



Regional School District No. 14 Woodbury / Bethlehem

Nonnewaug High School – Renovations Project

Public Building Committee Meeting

November 8, 2016

PBC Attendees:

John Chapman
JP Fernandes
Alan Rubacha
Robert Piazza
Brian Peterson
Tom Hecht
Don Fital
Janet Morgan
Andie Greene
Patrick DiSarro

Absent:

Matthew Cleary
George Bauer

Also Present:

Kurt Lavaway	Colliers
Scott Pellman	Colliers
Amy Samuelson	SLAM
Glen Collenberg	SLAM
Lorel Purcel	O&G
Mark Jeffko	O&G
Bruce Gelbar	O&G
Wayne McAlester	Region 14
Mike Molzon	Region 14
Alice Jones	Region 14
Suzy Greene	Region 14
Bill Nemec	Region 14

From / Notes Prepared by:

Kurt Lavaway / Scott Pellman - Project Manager
Colliers International

Attachments:

VE Presentation, Colliers VE List

A meeting of the Public Building Committee was held on Tuesday, November 8, 2016 in the LMC of Nonnewaug High School, 5 Minortown Road, Woodbury, Connecticut.

The following notes are to record the most significant issues discussed at the above referenced meeting. If anyone attending the meeting feels these notes are inaccurate, additional items need recording, or further detail is required, please forward your written comments to Kurt Lavaway for inclusion.

1. Call to Order - John Chapman called the meeting to order at 6:34 PM.

Tonight, is an open discussion to review impact to reimbursement and ask questions to the design team.

2. OPM Report – Kurt Lavaway reported on the following:

Renovation package has been review and is awaiting approval from the commissioner, expecting a letter by the end of the month

3. Estimate Review

- A. The schematic design estimate summary was distributed. The field work that did not fit in the schematic design was pulled out and has been listed separately, the effort to bring the project within budget has involved scope reductions and value engineering (VE). Additional VE and potential alternates have been developed to bring field scope back into the project.
- B. The schematic design budget was reviewed; the project is on budget. Numbers highlighted in blue reflected reconciled numbers which are the result of the detailed review of the SLAM and O&G budget estimates.
- C. When reviewing value engineering (VE) items note that the project is currently at the budget maximum. No VE items currently on the list have been taken out of the project, all items listed are currently in the projects scope.
- D. Added scope items were reviewed that include all scope that was originally anticipated at referendum but is not currently in the project budget, the connector corridor to the VoAg is a critical item that needs to be added according to Dr. Anna. The connector will be secure but not touching the existing building so it will not require sprinklers.
- E. New athletic fields and tennis courts are typically reimbursed at 50% of the regions reimbursement rate and synthetic fields are not reimbursed at all. Renovated fields are typically not reimbursed unless you receive renovation status. Any existing fields receiving work should focus on the renovation designation.

4. Value Engineering Review

- A. Column A lists prices, column B shows baseline savings, columns C and D are not yet recommended and have project impacts, Column D is rejected and did not make sense for the project.
- B. Each specific value engineering items listed below was reviewed with the committee with additional information provided by the design team.

C-1 - , This is actually a reduction in asphalt. The reduction is tied to the potential to provide 2 additional courts - 4 courts will work for tournaments but 6 are preferred

C-3 – reduction of landscaping taken in the base scope – the project currently includes a 150,000 allowance

C-4 – Underground storage tanks, required standpipes to be revised to eliminate one tank, Jane is reviewing

C-5 – Change blue stone caps to precast

C-6 – elimination of small stair to athletic fields – was technically not feasible once further reviewed by the design team

C-7 – Simplified bus loop, majority of work reduced in the base scope

C-8 – Change bituminous walks to stone dust – maintenance issue – SLAM recommends staying with Bituminous

C-9 – Reduce scope of staff and student parking – no pricing yet, requires P&Z input, Geotech work was performed today and will provide input on existing base material

C-10 – Reduce site lighting fixture count – assumption made at schematic level, will not have count for reduction until DD

C-11 – Reduce site drainage scope – age of original drainage was a concern to the engineers. The existing pipes need to be inspected.

S-1 – Eliminate ramp outside of gym. – dependent on decision of divider curtain verses folding wall, the drop-down curtain solves handicapped egress issue (not ideal but the school could live with it)

BX-1 – Back lit skylights – rejected for BX-2

BX-2 – Use light tubes in lieu of adding skylights, recommended by architects, the old skylights are actually clearstory glass.

BX-3 – Use storefront in lieu of curtainwall

Bx-4 – Change metal panel to CMU

BX-5 – Eliminate new entrance and canopy

BX-6 – Eliminate new entrance, canopy and connector corridor

BX-7 – Clean exterior ILO painting – needs to be cleaned anyway

BX-8 – Reduce extent of finishes of proposed entrance

BN-1 – Change gym movable wall to drop down curtain – tied to elimination of ramp

BN-2 - Reduce wood paneling in auditorium by 30% (suggestion – reduce to bring in line)

BN-3 – Reduce wood paneling in corridor (alternative material would be painted gyp. board)

BN-4 – Revise carpet spec

BN-5 - Patch gym floor ILO replacement.

BN-6a - Eliminate terrace infill, keep video in VoAg (rejected due to area required for program space)

BN-6b – Eliminate Terrace infill – keep video in VoAg and renovate culinary in place, use 2nd floor space for faculty dining – complicates phasing, program does not work well on the second floor for public access.

BN-7 – Same as BN-6 but do not build connector (rejected - offset by culinary)

BN-8 – Change all HVT to VCT – finish change can be done at any time

BN-9 – Eliminate VCT and patch and seal concrete floors – not recommended

BN-10 – Reduce renovations to locker rooms (rejected – involved code issues and program compromises)

BN-11 – Reduce Central office scope, (no real scope to take out, minimums being done)

BN-12 – Delete ceilings in all storage rooms

BN-13 – Change 4x4 ceiling tiles to 2x4. Just an aesthetic issue

BN-14 – Change interior storefront to alum door frames

BN-15 – Keep existing doors where possible

BN-16 – Change to Plastic Laminate sills ILO solid surface

FP-1 – Change to manual standpipe system – tied to storage tank reductions for fire protection.

FP-2 – Change to flex heads for sprinkler system

FP-3 - Change to exposed heads for sprinkler system

P-1 – Provide manual faucets ILO electrically operated

P-2 – Provide separate hot water heaters ILO storage tanks

P-3 - Change water heater quantity to two (2)

H-1 – Move chiller sound enclosure

H-2 – Move chiller further away (similar to H-1 did not make sense)

H-3 – Change to cassette unit's verses VRF'

H-4a – Eliminate AC except specific areas

H-4b - Eliminate AC from school by incorporating load sharing

H-5 – reduce # of fume hoods in chemistry

H-6 - Reduce # of fume hoods in biology

H-7 - Eliminate SS ductwork for hoods

H-8 – Re-use HVAC serving central office, pull out old parts and replace coils etc. (not recommended by engineers who need to certify systems)

H-9 – Reduce amount of roof cuts for AHU replacement, to be reviewed further in DD

H-10 – provide open spec for HVAC, could specify sole source system as bid alternate

E-1 – Reduce # of pull stations for fire alarm, Janet is reviewing

E-2a – Change service entrance secondary feeders to aluminum ILO copper

E-2b – Change feeders to aluminum ILO copper (maintenance would be required to tighten lugs)

E-3 – Change MC cable to EMT for branch circuits

E-4 – Change to florescent light fixtures

E-5 – Use recessed 2x4 LED fixtures in classrooms ILO 3 rows of pinnacle fixtures, no impact to light levels

E-6 – Delete conduit for data ILO hooks – NEW ITEM

C. Open discussions

- John Chapman, Suggested identifying \$3,000,000 in VE at this point
- Alan Rubacha, would not reduce scope for the sake of the fields, does not agree with load sharing, changing materials to sheetrock from wood may not hold up.
- JP Fernandez, Would rather put the money into the classrooms verses the auditorium, needs a balance aesthetics, the field are important and part of what the community voted on.
- Andie Greene, Agrees with JP, the building committee has an obligation to find some money for field work originally included in the referendum.
- Brian Peterson, Enrollment may be declining and the project needs to address the fields, in addition this was one of the warmest years in history and the project should maintain air conditioning of the school.
- Patrick DiSarro, the project needs to honor what was voted on.
- Tom Hecht, Is the sealed concrete polished? – SLAM -No, in addition I also feel strongly about full capacity of the AC system.
- John Chapman, Do you have examples of load sharing? – SLAM – Hill House HS in New Haven is an example that will be provided.
- Robert Piazza, Could you add another chiller in the future if you accepted the load sharing? SLAM - this will be explored.

5. Discussions of Added Scope Items

For discussion purposes; Items were priced together or in groups where it made sense

TRACK – A new track would cost approx. \$830,000, the existing will most likely require refurbishment by 2021.

SYNTHETIC FIELD - Current track will not allow preferred soccer field to be constructed within the existing track. Soccer can go 55yards wide to 80 yards wide, the current soccer field is almost 75 yards wide x 120 yards long. Football will fit within the track. Andie Greene stated that Milone and MacBroom was responsible for the existing track design and the drainage was installed for a future synthetic field, the design team will review.

- Option S-1B.1 what would cost reduction be to keep existing track and tie into existing drainage for new field and potentially re-surface the track?
- Question, What is the preferred sport which will dictate the height of the fibers?
- The track was re-surfaced in 2011 and would need to be re-surfaced in 2021
- O&G stated that the irrigation number included an additional well – O&G to review
- The Landscape architects needs to review on the scope of re-furbishing the fields
- The main field project could be bid as follows:

S1-A As the base project scope

S1-B As an alternate

- John Chapman – Design team to provide updated costing information, the committee should review costs and come to next meeting ready to make decisions, the committee is a conduit for the community, administration and students taking into consideration the different opinions and needs.
- JP Fernandez – The team needs to define what needs to be done to the existing fields specifically, a tiered pricing on how good they are with more grading and re-seeding to provide different levels of renovation.
- John Chapman – Requested more information on load sharing, the design team will provide a narrative.
- The next meeting will kick off the DD phase.

6. Administration Feedback

Field hockey cannot share a turf field with soccer and football, the grass needs to be cut short and football would rip it up.

7. Other Business

- Phase II ESA report received today
- OPR follow up meeting currently being coordinated
- Geotechnical borings were completed today

8. Public Comment

- None

9. Meeting Adjourned at 9:07 PM.

The next meeting will be held at **6:30 PM** on **Tuesday November 15, 2016** in the High School Library Media Center, located at 5 Minor Town Road, Woodbury, CT. Additional meetings will be determined.

REGION 14 NONNEWAUG HIGH SCHOOL BUILDING PROJECT

Building Committee Meeting

November 8, 2016



Presentation Agenda

Review of the Following:

- Schematic Design Cost Estimate Summary for Base Project Scope
- Added Scope Items / Alternates
- Reimbursement Scenarios
- Value Engineering (VE) Log

Next Steps

Schematic Design Cost Summary

Concept Design Estimate vs. Schematic Design Cost Estimate

Base Project Scope	A	B	C
	Concept Estimate Budget Base Scope 08/30/16	SD Phase Reconciled Cost Estimate 11/7/16	Variance Over/(Under) Budget (D-A)
Building Cost - High School	\$ 34,831.19	\$ 31,460.00	(3,371.19)
Building Cost - Central Office	\$ 950.32	\$ 977.50	27.18
TOTAL BUILDING CONSTRUCTION COST	\$ 35,781.50	\$ 32,437.50	(3,344.00)
Site Work Cost - High School	\$ 2,854.54	\$ 6,052.00	3,197.46
Site Work Cost - Central Office	\$ 135.00	\$ 120.00	(15.00)
Abatement	\$ 2,542.07	\$ 2,200.00	(342.07)
TOTAL RELATED CONSTRUCTION COST	\$ 5,531.61	\$ 8,372.00	2,840.39
Design Contingency and CM Mark-ups	\$ 8,634.30	\$ 9,488.40	854.10
Escalation	\$ 2,120.74	\$ 1,879.40	(241.34)
	\$ 10,755.04	\$ 11,367.80	612.76
TOTAL CONSTRUCTION COST ESTIMATE	\$ 52,068.16	\$ 52,177.30	109.14
APPROVED VALUE ENGINEERING (VE)		0	
TOTAL w/APPROVED VE	\$ 52,068.16	\$ 52,177.30	109.14
Project Related Costs (By Owner)	\$ 11,752.45	\$ 11,752.45	0.00
TOTAL PROJECT COST	\$ 63,820.61	\$ 63,929.75	\$ 109.14



Added Scope Items

Building and Site Related

August 30, 2016
Building Committee Meeting

SCOPE ITEMS NOT WITHIN CURRENT BUDGET

P ALTERNATE SCOPE ITEMS - BUILDING RELATED *

- 1 New Canopy Addition - Central Office
- 2 Auditorium (Base) - Reno in Place
- 3 Auditorium (1) - LL Added Program
- 4 Auditorium (2) - LL&UP Added Program
- 5 Roof Work - (Base) - Coat Exist Roof)
- 6 Roof Work - (1) - New Metal Roof
- 7 Enclose Connector to VoAG Building

Q ALTERNATE SCOPE ITEMS - SITE RELATED **

- 10 Multi-Purpose Irrigated Sod Field @Track
- 11 Multi-Purpose Synthetic Field
- 12 New Track Allowance
- 13 Multi-Purpose Field Lighting
- 14 Bleacher/Grandstands (Multi-Purpose Fields)
- 15 New Tennis Courts (4)
- 16 Add (2) New Tennis Courts
- 17 Irrigate Natural Turf Fields
- 18 New / Refurbish Exist. Baseball/Sofball Fields
 - Re-orient Varsity Baseball Field/Backstop
 - Athletic Feilds / Sofball Backstops (2)
 - Replace Athlteic Field Equipment

R ALTERNATE SCOPE ITEMS - CONSTRUCTION RELATED ***

- General Conditions
- 22 (5 additional months of construction)
- 23 Town Permit Costs

Conceptual Cost Estimate	
HIGH SCHOOL RENOVATIONS	CENTRAL OFFICE RENOVATIONS
742,882	67,672
0	67,672
Incl. above	0
279,856	0
422,967	0
Incl. above	0
TBD	TBD
40,059	
5,084,596	0
298,810	0
1,208,423	0
833,812	0
605,178	0
525,664	0
428,454	0
193,348	0
513,580	0
163,137	0
84,590	0
151,053	0
78,547	0
363,638	0
363,638	0
Assumed Waived	

Strategy for Schematic Design Phase

- Develop documents for the Base Scope SD Estimate in October
- Identify Value Engineering Items to reduce cost of the base scope
- Review Phasing options
- Work with OSCG to maximizing reimbursement
“Renovation Status”
- Review extent of required Central Office renovations with OSCG



Added Scope Items

Alternates Pricing

Alt. B1	Canopy at Central Office	\$54,800
Alt. B2	Enclosure / Connector to VoAG	\$27,400
Alt. B3	Teaching Spaces in Aud. – Main Level only	\$93,000
Alt. B4	Teaching Spaces in Aud. – Main & Upper Level	\$188,000
Alt. S1a	Track & Field w/Irrigation	\$1,843,000
Alt. S1b	Track & Synthetic Field	\$2,443,400
Alt. S2	Multi-Purpose Field Lighting	\$696,600
Alt. S3	Aluminum Bleachers	\$471,700
Alt. S4	(4) Tennis Courts	\$578,600
Alt. S5	(2) Additional Tennis Courts	\$256,300
Alt. S6	Irrigation at Existing Natural Turf Fields	\$245,200
Alt. S7	Refurbish Existing Fields (Clay Infield, Athletic Amenities, etc.)	\$662,400



Added Scope Items – Potential Options

NOTE: Eligible Site Related Items Reimbursed at 50% of District Rate

B2 - Enclose Connector to VoAG Bldg **\$27,400**

*District priority for student safety

Site Scope Option A **\$1,486,200**

S4 - Renovation of (3) Tennis Courts & (1) New = (4) Total

S6 - Irrigate Natural Turf Fields

S7 - Refurbish Existing Turf Field

Site Scope Option B **\$1,742,500**

S4 - Renovate (3) Exist. Tennis Courts & (1) New = (4) Total

S5 - (2) New Tennis Courts

S6 - Irrigate Natural Turf Fields

S7 - Refurbish Existing Turf Fields

*(2) added tennis courts requires event parking lot

Site Scope Option C **\$2,421,600**

S1a - Multi-Purpose Field (Natural Turf) with Track

S4 - Renovate (3) Exist. Tennis Courts & (1) New = (4) Total

*requires separate football practice field

Site Scope Option D **\$3,022,000**

S1b - Multi-purpose Field (Synthetic Turf) with Track

S4 - Renovate (3) Exist. Tennis Courts & (1) New = (4) Total

*Synthetic field is Ineligible for Reimbursement



State Reimbursement Considerations

Added Scope Items

Table

- Feasibility s
- Textbooks i
- Computer s
systems)
- Lease of fa
remedy indi
- Service, eq
contracts
- Salaries of
educational
board or m
- Site regrad
reseeding
- Relocation
- Repair of si
- Athletic faci
- Artificial tur

Source: [Conn. Agencies F](#)

SECTION F: LIMITED ELIGIBLE COSTS

		PCT/LOCAL Initial Estimate (\$)	1 st Revised Estimate (\$)	2 nd Revised Estimate (\$)	3 rd Revised Estimate (\$)	Final Costs (\$)
63.	Outdoor Athletic Facilities (includes tennis courts)					
64.	Swimming Pools					
65.	Retractable Gym Seating (includes movable bleachers)					
66.	PERMANENT (NOT RETRACTABLE) Spectator Seating in a Gymnasium. Complete lines a) through d) below.					
	a) Square Footage of Area Occupied by Seating					
	b) Total Square Footage of Gymnasium					
	c) Total Cost (\$) of Gym Construction Excluding Seating					
	d) Total Cost (\$) of Seats (Including Installation)					
66.	Seating Area in an Auditorium. Complete lines a) through e) below only if NEW AUDITORIUM SPACE will be created as a result of the project. Replacement seating costs in an existing auditorium are either ineligible (report costs on line 23) or are prorated between ineligible and eligible construction costs if the work involves creating seating areas for person with disabilities.					
	a) Square Footage of Area Occupied by Seating					
	b) Total Square Footage of Auditorium					
	c) Total Cost (\$) of Auditorium Construction Excluding Seating					
	d) Total Cost (\$) of Seats (Including Installation)					
	e) Capacity of Auditorium (Report Maximum Number of Potential Seats.)*					

* Note that seating capacity does not mean the actual number of seats, but the number which the auditorium has the capacity to hold.

State Reimbursement Considerations

Assumes Renovation Status – Decision from OSCG Still Pending

RENOVATION STATUS

Total Approved Budget (2013)	\$63,820,605
Estimated Ineligible Costs (assumed 12% @ HS/ 50% @ Central Office)	\$8,823,667
Projected Eligible Costs	\$54,996,938
Full Reimbursement Rate (reduction Ratio = 99.58%)	47.86%
Reduced Reimbursement Rate	47.66%
Estimated State Reimbursement	\$26,101,266
Estimated District Share	\$28,895,672
Total District Portion (including ineligible costs)	\$37,719,339
Referendum Region 14 Taxpayer Cost (2013) → (per referendum)	\$38,765,310
Variance (over) / under	\$1,045,971

Site scope could affect the reimbursement rate and District Share of the Project cost.

Value Engineering to achieve added site scope could impact ineligible costs.

Audit will look to the ED Spec in reviewing final reimbursements.

Value Engineering List

Potential Savings

Value Engineering Strategy

- Identify VE Savings for Added Scope Items (Building or Site Related)
- Keep Pending Savings for Future VE (If Needed)
- Identify VE Items that CANNOT be taken in Future Phases
- Use Alternates for Added Scope Items or for Major VE Items

Value Engineering Categories

Site – Civil / Landscape
Structural
Architectural
Exterior Envelope
Interior
Fire Protection
Plumbing
Mechanical (HVAC)
Electrical

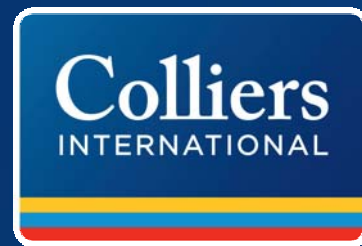
ITEM #	ITEM DESCRIPTION	A DRAWING / SPEC REFERENCE	B ALL VE COST SAVINGS (NET) (Deduct) ADD	C VE SAVINGS REQUIRED TO MEET BUDGET	D DESIGN TEAM ACCEPTABLE	E PENDING / POSSIBLE DESIRABLE Minor Impact	F PENDING / POSSIBLE DESIRABLE Significant Impact	G REJECTED	H RED 14 EXCLUDED REDUCTIONS 11/1/2014 (2D Phase)	I ALT. #1	COMMENTS
BUILDING - EXTERIOR / ENVELOPE											
EX-1	Change to double height E.O. opening at 9' height to double it	LAM Section									
EX-2	Change height to 10' 6" and install glazing with gas fill	LAM Section									
EX-3	Use threshold E.O. Curtainwall			\$ (40,341)							SLAM - would prefer to pursue EX-2 CER. UTILITY (S) SOLAR AFTER 330 DS SERIES UNITS IN RAN OF AS (7) SKYLIGHTS AND ALL (2) REPLACED CURTAINWALL GLAZING PANELS. INSTALL EXISTING INTERIOR SIDE OF GLAZING PANELS WITH TYPE F4 RUBBER PARTITION CONSTRUCTION. LAM to review new connector for height function. Consider take this EX-5 or EX-6 as accepted.
EX-4	Change all metal panels to steel										
EX-5	Reinforce new entrance and canopy - steel connector canopy	LAM Section									Consider take this EX-5 as accepted
EX-6	Reinforce new entrance and canopy and connector canopy	LAM Section									Consider take this EX-5 as accepted
EX-7	Change exterior building base E.O. re-pointing										SLAM - Not recommended for this work material
	Building Exterior - Sub-total		\$	\$ (40,341)	\$	\$	\$	\$	\$		
BUILDING - INTERIOR											
EX-1	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							SLAM - would prefer to pursue EX-2 CER. UTILITY (S) SOLAR AFTER 330 DS SERIES UNITS IN RAN OF AS (7) SKYLIGHTS AND ALL (2) REPLACED CURTAINWALL GLAZING PANELS. INSTALL EXISTING INTERIOR SIDE OF GLAZING PANELS WITH TYPE F4 RUBBER PARTITION CONSTRUCTION. LAM to review new connector for height function. Consider take this EX-5 or EX-6 as accepted.
EX-2	Reduce wood paneling in auditorium by 30%			\$ (51,483)							
EX-3	Reduce wood paneling in auditorium by 30%			\$ (51,483)							
EX-4	Reduce carpet installation in the future building	LAM									
EX-5	Replace carpet installation in the future building	LAM									
EX-6	Replace carpet installation in the future building	LAM									
EX-7	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-8	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-9	Reinforce all V.O. patch and seal concrete floor	LAM Section									
EX-10	Reinforce all V.O. patch and seal concrete floor	LAM Section									
EX-11	Reinforce all V.O. patch and seal concrete floor	LAM Section									
EX-12	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-13	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-14	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-15	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-16	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-17	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-18	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-19	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
EX-20	Change to drop down curtain E.O. facing partition in Gymnasium			\$ (100,000)							
	Building Interior - Sub-total		\$	\$ (100,000)	\$	\$	\$	\$	\$		

Next Steps

Special Building Committee Meeting – November 15, 2016

- Follow up on Accepted VE Decisions
- Provide Direction on any Added Scope for Design Development Phase
 - BC Approval of VE Savings for Added Scope Items
 - Update VE List for Remaining Balance
- Report on Renovation Status from OSCG (If Received)
- Future Review
 - Phase II ESA
 - Update on CxA Process (OPR Development)
 - Update on Geotechnical Investigation / Report
 - BC Meetings 11/22(?), 12/6, 12/20





Accelerating success.



Value Engineering Log



Schematic Design Phase Estimate - 11/08/16
Design Development Estimate -
75% Construction Documents Estimate

Regional School District 14
Nonnewaug High School
Additions / Renovations Project

			A	B		D	E	F	G
					PENDING / POSSIBLE DEFERRED Minor Impact	PENDING / POSSIBLE DEFERRED/ Significant Impact	REJECTED	RSD 14 SELECTED REDUCTIONS 11/1/2016 (SD Phase)	ALT. "✓"
ITEM #	ITEM DESCRIPTION	DRAWING / SPEC REFERENCE	ALL VE COST SAVINGS ITEMS (DEDUCT)/ADD	VE SAVINGS BASELINE					COMMENTS
SITE / CIVIL / LANDSCAPE									
C-1	Simplify staff/event parking lot, re-design as double loaded drive	SLAM Sketch	\$ 38.54			\$ 38.54			Single Loaded Drive, keep the existing dirt parking lot.
C-2	Eliminate staff/event parking lot (see note)	SLAM Sketch?	\$ -	X		\$ -	X		Additional two tennis courts will need to be eliminated in this option to maintain parking count.
C-3	Take reduction in landscaping and seeding — allowance \$150,000		\$ -	X			Revised in Base		In-Base Scope
C-4	Reduce capacity of underground storage tanks for fire suppression system (see note)	CES Narrative	\$ (305.45)	\$ (305.45)					Review with FM CES Comment: Reduced fire pump size due to manual standpipes will allow for one 70,000 water storage tank (Oldcastle precast model LWT) and one Oldcastle precast 10x16x24RC under pump house.
C-5	Change all blue stone caps on retaining and seat walls to precast		\$ (24.74)		\$ (24.74)				
C-6	Eliminate small stair to athletic fields and re-design handicap ramp to provide access to side of site where stairs were eliminated	SLAM Sketch	\$ (67.32)	X			\$ (67.32)		Need SLAM to review grading to see if stairs can be eliminated in this option. SLAM: NOT POSSIBLE DUE TO EXISTING GRADING.
C-7	Simplify bus loop plaza, delete pavers, change raised area to concrete	SLAM Sketch		X			Revised in Base Scope		Reduced in base scope Add additional savings for no pavers, minimal changes to island
C-8	Change all bituminous walks at fields to stone dust	SLAM Sketch	\$ (39.84)			\$ (39.84)			Review with District Maintenance Issue
C-9	Reduce scope of existing staff/student parking lot	SLAM sketch	\$ -	Revise in DD where possible					Pending Geotech Report Need to meet current P&Z Requirements
C-10	Reduce site lighting fixture count assumption to minimum required	SLAM Narrative	\$ -	Revise in DD where possible					SLAM to provide reduction in fixture quantity SLAM to reduce if possible in DD Phase
C-11	Reduce site drainage scope (see note)	Civil Narrative	\$ -	Revise in DD where possible					Scope existing pipes to inspect condition Reductions will be taken where possible in DD Phase
	Site / Civil / Landscape - Sub-total		\$ (398.82)	\$ (305.45)	\$ (24.74)	\$ (1.30)	\$ (67.32)	\$ -	
STRUCTURAL									
S-1	Eliminate ramp outside of gymnasium		\$ (141.00)	\$ (141.00)					Dependant on type of divider curtain installed (RE: Egress) See item No. BN-1
	Structural - Sub-total		\$ (141.00)	\$ (141.00)	\$ -	\$ -	\$ -	\$ -	



Value Engineering Log



Schematic Design Phase Estimate - 11/08/16
Design Development Estimate -
75% Construction Documents Estimate

Regional School District 14
Nonnewaug High School
Additions / Renovations Project

			A	B		D	E	F	G
					PENDING / POSSIBLE DEFERRED Minor Impact	PENDING / POSSIBLE DEFERRED/ Significant Impact	REJECTED	RSD 14 SELECTED REDUCTIONS 11/1/2016 (SD Phase)	ALT. "✓"
ITEM #	ITEM DESCRIPTION	DRAWING / SPEC REFERENCE	ALL VE COST SAVINGS ITEMS (DEDUCT)/ADD	VE SAVINGS BASELINE					COMMENTS
BUILDING - EXTERIOR / ENVELOPE									
BX-1	Change to backlit skylights ILO opening up 9 skylights to daylight	SLAM Sketch	\$ -	X			X		SLAM--would prefer to pursue BX-2
BX-2	Change skylights to Sola tubes and infill glazing with gyp bd	SLAM Sketch	\$ (109.00)	\$ (109.00)					CES: UTILIZE (8) SOLATUBE SOLAMASTER 330 DS SERIES UNITS IN LEIU OF ALL (7) SKYLIGHTS AND ALL (20) REPLACED CLERESTORY GLAZING PANELS. INFILL EXISTING INTERIOR SIDE OF GLAZING PANELS WITH TYPE F4 FURRED PARTITION CONSTRUCTION.
BX-3	Use Storefront ILO Curtainwall		\$ (42.36)		\$ (42.36)				SLAM to review new connector for height limitation Cannot take this if BX-5 or BX-6 is accepted
BX-4	Change all metal panel to CMU		\$ (41.47)		\$ (41.47)				
BX-5	Eliminate new entrance and canopy - (keep connector corridor)	SLAM Sketch	\$ (350.24)			\$ (350.24)			Cannot take this if BX-6 is accepted
BX-6	Eliminate new entrance and canopy and connector corridor	SLAM Sketch	\$ (875.59)			\$ (875.59)			Cannot take this if BX-5 is accepted
BX-7	Clean exterior building face ILO re-painting		\$ (51.23)	X			\$ (51.23)		SLAM--Not recommended for this wall material
Bx-8	Reduce extent and finishes of proposed entry canopy	SLAM Sketch	\$ -						Revisit in DD Phase if needed
	Building Exterior / Envelope - Sub-total		\$ (1,469.88)	\$ (109.00)	\$ (83.83)	\$ (1,225.83)	\$ (51.23)	\$ -	
BUILDING - INTERIOR									
BN-1	Change to drop down curtain ILO folding partiiton in Gymnasium		\$ (100.00)	\$ (100.00)					SLAM to review egress requirements for impact to Item No. S-1 SLAM Reviewed, accpetable
BN-2	Reduce wood paneling in auditorium by 30%		\$ (51.60)		\$ (51.60)				
BN-3	Reduce wood paneling in corridors by 30%		\$ (35.13)		\$ (35.13)				
BN-4	Revise carpet selection to be below \$45/yd	SLAM	\$ -						O&G base is at \$45/SY
BN-5	Patch and refinishg Gym floor ILO full replacement		\$ (65.10)			\$ (65.10)			Assume 20% patching, also reduces abatement costs AD does not prefer this option
BN-6a	Eliminate Terrace infill, Keep video production in VoAG Build new culinary arts on second floor where video production lab is proposed.	SLAM Sketch	\$ -	X			X		Still construct new corridor connector Current design--1,820-sf nd adjacent to café for overflow seating. This change = 1,150-sf
BN-6b	Eliminate Terrace infill, Keep video production in VoAG Renovate Culinary Arts Classroom in Place. Move second floor Faculty Workroom and Dining to Proposed Video Production Classroom		\$ -			\$ -			
BN-7	Same as BN-6, except do not build corridor connector		\$ -	X			X		
BN-8	Change all HVT to VCT floor tile	SLAM Spec	\$ (242.65)		\$ (242.65)				REVIEW MAINTENANCE IMPACT: ANNUAL WAXING ON VCT REQUIRED. NO WAX ON HVT. UTILIZE MANNIGTON TOUCHSTONE OR EQUIVALENT.
BN-9	Eliminate all VCT, patch and seal concrete floors		\$ (170.00)		\$ (170.00)				District to test floor moisture content Cannot be taken with BN-8
BN-10	Reduce renovations to locker rooms	SLAM Sketch	\$ -	X			X		Design needs to be reviewed with District Not preferred by District
BN-11	Reduce central office scope to code required changes only		\$ -	X			X		Sprinklers and ADA changes only SLAM not recommended



Value Engineering Log



Schematic Design Phase Estimate - 11/08/16
Design Development Estimate -
75% Construction Documents Estimate

Regional School District 14
Nonnewaug High School
Additions / Renovations Project

			A	B					
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BN-12	Delete ceilings in all storage rooms, jan. closets, IDF rooms, etc.		\$ (43.77)	\$ (43.77)					
BN-13	Change to 2x4 ceiling tile ILO 4x4 ceiling tile in Media Center		\$ (16.83)		\$ (16.83)				
BN-14	Change interior storefront to aluminum door frames		\$ -	X			Revised in Base		
BN-15	Keep existing doors where possible	SLAM	\$ -	X			Revised in Base		
BN-16	Change to PLAM sills ILO solid surface sills		\$ (20.80)		\$ (20.80)				Not recommended by design team
	Building Interior - Sub-total		\$ (664.47)	\$ (100.00)	\$ (499.37)	\$ (65.10)	\$ -	\$ -	

FIRE PROTECTION									
FP-1	Change to manual standpipe system (Reductions Inside Building)		\$ -	See C-4 Above					Review with FM, reduces size of fire pump and storage tanks CES comment: Manual standpipes will allow for diesel fire pump house package manufactured by Armstrong Pumps to be sized for 500 GPM @ 100ft/d approximately. See note C-4 above for additional information.
FP-2	Change to flex heads ILO black iron pipe		\$ (15.00)		\$ (15.00)				Review with District Facilities Director
FP-3	Change to exposed heads ILO concealed type	SLAM sketch	\$ -						Combined with BN--12
	Fire Protection - Sub-total		\$ (15.00)	\$ -	\$ (15.00)	\$ -	\$ -	\$ -	

PLUMBING									
P-1	Provide manual faucets and flush valves ILO automati sensing type		\$ (12.20)		\$ (12.20)				Review with District Facilities Director
P-2	Provide insta-hot water heaters ILO storage type		\$ -	X			X		CES Comment: Not recommended because hot water recirculation throughout the building. In addition the power consumption is extremely high for a building this size. As a result the electrical feeders and service can be effected. We typically do not recommend these units unless it is an office space or tenant fit-out. We do mention in our SD Narrative to provide tankless water heaters at janitor closets to supply hot water during the summer months when the building water heaters are shut down, if the owner so chooses.
P-3	Change water heaters to (2) PVI Conquest 80 L 130A-GCML. "		\$ -						CES Suggested VE - Take this in Design Development
	Plumbing - Sub-total		\$ (12.20)	\$ -	\$ (12.20)	\$ -	\$ -	\$ -	



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HVAC										
H-1	Move chiller sound enclosures 30 to 40 feet away from bldg with sound blankets	SLAM Sketch	\$ (402.00)	\$ (402.00)					✓	SLAM to verify with acoustic engineer
H-2	Move chiller sound enclosures away from bldg to eliminate sound control requirements	SLAM Sketch		X			X			SLAM to verify with acoustic engineer and proximity to neighbors Similar to H-1
H-3	Change to Cassette units for VFR system	SLAM Sketch?	\$ (400.00)	\$ (400.00)					✓	
H-4a	Eliminate AC from school except in specific areas (see notes)		\$ (214.50)	X			\$ (214.50)			Keep AC in Auditorium, Central offices, Admin offices, Media Center, Fitness Room CES Suggested VE:- Option #1 – Full cooling of air handlers listed above: Chillers will be reduced to (2) 120 ton chillers Trane model CGAM-120. Pumps P1A&B will be 25 HP Armstrong dual arm model 4302 pumps.- -AHU-1, 7, 8, 9, & 10 no cooling coil -VRF to be reduced where no VRF indoor or outdoor units serve classrooms-
H-4b	Eliminate AC from school except in specific areas (see notes) Load Sharing		\$ (258.40)			\$ (258.40)				CES Suggested VE: Cooling for only for class ventilation and offices only air handlers with swing space of auditorium: Chillers will be reduced to (2) 90 ton chillers Trane model CGAM-90. Pumps P1A&B will be 20 HP Armstrong dual arm model 4302 pumps. -AHU-1, 7, 8, 9, & 10 no cooling coil -VRF to be reduced where no VRF indoor or outdoor units serve classrooms. SLAM and District do not prefer to reduce AC
H-5	Reduce number of fume hoods in science classrooms (Chemistry)		\$ (33.00)		\$ (33.00)					Reduce from 4 to 2 - (4) total -- District to advise. Cannot be taken if H-7 is accepted
H-6	Reduce number of fume hoods in science classrooms (Biology)		\$ (58.00)		\$ (58.00)					Reduce from 2 to 1 - (3) total -- District to advise Cannot be taken if H-7 is accepted
H-7	Eliminate Stainless Steel ductwork in chemistry labs		\$ (40.00)		\$ (40.00)					SLAM to verify list of chemical used in chemistry labs with District. Use fume hoods with filters? Cannot be taken with H-5 or H-6
H-8	Reuse HVAC unit serving Central offices;		\$ -	X			X			CES does not recommend this due to lost efficiency
H-9	Reduce amount of roof cut and patch for new AHU replacement	SLAM Sketch?	\$ -	Revise in DD where possible						SLAM to coordinate with CES and Structural Engineer SLAM to review potential in DD
H-10	Open specification for HVAC controls		\$ (75.00)	\$ (75.00)						
	HVAC - Sub-total		\$ (1,480.90)	\$ (877.00)	\$ (131.00)	\$ (258.40)	\$ (214.50)	\$ -		



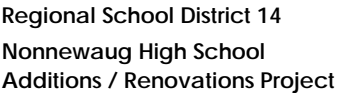
Value Engineering Log



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ELECTRICAL (includes Fire Alarm and Low Voltage Items)										
E-1	Reduce number of fire pull stations through buildings		\$ -	TBD						\$500 savings / each - To be reviewed with FM CES Comment: This will need to be formally reviewed and approved by the AHJ prior to implementing into the design. We should keep this as a possible savings but not count on it at this stage.
E-2a	Change service entrance feeders to aluminum ILO copper		\$ (10.00)			\$ (10.00)				CES Comment: Change aluminum feeders for the service entrance conductors from the utility transformer to the main service entrance switch.
E-2b	Change feeders to aluminum ILO copper		\$ (58.00)			\$ (58.00)				CES Comment: Provide Aluminum feeders for panelboards 100A and larger. HVAC equipment shall remain copper.
E-3	Change to MC cable ILO EMT for branch circuit wiring	CES Narrative?	\$ (380.00)	\$ (380.00)						Entire building (where allowed) CES Comment: Estimator to confirm if included in base
E-4	Change to fluorescent light fixtures in locker rooms, storage/mech/elec/data rooms		\$ (21.00)	X			\$ (21.00)			SLAM/CES – Not Preferred
E-5	Use (12) recessed 2x4 LED fixtures in lieu of 3 rows of 6 Pinnacle linear recessed fixtures in all classroom spaces (35)		\$ (52.50)	\$ (52.50)						\$1,500 savings per classroom (expected)
	Electrical - Sub-total		\$ (521.50)	\$ (432.50)	\$ -	\$ (68.00)	\$ (21.00)	\$ -		



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Budget	\$ 52,068.20	\$ 52,068.20	
Reconciled Estimate (11/07/16)	\$ 52,177.30	\$ 52,177.30	
Value Engineering Required to Meet Budget	\$ 109.10	\$ 109.10	
Total VE Savings Remaining After Meeting Budget (before mark-ups)	\$ (1,855.85)	\$ 109.10	

\$	(4,703.76)	\$	(1,964.95)	\$	(766.14)	\$	(1,618.63)	\$	(354.05)	\$	-
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\$ (4,349.72)



Value Engineering Log



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ALTERNATES

Alt. No. B1	Canopy at Central Office							\$	54.80
Alt. No. B2	Enclosure at Corridor to VoAG Building							\$	27.80
Alt. No. B3	Teaching Spaces in Auditorium - Main Level Only							\$	93.00
Alt. No. B4	Teaching Spaces in Auditorium - Main and Upper Level							\$	188.00
Alt. No. S1a	Track and Natural Turf Field w/Irrigation							\$	1,843.00
Alt. No. S1b	Track and Synthetic Turf Field							\$	2,443.40
Alt. No. S2	Multipurpose Field Lighting							\$	696.60
Alt. No. S3	Aluminum Bleachers							\$	471.70
Alt. No. S4	(4) Tennis Courts							\$	578.60
Alt. No. S5	(2) Additional Tenniss Courts							\$	256.30
Alt. No. S6	Irrigation at Natural Turf Fields							\$	245.20
Alt. No. S7	Refurbish Existing Fields, Athletic Amenities							\$	662.40

District Priority
Includes new track
Includes new track
Renovate (3) existing, add (1) new cout
Will not allow Event Parking Lot to be eliminated