



Meeting Notes

Project: MSAD 75 High School

Date: May 13, 2015

Attendees: MSAD 75 Building Committee
 Lyndon Keck, PDT Architects
 Allison Zuchman, PDT Architects
 Abigail Cram, PDT Architects
 Kathy Kahill, PDT Architects
 Ian MacDonald, Allied Engineering

Purpose: Project Update & Green Schools Presentation Part 2

Topic	Agenda/Notes	Action
	<ol style="list-style-type: none"> 1. Prior meeting minutes approved 2. No public comment (no members of the public attended) 	
Green Schools Agenda	<ol style="list-style-type: none"> 1. Definition of a green school 2. Green schools design criteria <ol style="list-style-type: none"> a. Materials & Resources b. Energy & Atmosphere c. Indoor Environment 3. Priorities for Mt. Ararat 	
Priorities	<p>Materials & Resources</p> <ol style="list-style-type: none"> 1. Student and staff involved in recycling program, more vigorous than current program 2. Data as teaching tool 3. Water bottle refilling station 4. Low maintenance, durable, and cost effective materials 5. Less or no carpet 6. Minimum waste during construction 7. Low/no VOC materials and green cleaning products 8. Combine old (repurpose, reuse) with new for efficiency 9. Preference for local materials with easily available and replaceable components 10. Avoid florescent lights, preference for LED 11. No radioactive sources (i.e. current exit signs) 12. Consider lifecycle of materials 13. Repurpose existing building elements 	
Priorities	<p>Energy & Atmosphere</p> <ol style="list-style-type: none"> 1. Multiple energy sources, and cost effective 2. Student access to utility information as educational tool 3. Variable speed drives 	



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	<ol style="list-style-type: none"> 4. Black roof preferred, not white, due to keeping building warm 5. Maximize free energy 6. Maximize the effectiveness of monitoring and controls 7. Building envelope insulation, especially walls (harder to insulate walls after the fact) 8. Solar and wind power as student teaching tools 9. Quality doors and windows 10. Acoustics 11. Less air, more water (geothermal, chilled beams, radiant heating and cooling). Transferring heat through water is more efficient than through air. 12. Lighting, natural daylight 	
Priorities	<p>Indoor Environment</p> <ol style="list-style-type: none"> 1. Daylight, window walls, open and extend to outdoors 2. Fresh air exchange frequently and efficiently 3. Quality artificial light, direct and indirect, avoid hot spots 4. Acoustics 5. Air filtration 6. Easy access to equipment to clean, and not in visually disruptive location 7. Safe and healthy spaces 8. Coordinate all systems for maximum effectiveness 9. Quality control / quality assurance that we install healthy materials, local materials (i.e. set benchmarks in architectural specifications) 10. Thermal, lighting and acoustical controls appropriate for each individual space type and use 11. Building siting and orientation important. (Temperature variance in schools buildings within town based on building location and geography.) 	
Additional notes from notecards	<p>Materials & Resources (check marks ✓ indicate ideas that were mentioned more than once)</p> <ol style="list-style-type: none"> 1. Recycled materials used in construction ✓✓ 2. Recycling and composting throughout building, part of design, and as a teaching a tool ✓✓✓ 3. Tool to keep updated monthly on recycling in school 4. Incorporate old school with new construction to create a vision 5. Use local, replaceable materials with easily replaceable parts. Ease of periodic renewability (replacement, repair) ✓✓✓ 6. Use cost effective recycled materials 7. Be aware of lifecycle costs when choosing materials 8. Recycle/salvage building materials from old building ✓✓✓ 9. Reuse steel and concrete in renovation 10. Use low maintenance, durable material ✓✓✓✓✓ 11. No radioactive sources (i.e. exit signs) 	



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	<ul style="list-style-type: none"> 12. LED lighting, no fluorescent bulbs (waste) 13. Lifecycle is critical. Do not compromise based on short term cost savings. ✓✓ 14. Reuse concerns – removed all hazardous materials first. 15. Minimal waste 16. Use multiple structural materials where most appropriate (wood = ambiance, steel = support, CMU/thick insulated walls = specialty acoustical concerns) 17. Low or no VOC materials and green cleaning products ✓✓ 18. Renewable, such as linoleum ✓✓ 19. Less carpet (hosts mold and dust mites) 20. Use recycled carpet 21. Field house 22. Certified wood 	
<p>Additional notes from notecards</p>	<p>Energy & Atmosphere (check marks ✓ indicate ideas that were mentioned more than once)</p> <ul style="list-style-type: none"> 1. Back-up systems. Redundancy. 2. Quality commercial doors and windows. 3. Educational piece to teach students about energy use. Energy efficiency sources that also serve an educational purpose. Several energy sources, designed for instruction/demonstration that save costs (i.e. wind to power a sign). ✓✓✓✓ 4. LED ✓✓ 5. Maximize use of free energy 6. Consider biomass 7. Consider geothermal ✓✓✓✓✓ 8. Choose monitoring and controls systems that maximize efficiency. Digital controls down to room level. Be able to control lighting through a programming tool. (Bill Donovan is energy manger – get his input.) ✓✓✓ 9. Reduce energy use and operating costs any way you can 10. Variable speed drives 11. Black pool 12. Daylight harvesting 13. Concerns with radiant heating, slow temperature swings – have controls improved? 14. Renewable energy 15. Patio/lanai style rooms extensions. Classrooms open to outdoors. 16. Less air, more water for energy transfer 17. Commissioning is essential 18. Heat recovery 19. Net zero ready 20. Natural light and window shading devices 21. Solar panels, wind and water power to reduce electricity use 	



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	22. More windows to let in more light so less electric lighting is used 23. Well insulated so less heat and air conditioning is used 24. No fluorescent lights 25. Multiple energy sources (wind, geothermal, solar) that are cost effective both in use and installation	
Additional notes from notecards	Indoor Environment (check marks ✓ indicate ideas that were mentioned more than once) <ol style="list-style-type: none"> 1. UV/UVC air filtrations systems. ✓✓ 2. Avoid noise transfer from systems into classrooms 3. Dust and dirt build up in high areas that are not easily accessible including on ceiling fans. Compromises air quality. 4. Safe and healthy spaces 5. Maximize natural light for energy efficiency but also for outdoor views and improved teaching and learning environment. Windows, skylights, daylighting. ✓✓✓✓✓✓ 6. Classrooms that are like greenhouses. 7. Rooms that can be used in different ways, flexibility. 8. Ability to change indoor quality quickly with changes in exterior conditions without impacting energy costs 9. Lighting controls 10. No and low VOC materials 11. IAQ, fresh air, and proper ventilation critical – current school plagued with complaints. Clean air exchange. ✓✓✓✓✓✓ 12. Once built don't change use based on short term use. Critical to ed specs input now so changes don't continue to evolve in the short term. 13. Domestic products 14. Acoustics. Prioritize quiet learning environments. Appropriate per space. ✓✓✓ 15. Something the students can be proud of 16. Incorporate reimagined passive air columns (heating/cooling). Operable windows as second option 17. Consider avenues for radon avoidance 18. Combination heating and cooling system that modulates around set point (heat pump) 19. Energy management system for controls and measurement 20. Smart controls (IoT) requiring minimal intervention 21. High acoustical performance ✓✓✓ 22. Engineered water flow inside buildings (artificial streams) 23. Quality artificial lighting (indirect and direct) 24. Controllability 25. Use waste heat to heat incoming air 26. Use safe materials 27. High performance 	



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	28. Radiant heat in floor 29. Spend money on high performance insulation and windows 30. Thermal comfort 31. Lighting controls	
Building Committee Meeting Dates	After June 17 th , building committee meetings will be once a month, 5:30-7:30pm, on July 15 th , August 19 th , and September 16 th .	
User group input	1. Meetings being held in May and June. 2. A survey will be distributed to students. Brad cautioned that 14-day notice needs to be given to parents prior to a student survey being issued. Be clear what the purpose is and give parents the opportunity to opt out. 3. A Pinterest page has been set up to share images and photographs.	
Stakeholder list	1. Public meeting is less than a week away. 2. Building committee members were assigned to contact stakeholders on the list. Send email with flyer and letter from Brad and/or make phone calls. Encourage stakeholders to spread the word and bring others as well.	
Public meeting agenda	1. 90 minutes 2. 10-15 minutes: introductions and presentation 3. Remainder of meeting includes 3 break-out sessions with prepared questions and time to report out to overall group. 4. A tour will be available ½ hour before the meeting starts 5. Provide information on how they can follow the project and be involved in subcommittees.	
Sub-committees	1. Communications 2. Building Systems (combine with sustainability?) 3. Sustainability 4. Technology and learning commons 5. Student advisory 6. Physical education and athletics Future subcommittees 7. Percent for art 8. Furniture 9. Finishes and colors 10. Site? Report back on new vs renovation studies first and then determine if a site sub-committee is needed.	



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	11. One member from the building committee will be a member of each sub-committee (chair or co-chair) and report back to the building committee. To be assigned at next building committee meeting.	
Next Meeting	May 27 th , 5:30-7:30	

End of meeting minutes