

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

To: Board of School Directors

From: Ed Poprik

RE: **High School Project – 30% estimate**

Date: November 3, 2014

Attached are independent estimates for the High School Project 30% design phase documents generated by both Crabtree Rohrbaugh and Associates (CRA) and Massaro Construction Management Services (MCMS).

Budget:

The project has been budgeted for a Total Project Cost of \$115 million and a Leadership in Energy and Environmental Design (LEED) Silver certification. As part of the application for a Department of Economic and Community Development (DCED) grant application, the project is currently designed to meet LEED Gold certification. Being that the LEED design process is integrative in nature, the grant funds are shown as a deduct to the district cost for the entire project. An example of this would be energy modeling, which includes considerations for the heating and ventilation system, lighting, daylighting, and insulation of all envelope components.

Alternates:

The CRA estimate has identified a series of potential alternates, which are not included in either estimate. The largest of these is the cost for the addition of the mid-level Delta program. While this item, currently estimated at \$6,533,120, is currently being shown as an alternate, it is not recommended that this item be designed as a bid alternate. As part of the 30% approval process, the design team is looking for direction as to whether this item should be added to the project scope and budget.

Another large alternate is the addition of a “construction arena” for the CTC program, which is currently estimated at \$1,533,230. This would be a shared workspace for collaboration on large projects in the CTC/Stem learning community. Additionally, Board direction will be required on this item.

A Gymnasium in the South building is also shown as an alternate estimated at \$1,623,627. While this is a large space at 7,636 sq.ft., it is planned for a location that would make it feasible to be a bid alternate in the final documents.

The other alternates do not involve additional square footage and are projected to be bid alternates in the final documents. Additional alternates remain to be identified as part of the next design phase(s).

Summary:

The estimates are within 0.74% and 6.38% of the project budget, which are within accepted tolerances for this phase of design.

The project team has estimated that \$5-6 million of PlanCon reimbursements may be available for the project. These funds would be secured from the State over the life of the bond payments. Consequently, they have not been shown to reduce the project expenses, but could aid in reducing tax levies in future years.

At this early phase many variables are left to be defined, which at least partially explains the discrepancy in estimates. This degree of variability is typical for this phase of estimating. It is anticipated that the differences between the estimates will shrink as the project design advances and the accuracy increases due to more defined drawings. Additional estimates will be completed by each firm at the 60% design phase and at the 90% design phase.

Attached: SCASD Summary of estimates
HS estimate – CRA
HS estimate – MCMS



State College Area School District High School Project

Comparison of Independent 30% Cost estimates

11/3/14

	Crabtree Rohrbaugh	Massaro
South*	\$89,242,278.00	\$89,479,000.00
North	\$11,497,327.00	\$6,478,000.00
Site	inc. above	\$11,276,000.00
Total construction	\$100,739,605.00	\$107,233,000.00
Soft costs	\$17,107,555.00	\$17,107,555.00
Total Project cost	\$117,847,160.00	\$124,340,555.00
Grant funds	\$2,000,000.00	\$2,000,000.00
Referendum Budget	\$115,000,000.00	
SCASD cost**	\$115,847,160.00	\$122,340,555.00
% over budget	0.74%	6.38%
<p><i>*includes LEED Gold features identified in grant application</i></p> <p><i>** does not include PlanCon reimbursement</i></p>		

State College Area High School

Schematic Design Construction Cost Estimate - 30% Design Documents
Crabtree, Rohrbaugh & Associates

CRA #2787
10/29/2014

Executive Summary

I South Building

The South Building will house 2,500 students in grades 9-12 in a new / renovated High School.

The project will consist of the following:

- a. Demolition of 103,000 sf of existing building area
- b. Renovations to 77,000 sf of existing building area
- c. The project will be a "LEED Gold" project
- d. Alternate Bid for 7,600 sf Auxiliary Gym, Fitness Center & Support Spaces
- e. Site Development shall include new bus drop off, new parking areas, new signalized intersection new entrance plaza, new shop yard, site lighting, signage, and landscaping

II North Building

The North Building will retain existing competition athletic venues for the High School, including competition gym, natatorium, and auxiliary gym, with adjacent locker rooms.

A two-story wing will be constructed for the Delta Program, housing students in Grades 5 - 12

The North Building project will consist of the following:

- a. Demolition of the two-story academic wings
- b. Construction of a 20,000-sf academic wing for the Delta Program with an alternate to increase the Delta Program to 52,000 sf
- c. Limited renovations to the existing athletic facilities
- d. Major renovations to the existing kitchen to serve the Delta Program
- e. Site development work will include upgrades to existing parking, new athletic field and expanded storm water management for the site

III Referendum Estimate

In May 2014, the voters of State College Area School District overwhelmingly approved a referendum to remain on the existing Westerly Parkway site and complete a major addition and renovations project. Listed below are the estimates prepared for the referendum:

South Building:	\$100,254,365
North Building:	\$14,623,516
Total Estimate:	\$114,877,881

State College Area High School

Schematic Design Construction Cost Estimate			CRA #2787
Crabtree, Rohrbaugh & Associates			10/29/2014
Estimate Summary	South Building	North Building	
Division 1: General Requirements	\$3,598,070	\$354,998	
Division 2: Existing Conditions	\$845,318	\$1,178,005	
Division 3: Concrete	\$2,665,538	\$173,000	
Division 4: Masonry	\$9,693,422	\$670,862	
Division 5: Metals	\$6,699,093	\$334,400	
Division 6: Wood, Plastics, & Composites	\$882,000	\$62,978	
Division 7: Thermal & Moisture Protection	\$5,061,950	\$281,843	
Division 8: Openings	\$4,972,200	\$491,706	
Division 9: Finishes	\$6,478,784	\$653,909	
Division 10: Specialties	\$1,548,480	\$181,021	
Division 11: Equipment	\$1,910,075	\$665,000	
Division 12: Furnishings	\$1,656,200	\$151,517	
Division 13: Special Construction	\$0	\$0	
Division 14: Conveying Systems	\$455,000	\$0	
Division 21: Fire Suppression	\$1,225,000	\$111,313	
Division 22: Plumbing	\$4,410,000	\$400,725	
Division 23: HVAC	\$13,720,000	\$1,246,700	
Division 26: Electrical	\$8,820,000	\$801,450	
Division 27: Communications	\$1,960,000	\$178,100	
Division 28: Electronic Safety & Security	\$882,000	\$80,145	
Division 31: Earthwork	\$0	\$0	
Division 32: Exterior Improvements	\$5,278,345	\$2,644,717	
Division 33: Utilities	\$0	\$0	
Subtotal	\$82,761,475	\$10,662,388	
Estimating Contingency @ 3%	\$2,482,844	\$319,872	
Subtotal	\$85,244,319	\$10,982,259	
Escalation to Midpoint of Construction 4.69%	\$3,997,959	\$515,068	
Total Structure Costs	\$89,242,278	\$11,497,327	
Total Combined Structure Costs	\$100,739,605		

State College Area High School

Schematic Design Construction Cost Estimate			2787
Crabtree, Rohrbaugh & Associates			10/29/2014
Estimate Summary	South Building	North Building	
Grand Total Construction Costs	\$89,242,278	\$11,497,327	
Soft Costs			
Construction Contingency @ 3%	\$2,677,268	\$344,920	
CM Services (\$1,500,000 Referendum Budget)	\$2,000,000	\$570,000	
Professional Services - Basic Services	\$5,939,179		
Additional Services			
Architectural	TBD		
Traffic Study	\$36,450		
Site Survey	\$20,000		
Food Service	\$30,000	\$15,000	
Codes Review	\$30,000		
Geotechnical Engineering	\$41,380		
Environmental Engineering	\$20,000		
Asbestos Abatement	\$30,000	\$30,000	
Solar Array	\$23,500		
Building Permit @ .75%	\$669,317	\$86,230	
Testing & Inspections			
Testing & Inspection & TAB	\$891,000		
Enhanced Commissioning	\$373,030	\$61,791	
Financing	\$550,000	\$150,000	
FF&E 2.5%	\$2,231,057	\$287,433	
Subtotal Soft Costs	\$15,562,181	\$1,545,374	
Estimated Total Project Cost	\$104,804,459	\$13,042,701	
Estimated SD Grand Total Project Costs			\$117,847,160
Building Cost Per Square Foot Excluding Site work	\$171	\$172	
	South Building	North Building	
	\$100,254,365	\$14,623,516	
Referendum Estimate			\$114,877,881

Additional Costs / Alternates including Soft Costs

32,000 SF Delta Program @ North Building			\$6,533,120
7636 SF Gymnasium @ South Building		\$1,623,627	
Vegetated Roof @ South Building		\$290,000	
Solar Array @ South Building		\$580,000	
Terrazzo In Corridors		\$1,413,247	
Construction Arena		\$1,533,230	
Subtotal		\$5,440,104	\$6,533,120
Total Costs for Alternates			\$11,973,224

STATE COLLEGE AREA SCHOOL DISTRICT
ADDITIONS AND RENOVATIONS TO THE STATE COLLEGE HIGH SCHOOL - NORTH AND SOUTH BUILDING
30% DOCUMENTS

SYSTEMS SUMMARY

SYSTEM DESCRIPTION	SOUTH BUILDING						NORTH BUILDING						SITE WORK				Project Totals	
	NEW CONSTRUCTION			RENOVATIONS			NEW CONSTRUCTION			RENOVATIONS			NEW CONSTRUCTION		RENOVATIONS			
AREA SUMMARY	392,009 SF			97,991 SF			20,000 SF			24,025 SF			412,009 SF		122,016 SF		534,025 SF	
	COST	SF COST		COST	SF COST		COST	SF COST		COST	SF COST		COST	SF COST		COST	SF COST	
DEMOLITION & PATCHING	\$357,000	\$0.91	0.48%	\$450,000	\$4.59	2.86%	\$0	\$0.00	0.00%	\$1,297,000	\$53.99	46.82%				\$2,104,000	\$3.94	1.96%
EXCAVATION & FOUNDATIONS STRUCTURE	\$5,488,000	\$14.00	7.44%	\$0	\$0.00	0.00%	\$280,000	\$14.00	7.55%	\$0	\$0.00	0.00%				\$5,768,000	\$10.80	5.38%
ROOFING & WATERPROOFING	\$7,056,000	\$18.00	9.57%	\$0	\$0.00	0.00%	\$360,000	\$18.00	9.71%	\$0	\$0.00	0.00%				\$7,416,000	\$13.89	6.92%
EXTERIOR WALL	\$2,788,000	\$7.11	3.78%	\$1,652,000	\$16.86	10.49%	\$156,000	\$7.80	4.21%	\$409,000	\$17.02	14.77%				\$5,005,000	\$9.37	4.67%
INTERIOR PARTITIONS & FINISHES	\$7,587,000	\$19.35	10.29%	\$374,000	\$3.82	2.37%	\$293,000	\$14.65	7.90%	\$115,000	\$4.79	4.15%				\$8,369,000	\$15.67	7.80%
SPECIALTIES & EQUIPMENT	\$10,748,000	\$27.42	14.58%	\$2,756,000	\$28.13	17.50%	\$565,000	\$28.25	15.24%	\$327,000	\$13.61	11.81%				\$14,396,000	\$26.96	13.42%
VERTICAL TRANSPORTATION	\$2,428,000	\$6.19	3.29%	\$1,439,000	\$14.69	9.14%	\$175,000	\$8.75	4.72%	\$97,000	\$4.04	3.50%				\$4,139,000	\$7.75	3.86%
FIRE PROTECTION	\$190,000	\$0.48	0.26%	\$0	\$0.00	0.00%	\$0	\$0.00	0.00%	\$0	\$0.00	0.00%				\$190,000	\$0.36	0.18%
PLUMBING	\$953,000	\$2.43	1.29%	\$274,000	\$2.80	1.74%	\$45,000	\$2.25	1.21%	\$0	\$0.00	0.00%				\$1,272,000	\$2.38	1.19%
HVAC	\$3,242,000	\$8.27	4.40%	\$913,000	\$9.32	5.80%	\$165,000	\$8.25	4.45%	\$0	\$0.00	0.00%				\$4,320,000	\$8.09	4.03%
ELECTRICAL	\$10,008,000	\$25.53	13.57%	\$2,589,000	\$26.42	16.44%	\$511,000	\$25.55	13.78%	\$0	\$0.00	0.00%				\$13,108,000	\$24.55	12.22%
SUBTOTAL	\$8,930,000	\$22.78	12.11%	\$2,323,000	\$23.71	14.75%	\$456,000	\$22.80	12.30%	\$0	\$0.00	0.00%				\$11,709,000	\$21.93	10.92%
SUBTOTAL	\$59,775,000	\$152.48	81.08%	\$12,770,000	\$130.32	81.07%	\$3,006,000	\$150.30	81.07%	\$2,245,000	\$93.44	14.25%				\$77,796,000	\$145.68	72.55%
SITWORK													\$8,364,000	\$20.30		\$9,142,000	\$17.12	8.53%
GENERAL REQUIREMENTS	5.25%	\$3,138,000	\$8.00	4.26%	\$670,000	\$6.84	4.25%	\$158,000	\$7.90	4.26%	\$118,000	\$4.91	4.26%	\$439,000	\$1.07	\$4,564,000	\$8.55	4.26%
BOND	1.00%	\$598,000	\$1.53	0.81%	\$128,000	\$1.31	0.81%	\$30,000	\$1.50	0.81%	\$22,000	\$0.92	0.79%	\$84,000	\$0.20	\$870,000	\$1.63	0.81%
BUILDING PERMIT																		
OVERHEAD & PROFIT	3.50%	\$2,092,000	\$5.34	2.84%	\$447,000	\$4.56	2.84%	\$105,000	\$5.25	2.83%	\$79,000	\$3.29	2.85%	\$293,000	\$0.71	\$27,000	\$5.70	2.84%
SUBTOTAL		\$65,603,000	\$167.35	88.98%	\$14,015,000	\$143.02	88.98%	\$3,299,000	\$164.95	88.97%	\$2,464,000	\$102.56	15.64%	\$9,180,000	\$854,000	\$95,415,000	\$178.67	88.98%
CONTINGENCY	10.00%	\$5,978,000	\$15.25	8.11%	\$1,277,000	\$13.03	8.11%	\$301,000	\$15.05	8.12%	\$225,000	\$9.37	6.07%	\$836,000	\$2.03	\$8,695,000	\$16.28	8.11%
ESCALATION	3.00%	\$2,147,000	\$5.48	2.91%	\$459,000	\$4.68	2.91%	\$108,000	\$5.40	2.91%	\$81,000	\$3.37	2.18%	\$300,000	\$0.73	\$3,123,000	\$5.85	2.91%
TOTAL CONSTRUCTION COST		\$73,728,000	\$188.08	100%	\$15,751,000	\$160.74	100%	\$3,708,000	\$185.40	100%	\$2,770,000	\$115.30	100%	\$10,316,000	\$25.04	\$960,000	\$200.80	100.00%

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