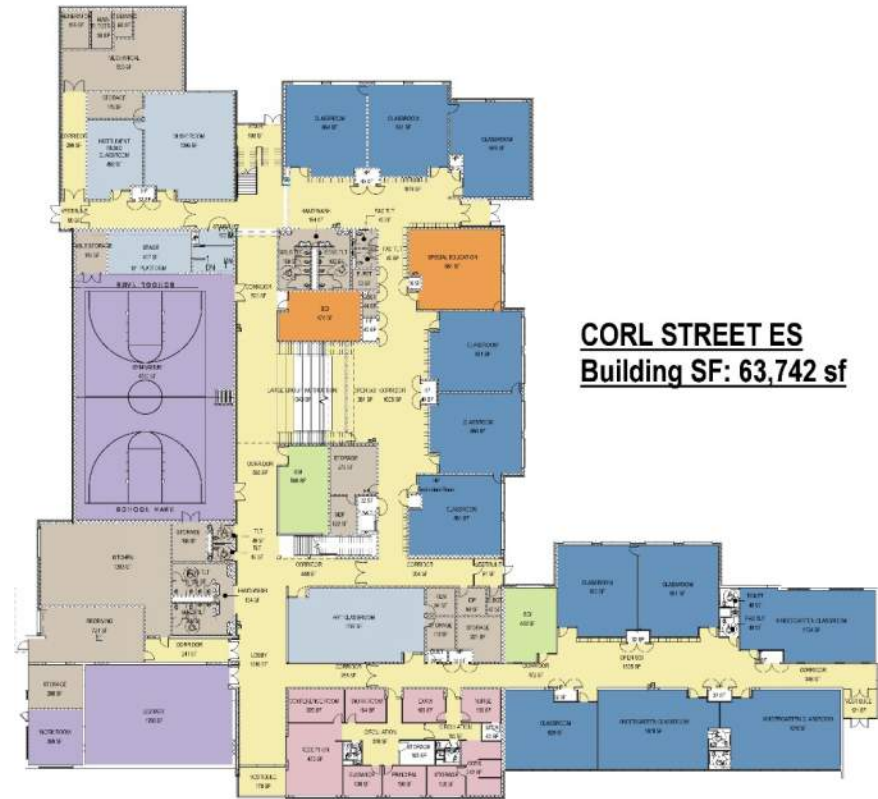


Proposed 30% Revisions

Design team is proposing to reduce square footage at Houserville by approximately 5,246 SF. The areas highlighted in **RED** above are the areas of reductions. Reductions are predominantly limited to Open Small Group Instruction, Small Group Instruction & matching gym sizes across schools. Proposed savings is discussed in Slide 2.3.



30% Submission



Post 30% Floor Plan

Design team has made modifications to Corl Street as well looking for cost savings, however, this has been counteracted by mechanical and structural system requirements that have developed in the past weeks. At this time both have been evaluated and floor plan appears to be stable.



State College Area School District Elementary School Cost Comparisons

Comparison of Independent 30% Cost estimates

2/27/17

	Corl Street		Houserville		Radio Park**		
	CRA	Massaro	CRA	Massaro	CRA	Massaro	
Site Work							
Renovation							
New Construction							
Total construction*	\$12,774,264	\$12,723,616	\$16,775,089	\$16,823,589	\$17,209,176	\$18,344,532	
Soft costs	\$3,156,635	\$3,156,635	\$3,425,338	\$3,425,338	\$3,844,902	\$3,844,902	
Total Project cost	\$15,930,899	\$15,880,251	\$20,200,427	\$20,248,927	\$21,054,078	\$22,189,434	
Grant (received at 30%****)	\$0	\$0	\$1,750,000	\$1,750,000	\$1,750,000	\$1,750,000	\$3,500,000
PlanCon (projected at 30%)	\$1,236,007	\$1,236,007	\$1,173,942	\$1,173,942	\$1,539,966	\$1,539,966	\$3,949,915
Subtotal SCASD Cost at 30%	\$14,694,892	\$14,644,244	\$17,276,485	\$17,324,985	\$17,764,112	\$18,899,468	\$49,735,489
<i>Estimate variance</i>		-0.32%		0.24%		5.39%	
Original Budget	\$15,920,000	\$15,920,000	\$19,580,000	\$19,580,000	\$20,340,000	\$20,340,000	
PlanCon at Part A	\$900,049	\$900,049	\$1,112,017	\$1,112,017	\$1,447,905	\$1,447,905	\$3,459,971
Grant Anticipated Nov. 7, 2016			\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$3,000,000
SCASD Cost at Nov 7, 2016	\$15,019,951	\$15,019,951	\$16,967,983	\$16,967,983	\$17,392,095	\$17,392,095	\$49,380,029
% over/under original budget	-2.16%	-2.50%	1.82%	2.10%	2.14%	8.67%	
Estimating Contingency***	In Total Constr. Above	\$1,272,361	In Total Constr. Above	\$1,682,359	In Total Constr. Above	\$1,643,871	
Escalation***	In Total Constr. Above	\$629,819	In Total Constr. Above	\$832,768	In Total Constr. Above	\$813,716	
Project with Cont & Escalation	\$15,019,951	\$16,922,131	\$16,967,983	\$19,483,110	\$17,392,095	\$21,357,055	
	0.00%	-11.24%		-12.91%		-18.57%	

* Total Construction for Site Work, Renovation and New Construction at 30%.

** Radio Park is estimated as 4 classrooms deep

*** As drawings become more detailed, Massaro Estimating Contingency & Escalation will drop to 0%-3% eliminating assumptions in estimate. CRA's estimates contain estimating & Escalation in Base Budget that do not change due to estimating on recent bid projects.

**** Grants were for \$1.96 Million (Radio Park) & \$1.88 Million (Houserville) as awarded in July 2016. They have been planned conservatively at Nov. 7, 2016 and 30% submission, but likely will be closer to full amount eligibility. This is to be validated at 60% and 90% submissions. Alternate 4 deep classrooms will also maximize Grant at Radio Park.

Soft cost (ffe, phasing, conting)

CR

2.1 Current Budget Analysis



Total Project cost	\$15,930,899	\$15,880,251	\$20,200,427	\$20,248,927	\$21,054,078	\$22,189,434	
Grant (received at 30%)****	\$0	\$0	\$1,750,000	\$1,750,000	\$1,750,000	\$1,750,000	\$3,500,000
PlanCon (projected at 30%)	\$1,236,007	\$1,236,007	\$1,173,942	\$1,173,942	\$1,539,966	\$1,539,966	\$3,949,915
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SCASD Cost at Nov 7, 2016	\$15,019,951	\$15,019,951	\$16,967,983	\$16,967,983	\$17,392,095	\$17,392,095	\$49,380,029

DWFMP Budget Nov. 7 2016 (After Reimburse & Grants) \$49,380,029

Total Project Cost Increased \$1,345,404
Increase of Reimbursement \$-489,944
Increase in Grant* (Total Available \$3.84 Million) \$-500,000
Subtotal Increase \$355,460

SCASD Cost at 30% (0.7% Variation from Nov. 7, 2016) \$49,735,489

*Please be aware design team is acting conservative on projections of Grant utilized, however, goal is to maximize full value of grant by 90% to \$3.84 Million Value if possible.

Cost Above includes Alternate for 4 Deep Classrooms at Radio Park \$1,468,655. This was not part of the 30% Budget.



30% Submitted Cost Estimates (Cost/ Square Foot) New Construction Cost

CRA **\$165-\$185/ SF**

Massaro **\$175/ SF**

Massaro Provided Cost Data			Building SF		Bid Results			
Project Name	Location	Bid Day	New Construction	Total SF	Low Bids Total	Low Bid \$/SF	Average Bids Total	Avg Bids \$/SF
1 Cumberland Valley Elementary*	South Central PA	12/7/2016	140,364	140,364	\$22,834,112	\$162.68	\$24,365,153	\$173.59
2 Cumberland Valley Middle*	South Central PA	12/7/2016	242,407	242,407	\$36,420,257	\$150.24	\$36,684,536	\$151.33
3 Brooke Co. Middle	Northeastern WV	5/2/2016	114,223	114,223	\$23,895,262	\$209.20	\$25,607,951	\$224.19
4 Brownsville Elementary	South Western PA	2/20/2015	79,458	79,458	\$12,391,113	\$155.95	\$14,414,247	\$181.41
5 Montour Elementary	Western PA	12/18/2014	169,195	169,195	\$40,161,903	\$237.37	\$45,195,802	\$267.12
6 Frazier Elementary	Western PA	9/25/2013	114,000	114,000	\$17,258,200	\$151.39	\$18,957,694	\$166.30
Summary / Average						\$177.80		\$193.99
* Crabtree, Rohrbaugh & Associates Projects, Does not include \$3/ SF of Technology completed directly by owner								

SCASD Recent Precedence (New Construction)

MOUNT NITTANY ES-** **\$190.05/ SF** **Bid May 4, 2010**

**RS Means has reported an average inflation of 14.39% for Central PA since 2010.

STATE HIGH (New Constr. Only) **\$178.70/ SF** **Bid Nov. 18, 2016**

Based Upon Submitted Cost Estimates from both CRA and Massaro, State College Elementary Schools are comparable to schools built throughout the region.

The team focused on New Construction which can more readily be Evaluated for an “Apple to Apple” comparison.

CR 3.1 Cost Comparisons



HOUSERVILLE ELEMENTARY SCHOOL			CRA	MASSARO		
	76,072	SF	New Constructiton			
New Construction						
General Construction			\$ 8,585,912.00		\$ 8,298,552.00	
Mechanical (HVAC)			\$ 2,234,230.00		\$ 2,140,520.00	
Plumbing			\$ 1,075,740.00		\$ 771,732.00	
Fire Protection			\$ 227,560.00		\$ 218,083.00	
Electrical			\$ 1,985,982.00		\$ 1,867,604.00	
Subtotal New Construction			\$ 14,109,424.00	\$ 185.47	\$ 13,296,491.00	\$ 174.79 -5.76%
Demolition			\$ 261,271.00		\$ 287,396.00	
Sitework			\$ 2,284,329.00		\$ 2,779,652.00	21.68%
Import Fill (Design Team working to eliminate)					\$ 460,050.00	
w/o Import Fill Houerville Subtotal			\$ 16,655,024.00		\$ 16,363,539.00	-1.75% Variation
Estimating Contingency	10%	in estimate above			\$ 1,682,359.00	will drop to 0% at 90%
Escalation	4.5%	in estimate above			\$ 832,768.00	will drop to 0% at 90%
			\$ 16,655,024.00		\$ 18,878,666.00	13.35%
HOUSERVILLE TOTAL W/O IMPORTED FIL			\$ 16,655,024.00		\$ 18,351,908.75	10.19%
* Asbestos Removed from CRA Budget						

This slides shows 2 pieces of information for discussion

- **CRA & Massaro's Cost Per Square Foot used in the 30% cost estimates.**
- **Contingency & Escalation broken out separately which will be discussed in 4.3 through 4.6 slides.**

CR 4.1 Cost Comparison



Budget Comparison for State College Area School District Elementary Schools				
Summary	CRA	MASSARO		
Building Cost				
Radio Park	\$ 13,764,898.00	\$ 14,440,067.00		4.91%
Houserville	\$ 14,109,424.00	\$ 13,296,491.00		-5.76%
Corl Street	\$ 11,329,598.00	\$ 11,084,942.00		-2.16%
Subtotal Building Cost	\$ 39,203,920.00	\$ 38,821,500.00		-0.98%
Demolition				
Radio Park	\$ 243,090.62	\$ 262,865.00		8.13%
Houserville	\$ 261,271.00	\$ 287,396.00		10.00%
Corl Street	\$ 166,927.00	\$ 170,661.00		2.24%
Subtotal Demolition	\$ 671,288.62	\$ 720,922.00		7.39%
Sitework				
Radio Park	\$ 1,740,440.80	\$ 1,735,779.00		-0.27%
Houserville w/o Import Fill	\$ 2,284,329.00	\$ 2,779,652.00		21.68%
Corl Street	\$ 1,060,581.00	\$ 1,476,352.00		39.20%
Subtotal Sitework w/o Import Fill	\$ 5,085,350.80	\$ 5,991,783.00		17.82%
Subtotal w/o Contingency Below	\$ 44,960,559.42	\$ 45,534,205.00		1.28%
Estimating Contingency & Escalation				
Radio Park	in numbers above	\$ 2,457,587.00		
Houserville	in numbers above	\$ 2,515,127.00		
Corl Street	in numbers above	\$ 1,947,097.00		
Subtotal Estim. & Escalation	in numbers above	\$ 6,919,811.00		
Total Construction	\$ 44,960,559.42	\$ 52,454,016.00		16.67%

This slide breaks down estimates between CRA & Massaro.

Of note is that 3 projects are within 1.28% of each other, before contingency & escalation discussed in slides 4.3 – 4.6.



In 2016 CRA and Massaro successfully designed and bid a New Middle School & Elementary School for Cumberland Valley School District that is currently in construction.

The design team believes the process related to cost estimating directly relates to State College ES's project for expectations moving forward.

Early 90% Massaro Budget	\$96,903,000
Early 90% Massaro Budget without Contingencies	\$92,440,000
Final 90% Massaro Budget (Reconciled)	\$85,672,000
CRA Cost Estimate	\$74,722,162
Bid Day Costs	\$68,453,162

Both Firms have been building off of this recent experience together.

The following slides walk through the estimates and final bid numbers showing how the two companies came together on bid day.

Most notable is the reduction and elimination of contingencies & escalation as the final estimates were generated and information is shared between 2 companies. This directly relates to State College ES's which currently show 10% estimating and 4.5% escalation at 30% design submission.

**CUMBERLAND VALLEY SCHOOL DISTRICT
NEW CONSTRUCTION - GOOD HOPE MS, CUMBERLAND VALLEY ES & SITE WORK
90% DOCUMENTS**

OVERALL PROJECT SUMMARY

**DRAFT ESTIMATE PRIOR TO RECONCILIATION
Based on Site / Civil Drawings Dated 6-28-16
Based on Building Drawings Dated 6-24-16
No Technical Specifications Available
No Front End Specifications Available**

SYSTEM DESCRIPTION	GOOD HOPE MIDDLE SCHOOL			CV ELEMENTARY SCHOOL			SITE WORK		Project Totals			
	NEW CONSTRUCTION			NEW CONSTRUCTION			NEW CONSTRUCTION					
AREA SUMMARY	242,407 SF			140,364 SF					382,771 SF			
	COST	SF COST		COST	SF COST		COST		COST	SF COST		
DEMOLITION & PATCHING	\$0	\$0.00	0.00%	\$0	\$0.00	0.00%	\$0		\$0	\$0.00	0.00%	
EXCAVATION & FOUNDATIONS	\$2,365,000	\$9.76	4.59%	\$1,221,000	\$8.70	4.36%	\$0		\$3,586,000	\$9.37	3.70%	
STRUCTURE	\$3,605,000	\$14.87	6.99%	\$2,162,000	\$15.40	7.72%	\$0		\$5,767,000	\$15.07	5.95%	
ROOFING & WATERPROOFING	\$2,947,000	\$12.16	5.72%	\$1,608,000	\$11.46	5.74%	\$0		\$4,555,000	\$11.90	4.70%	
EXTERIOR WALL	\$5,748,000	\$23.71	11.15%	\$4,119,000	\$29.35	14.71%	\$0		\$9,867,000	\$25.78	10.18%	
INTERIOR PARTITIONS & FINISHES	\$8,025,000	\$33.11	15.57%	\$4,431,000	\$31.57	15.82%	\$0		\$12,456,000	\$32.54	12.85%	
SPECIALTIES & EQUIPMENT	\$6,896,000	\$28.45	13.38%	\$1,819,000	\$12.96	6.50%	\$0		\$8,715,000	\$22.77	8.99%	
VERTICAL TRANSPORTATION	\$90,000	\$0.37	0.17%	\$75,000	\$0.53	0.27%	\$0		\$165,000	\$0.43	0.17%	
FIRE PROTECTION	\$627,000	\$2.59	1.22%	\$363,000	\$2.59	1.30%	\$0		\$990,000	\$2.59	1.02%	
PLUMBING	\$2,448,000	\$10.10	4.75%	\$1,418,000	\$10.10	5.06%	\$0		\$3,866,000	\$10.10	3.99%	
HVAC	\$6,033,000	\$24.89	11.70%	\$3,493,000	\$24.89	12.47%	\$0		\$9,526,000	\$24.89	9.83%	
ELECTRICAL	\$6,264,000	\$25.84	12.15%	\$3,752,000	\$26.73	13.40%	\$0		\$10,016,000	\$26.17	10.34%	
SUBTOTAL	\$45,048,000	\$185.84	87.40%	\$24,461,000	\$174.27	87.35%	\$0		\$69,509,000	\$181.59	71.73%	
SITEWORK	N/A			N/A			\$15,260,000	87.93%	\$15,260,000	\$39.87	15.75%	
GENERAL REQUIREMENTS	5.00%	\$2,252,000	\$9.29	4.37%	\$1,223,000	\$8.71	4.37%	\$763,000	4.40%	\$4,238,000	\$11.07	4.37%
BOND	1.00%	\$473,000	\$1.95	0.92%	\$257,000	\$1.83	0.92%	\$160,000	0.92%	\$890,000	\$2.33	0.92%
BUILDING PERMIT	BY OWNER											
OVERHEAD & PROFIT	3.00%	\$1,351,000	\$5.57	2.62%	\$734,000	\$5.23	2.62%	\$458,000	2.64%	\$2,543,000	\$6.64	2.62%
SUBTOTAL		\$49,124,000	\$202.65	95.30%	\$26,675,000	\$190.04	95.26%	\$16,641,000	95.89%	\$92,440,000	\$241.50	95.39%
CONTINGENCY - MEP	5.00%	\$769,000	\$3.17	1.49%	\$451,000	\$3.21	1.61%	\$0	0.00%	\$1,220,000	\$3.19	1.26%
CONTINGENCY - ALL OTH.TRADES	3.00%	\$890,000	\$3.67	1.73%	\$463,000	\$3.30	1.65%	\$458,000	2.64%	\$1,811,000	\$4.73	1.87%
ESCALATION	1.50%	\$762,000	\$3.14	1.48%	\$414,000	\$2.95	1.48%	\$256,000	1.48%	\$1,432,000	\$3.74	1.48%
TOTAL CONSTRUCTION COST		\$51,545,000	\$212.64	100%	\$28,003,000	\$199.50	100%	\$17,355,000	100%	\$96,903,000	\$253.16	100.00%

**Currently 10% Estimating &
4.5% Escalation for State
College ES projects**



4.4 Early 90% Estimate Precedence



**CUMBERLAND VALLEY SCHOOL DISTRICT
NEW CONSTRUCTION - GOOD HOPE MS, CUMBERLAND VALLEY ES & SITE WORK
90% CD DOCUMENTS**

OVERALL PROJECT SUMMARY

90% - RECONCILED ESTIMATE

SYSTEM DESCRIPTION	GOOD HOPE MIDDLE SCHOOL			CV ELEMENTARY SCHOOL			SITE WORK		Project Totals				
	NEW CONSTRUCTION			NEW CONSTRUCTION			NEW CONSTRUCTION						
AREA SUMMARY	242,407 SF			140,364 SF					382,771 SF				
	COST	SF COST		COST	SF COST		COST		COST	SF COST			
DEMOLITION & PATCHING	\$0	\$0.00	0.00%	\$0	\$0.00	0.00%			\$0	\$0.00	0.00%		
EXCAVATION & FOUNDATIONS	\$2,365,000	\$9.76	5.29%	\$1,221,000	\$8.70	4.87%			\$3,586,000	\$9.37	4.19%		
STRUCTURE	\$3,605,000	\$14.87	8.06%	\$2,162,000	\$15.40	8.62%			\$5,767,000	\$15.07	6.73%		
ROOFING & WATERPROOFING	\$2,678,000	\$11.05	5.99%	\$1,450,000	\$10.33	5.78%			\$4,128,000	\$10.78	4.82%		
EXTERIOR WALL	\$4,983,000	\$20.56	11.15%	\$3,459,000	\$24.64	13.79%			\$8,442,000	\$22.05	9.85%		
INTERIOR PARTITIONS & FINISHES	\$8,016,000	\$33.07	17.93%	\$4,589,000	\$32.69	18.29%			\$12,605,000	\$32.93	14.71%		
SPECIALTIES & EQUIPMENT	\$4,368,000	\$18.02	9.77%	\$1,731,000	\$12.33	6.90%			\$6,099,000	\$15.93	7.12%		
VERTICAL TRANSPORTATION	\$77,000	\$0.32	0.17%	\$64,000	\$0.46	0.26%			\$141,000	\$0.37	0.16%		
FIRE PROTECTION	\$657,000	\$2.71	1.47%	\$380,000	\$2.71	1.51%			\$1,037,000	\$2.71	1.21%		
PLUMBING	\$2,509,000	\$10.35	5.61%	\$1,346,000	\$9.59	5.36%			\$3,855,000	\$10.07	4.56%		
HVAC	\$6,215,000	\$25.64	13.90%	\$3,526,000	\$25.12	14.05%			\$9,741,000	\$25.45	11.37%		
ELECTRICAL	\$6,295,000	\$25.97	14.08%	\$3,512,000	\$25.02	14.00%			\$9,807,000	\$25.62	11.45%		
SUBTOTAL	\$41,768,000	\$172.31	93.43%	\$23,440,000	\$166.99	93.43%			\$65,208,000	\$170.36	76.11%		
SITework	N/A			N/A			\$14,833,000	93.42%	\$14,833,000	\$38.75	17.31%		
GENERAL REQUIREMENTS	3.50%	\$1,462,000	\$6.03	3.27%	\$820,000	\$5.84	3.27%	\$519,000	3.27%	\$2,801,000	\$7.32	3.27%	
BOND	1.00%	\$432,000	\$1.78	0.97%	\$243,000	\$1.73	0.97%	\$154,000	0.97%	\$829,000	\$2.17	0.97%	
BUILDING PERMIT	BY OWNER												
OVERHEAD & PROFIT	2.50%	\$1,044,000	\$4.31	2.34%	\$586,000	\$4.17	2.34%	\$371,000	2.34%	\$2,001,000	\$5.23	2.34%	
TOTAL CONSTRUCTION COST		\$44,706,000	\$184.43	100.00%	\$25,089,000	\$178.74	100.00%		\$15,877,000	100.00%	\$85,672,000	\$223.82	100.00%

Estimating Contingency & Escalation Completely Removed at Final Estimate



Cumberland Valley School District

NEW MIDDLE SCHOOL & ELEMENTARY SCHOOL CONSTRUCTION DOCUMENT ESTIMATE SUMMARY								
	BIDS + ALTERNATES 12/7/2016	ACT 34 ESTIMATE 10/5/15	BIDS + ALTERNATES DIFFERENCE	CRA ESTIMATE 7/28/2016	BIDS + ALTERNATES DIFFERENCE	MASSARO 8/9/2016	BIDS + ALTERNATES DIFFERENCE	
TOTAL CONSTRUCTION COST	\$ 68,453,162	\$ 72,296,328	\$ 3,843,166	\$ 74,722,162	\$ 6,269,000	\$ 85,609,000	\$ 17,155,838	
NEW MIDDLE SCHOOL								
General Construction + Food Service	\$ 22,573,400	\$ 22,380,436	\$ (192,964)	\$ 24,818,982	\$ 2,245,582	\$ 26,092,000	\$ 3,518,600	
Mechanical Construction	\$ 5,875,000	\$ 6,647,200	\$ 772,200	\$ 6,304,454	\$ 429,454	\$ 6,215,000	\$ 340,000	
Electrical Construction	\$ 5,102,557	\$ 5,935,000	\$ 832,443	\$ 5,334,538	\$ 231,981	\$ 6,288,000	\$ 1,185,443	
Plumbing Construction	\$ 2,284,500	\$ 3,121,810	\$ 252,510	\$ 2,424,790	\$ 140,290	\$ 2,509,000	\$ 224,500	
Fire Protection	\$ 584,800	Included in Plumbing		\$ 727,437	\$ 142,637	\$ 657,000	\$ 72,200	
General Requirements		Included in all Primes		Included in all Primes		\$ 2,938,000		
TOTAL	\$ 36,420,257	\$ 38,084,446	\$ 1,664,189	\$ 39,610,201	\$ 3,189,944	\$ 44,699,000	\$ 8,278,743	
NEW ELEMENTARY SCHOOL								
General Construction + Food Service	\$ 13,747,000	\$ 12,414,033	\$ (1,332,967)	\$ 14,412,272	\$ 665,272	\$ 14,676,000	\$ 929,000	
Mechanical Construction	\$ 3,776,000	\$ 4,200,000	\$ 424,000	\$ 3,649,464	\$ (126,536)	\$ 3,526,000	\$ (250,000)	
Electrical Construction	\$ 3,404,429	\$ 3,500,000	\$ 95,571	\$ 3,088,008	\$ (316,421)	\$ 3,503,000	\$ 98,571	
Plumbing Construction	\$ 1,387,000	\$ 1,820,000	\$ 49,424	\$ 1,263,276	\$ (123,724)	\$ 1,346,000	\$ (41,000)	
Fire Protection	\$ 383,576	Included in PC		\$ 421,092	\$ 37,516	\$ 380,000	\$ (3,576)	
General Requirements		Included in all Primes		Included in all Primes		\$ 1,649,000		
TOTAL	\$ 22,698,005	\$ 21,934,033	\$ (763,972)	\$ 22,834,112	\$ 136,107	\$ 25,080,000	\$ 2,381,995	
SITE WORK	\$ 9,334,900	\$ 12,277,849	\$ 2,942,949	\$ 12,277,849	\$ 2,942,949	\$ 15,830,000	\$ 6,495,100	
TOTAL PROJECT COSTS	\$ 68,453,162	\$ 72,296,328	\$ 3,843,166	\$ 74,722,162	\$ 6,269,000	\$ 85,609,000	\$ 17,155,838	

The recent information and process from these two projects bid 4 months ago, show the State College ES projects appear to be estimated very close to each other at this time between CRA and Massaro.