

**DENALI REPLACEMENT ELEMENTARY SCHOOL**  
**Schematic Design Cost Reduction Options**

April 12, 2001

Attachment B

Current SD Estimate: \$12,356,915

Gross Bldg. Area (SF): 62,915

Cost Per SF: \$196.41

				DENALI BDC RECOMMENDATIONS			
		ORIGINATOR	PROPOSED SAVINGS	INITIAL COMMENT	Action	Proposed Savings	Comment
<b>SD ESTIMATE: Cost Reduction Alternatives</b>							
Option 1:	Eliminate in-slab floor heat:	KAI	(\$161,425)		Yes	(\$161,425)	
Option 2:	Eliminate exterior snow-melt system:	KAI	(\$12,605)		Yes	(\$12,605)	
Option 3:	Change IRMA roof system to conventional EPDM:	KAI	(\$191,530)		Yes	(\$191,530)	
Option 4:	Lower the Level 1 finished floor elevation 1.0 foot:	KAI	(\$120,000)		Yes	(\$120,000)	
Option 5:	Change exterior masonry veneer to brick tile system:	KAI	(\$36,540)		No	\$0	Savings are questionable here. BDC does agree the exterior wall system should be analyzed to provide the most cost effective solution.
Option 6:	Eliminate operable "Won-Door" at MP Room:	KAI	(\$24,840)		Yes	(\$24,840)	More discussion is needed to evaluate the possibility of providing the open connection to the commons such that operable walls might be installed at a later date.
Option 7:	Eliminate clerestory monitors at classroom wings:	KAI	(\$29,700)		No	\$0	Extent of glazing or other adjustments to lower costs should be explored, however.
Option 8:	Eliminate clerestory windows at MP Commons:	KAI	(\$49,530)		Yes	(\$49,530)	
Option 9:	Eliminate clerestory windows at Main Entry Commons:	KAI	(\$13,035)		No	\$0	Extent of glazing or other adjustments to lower costs should be explored, however.
Option 10:	Interior finish reductions (3 items): 1. Eliminate cork-backed tackable wall covering at corridors / classrooms. 2. Substitute wood interior doors for metal doors currently priced. (Needs further evaluation) 3. Substitute 6' wide pair of doors for the operable walls between Classrooms and Kindergarten CR's. Op. walls at Music and Resource Classrooms to remain.	KAI	(\$234,675)		Yes	(\$234,675)	BDC endorses these savings, but defers to KAI / ASD to refine material estimates and options here.
Option 11:	Eliminate A Street retaining walls:	KAI	(\$71,000)		No	\$0	Fundamental design element - provides separation of pedestrians & students (safety), while maximizing already cramped exterior play space.
Option 12:	Reduce ceiling height by 12" on each level:	KAI	(\$50,000)		Yes	(\$50,000)	
Option 13:	Eliminate 2nd Level exit ramp:	KAI	(\$6,600)		No	\$0	Essential to promote inclusion within the program.
Option 14:	Eliminate sledding hill:	KAI	(\$5,350)		No	\$0	Essential component for the ramp in Item 25. Sledding hill becomes a bonus.
Option 15:	Eliminate emergency / standby generator system:	KAI	(\$132,000)		Yes	(\$132,000)	
Option 16:	Reduce overall building area by 540 sf:	KAI	(\$45,000)		Yes	(\$45,000)	Area noted is the amount by which the SD exceeds the approved / adjusted Ed Spec.
Option 17:	Eliminate safety mat @ playground / use "Play Chips":	OLYMPIC	(\$83,840)		No	\$0	Not possible for accessibility reasons. May be future savings if "rainbow turf" product can be utilized.
Option 18:	Eliminate stand alone pavilions:	OLYMPIC	(\$75,325)	Already eliminated in current SD estimate (\$12.3)			
Option 19:	Eliminate 10th avenue retaining walls:	OLYMPIC	(\$20,000)	Already considered in the estimate for Option 4.			
Option 20:	Reduce concrete sidewalks:	OLYMPIC	(\$14,800)		Yes	(\$14,800)	Estimate should be refined here.

Option 21:	Provide wood framing in lieu of metal studs and steel:	OLYMPIC	(\$219,000)		No	\$0	New IBC code severely limits allowable area of wood-framed buildings. Area separations would be req'd, adding to costs, etc. Wood framed bldgs. "move" more, creating more maintenance repairs to GWB, etc. Savings here are questionable.
Option 22:	Simplify roof monitor shape:	OLYMPIC	(\$20,000)		Yes	(\$20,000)	
Option 23:	Reduce classroom windows:	OLYMPIC	(\$80,000)		No	\$0	As designed, they are comparable with window opening area in the Prototype & Fairview designs.
Option 24:	Substitute EIFS in lieu of masonry veneer at exterior walls:	OLYMPIC	(\$62,500)		No	\$0	Savings are very questionable, other options are better performers, etc. See Item 5 also.
Option 25:	Eliminate sun screen at classroom exterior wall:	OLYMPIC	(\$18,800)		Yes	(\$18,800)	
Option 26:	Eliminate exterior classroom doors, except at IN & Kindergarten:	OLYMPIC	(\$7,500)		Yes	(\$7,500)	
Option 27:	Reduce classroom casework to 35-30 LF each:	OLYMPIC	(\$163,800)		No	\$0	As designed, casework quantity is comparable to other ASD facilities. This should be analyzed to ensure best use / cost control are balanced.
Option 28:	Combine Gym and MP Room to 4,000 sf combined, reducing area by 1,000 sf:	OLYMPIC	(\$150,000)		No	\$0	This option would adversely affect delivery of the educational program. As designed, the configuration is per Ed Spec.
Option 29:	Bid operable walls as an additive alternate:	OLYMPIC	(\$110,000)		N/A	\$0	This is a bid strategy (for later discussion), not a cost reduction alternative.
Option 30:	Provide framed corridor walls in lieu of masonry:	OLYMPIC	(\$65,000)	Already substituted in current SD estimate (\$12.3)			
Option 31:	Eliminate 540 sf storage rooms at the west end of the 2-story classroom wing:	OLYMPIC	(\$54,000)		No	\$0	This option would adversely affect delivery of the educational program. As designed, the configuration is per Ed Spec.
Option 32:	Provide FRP wall and sheet vinyl floor finishes at toilet rooms:	OLYMPIC	(\$48,000)		No	\$0	Significant compromise to long-term performance, adding to maintenance costs.
Option 33:	Eliminate toilet room in OT / PT room:	OLYMPIC	(\$35,000)		No	\$0	This is an essential element of the Intensive Needs program.
Option 34:	Provide "Tectum" acoustic panels at Gym in lieu of fabric panels:	OLYMPIC	(\$6,000)		Yes	(\$6,000)	
Option 35:	Provide gypsum wallboard backing in lieu of cork at tackable wall surface areas:	OLYMPIC	(\$5,000)	Already considered in the estimate for Option 10.			
Option 36:	Provide constant volume mechanical system in lieu of variable air volume (VAV) system:	OLYMPIC	(\$50,000)		No	\$0	Savings are suspect, and the system described provides less control / flexibility than ASD standards suggest. Requires further design evaluation.
Option 37:	Provide square diffusers in lieu of slot diffusers:	OLYMPIC	(\$12,000)		Yes	(\$12,000)	
Option 38:	Provide electric in lieu of hydronic snow melt system:	OLYMPIC	(\$10,000)		No	\$0	Dramatically increases operational costs.
Option 39:	Provide MC cable in lieu of conduit and wire:	OLYMPIC	(\$25,000)		No	\$0	Eliminates all flexibility for replacement, etc.
Option 40:	Bid sound system as an additive alternate:	OLYMPIC	(\$23,000)		No	\$0	Adversely affects program delivery. This is also a bid strategy, not a cost reduction alternative.
Option 41:	Eliminate requirement for conduit for fire alarm system wiring:	OLYMPIC	(\$20,000)		No	\$0	ASD Standards, could use MC cable. Requires further design evaluation.
Option 42:	Provide standard receptacles in lieu of wiremold raceway:	OLYMPIC	(\$18,000)		No	\$0	Savings are marginal when compared to the flexibility provided by raceway systems (adding outlets, routing / upgrading technology wiring, etc.)
Option 43:	Provide lensed fixtures in lieu of parabolic style:	OLYMPIC	(\$10,000)		Yes	(\$10,000)	
Option 44:	Provide cable rings in lieu of cable tray for technology wiring:	OLYMPIC	(8,000)		Yes	(\$8,000)	
Option 45:	Purchase appliance directly (FF&E).	OLYMPIC	(\$21,000)	Already considered in the current SD estimate (\$12.3)			
Option 46:	Bid abatement and demolition as a separate bid package:	OLYMPIC	(\$100,636)		No	\$0	This is a bid strategy (for later discussion), not a cost reduction alternative. Cost savings noted are also highly suspect.

<b>Proposed Reduction Total:</b>	<b>(\$1,118,705)</b>	
<b>Revised SD Estimate:</b>	<b>\$11,238,210</b>	
<b>Revised Gross Building Area:</b>	<b>62,375</b>	
<b>Revised Cost per SF:</b>	<b>\$180.17</b>	

**DENALI REPLACEMENT ELEMENTARY SCHOOL  
Schematic Design Deferred Cost Options**

***Deferred Site Improvements:***

A Street Retaining Walls:	(80,000)
Sledding Hill / Ramp (Provide Temp Stair in lieu of ramp):	(5,300)
Landscaping (if permitted by MOA):	(76,488)
Pavement Demo (partial):	(7,000)
Decorative Fencing / Screen Wall:	(11,761)
Playground Improvements (work limited to relocating existing equipment to existing paved area):	(124,358)
Flag Pole:	(5,215)

Total Deferred Costs: (310,122)

***Subtotal (Including BDC Cost Reduction Options): \$10,928,088***

***Deferred Program Area (4 SE Classrooms):***

Gross Building Area:	62,375
Revised Cost Per SF (Per Subtotal Above):	\$175.20
Defer (4) SE classrooms:	5,120 SF
Credit at 50% of SF Cost:	\$87.60
Total Classroom Costs Deferred:	\$448,512

***Subtotal: (\$448,512)***

***Total Base Bid Cost: \$10,479,576***