**Carver Elementary School Building Committee Minutes**

**Monday July 20th, 2015**

**7:00 P.M.**

**CARVER TOWN HALL – SELECTMEN’S CHAMBERS**

Present: Peter Gray, Sarah Stearns, Heather Sepulveda, Liz Sorrell, Dave Siedentopf, James O’Brien, Adam Holmes Jon Delli Priscoli, Michael Milanoski, Andrew Soliwoda

Board of Selectmen Present: None

Absent: Chairman Dick Ward, Dan Ryan, John Cotter, Ruby Maestas

Others present: GGD – Dominick Puniello, Adam Holmes, Stephanie Gavin, Kerry Agashe, Larry Blackwell, Peg Blackwell

PMA Present: Chad Crittenden, Chris Carroll

HMFH Present: Matt LaRue, Devin Canton, Laura Wernick

1. **Acting Chair Sarah Stearns** called the meeting to order at 7:05 p.m.
2. **07-07-15 Meeting Minutes** were read. No changes made. Motion made by Heather Sepulveda and seconded by Jon Delli Priscoli….no discussion. Approved. James O’Brien abstained.
3. **Overview of Meeting Agenda** given by Sarah Stearns. HMFH will give a design update. Heather Sepulveda will speak about community outreach.
4. **HMFH Design Update**

Review Isometrics

SBC Discussion, Q & A

1. **Halvorson Site Layout Update**

**SBC Discussion, Q & A**

Matt LaRue addressed committee showing First image view showing replicating floor plans from last time in 3d on site. Landscape architect is working on plan and will respond to feedback regarding circulation of buses and athletic fields. Options give slightly different ways to load/unload. Entrance off Main St. Buses go through loop. Angled parking for 16 spaces are for preschool. Option 1 shows buses would be double stacked to accommodate 20 buses at a time to load/unload. In option 2 it shows 10 buses only along curbside and then other 10 would load/unload. This option has an extension of a drive that gives an inner loop for the buses to come back around. The 10 buses might impede some the preK parking area while waiting for the first buses to load/unload, but it would only be during those times. Option 3 also has 10 buses queued at a time, but broken up in a slightly different way. Option 1 has the ball fields closest to school facing opposing directions. Larger field is to the east with additional u10 field possible. This avoids fields over septic fields. Option 2 reverses ball fields and soccer fields with the southern most of the two fields overlap septic and still the potential for smaller fields additional. Option 3 has the ball fields flipped and outfield overlaps septic field. The soccer fields overlap as well. Jon Delli Priscoli asked about fields over septic and Matt LaRue said that no irrigation can take place over septic fields. Mr. Delli Priscoli also asked about bus lane be dedicated to just buses and not meet up with the passenger car traffic entering/exiting the school. Can there be a bus only lane? Sarah Stearns agreed with wanting that as sometimes there is logjams when entering/exiting during bus pickup/dropoff. Mike Milanoski also spoke about buses and cars mixing and the possibility of accidents/liability. He liked the separation in option 1. In option 2 the infield of ballfields should not be over septic. Option 3 avoids that. Jon Delli Priscoli asked with Option 3 could you explore doing it without encroaching on the 65 foot no build zone? Liz spoke about the bus options and that preK parents would go through bus lane after/before drop off/pickup. Matt LaRue spoke about controlled crosswalks for parents/students crossing to walk from parking into school. There could possibly be a raised table for the crosswalks to slow vehicle traffic. This would also help handicapped/those in wheelchairs. HMFH will check into more fields possible. Jon Delli Priscoli asked about limited access to fields. It was agreed that that would be good. There can also be a service road that will accommodate larger trucks when necessary for deliveries. Mr. Delli Priscoli asked about a dock leveler. Dave said he would look into it, and that it would be nice, but would depend on the cost. Cost would be the deciding factor. Mr. Milanoski asked about max number of fields and how it can be laid out. Matt LaRue said that the options for fields and bus lanes can be changed.

1. **GGD HVAC System Overview -** HVAC systems overview – Matt LaRue said that in the mid-feasibility study, green options were discussed and possibilities

were looked at and received good feedback and looked for most cost effective and energy efficient. Dominick Puniello from Garcia Galuska DeSousa Consulting Engineers Inc. explained all the options for HVAC systems. 2 systems….mixing system versus the displacement system. Mr. Puniello explained the difference between displacement vs. mixing. Displacement beneficial for classrooms as it takes out germs as well. There is a supply air temperature of 75 degrees. Occupied zone in most building is 2-6 feet from the floor. Displacement system includes diffusers. There are pros and cons. Sub-cooling causes different temps in different areas. Sub-cooling vs. reheating. It is harder to heat/cool with perimeter exposure (near outside walls). But there is also a benefit. You can use hot water fin tube radiators with a displacement system and that is more efficient. Dehumidification only (options 2 & 4) does not provide cooling setpoint temperature control but usually that is not a problem based on a fully loaded class in summer on an 88 degree day. During the winter months a dedicated outdoor air system takes 0 degree. Air passes over recovery wheel up to 45 degrees and is then heated. Total energy recovery wheel ….not a heat wheel. Full energy 400-450 650-700 cfm from 78 degrees to 75 degrees. Induction units…induction/chill beam….you can have multiple induction units done at a central station. Air is supplied to room and passes overhead. There are also Induction unit pros and cons. Central plant equipment is similar. There are three systems: chiller plant, boiler plant and geothermal heat pump plant – water-to-water heat pump and chillers. Anytime you can go smaller you increase efficiency. A geothermal system extracts water from ground and use chilled or hot water to temper from the constant 45-55 degree groundwater. His has a high installation cost but the high cost typically offsets their savings with a 15-30 year payback, but it may not be the most cost effective option. All systems would be tied into energy management system and can be programed in advance. The equipment learns from itself and will be able to maintain the same day/night temperatures. You can even integrate lighting control. You need to factor in installation/maintenance cost which gives life cycle costs. BLCC 5 building life cycle cost using industry standards to summary chart contains capital investment cost and can figure out payback cost. Sarah Stearns thanked Dominick Puniello and said his presentation was very thorough. She asked where are we in the process? Dominick Puniello said his firm has not done life cycle cost or building and design analysis. It would take 3 weeks to work those up. A mixed system could be used in certain areas and could be added to by using chill beams in some areas. 80 percent to 85 percent of school HVAC installations are dehumidification only. Liz Sorrell asked about what is recommended for server rooms. Dominick Puniello said it is recommended there be a dedicated a/c unit in server rooms that can be hooked to a generator. There would need to be test well and soil tests would need to be done also if the district wanted to pursue a geothermal system. Jon Delli Priscoli asked why office buildings don’t use displacement ventilation systems. Dominick Puniello said chill beams are being used in some office buildings. He said that you treat the outdoor air to serve the induction unit. VAV group spaces is a typical commercial approach. With induction, each office has its own thermostat. Mr. Delli Priscoli asked again about VAV. Matt explained that schools are different than large office buildings, since classrooms in a school building are all similarly sized and have similar occupant loads. Temperatures fluctuate based on occupancy. When using a displacement system it does not have to account for lighting, etc since the supply air is focused at the ground level where the occupants are. Underfloor air was popular years ago, but simpler overhead VAV is a simpler design. Displacement ventilation is very popular with schools because population in schools is very high. A good amount of outside air needs to be brought in because of high code requirements. Jon Delli Priscoli does not want to see us have to retrofit because the system doesn’t work. Liz Sorrell spoke of visit to school in New Hampshire that has the displacement system. It was 88 degrees outside that day and the building was very comfortable. Matt spoke about acoustics. With the displacement system, is it so quiet that acoustics are very good. James O’Brien asked about whether or not it was like a swamp cooler. Dominic said it is similar but moisture would be drained too and the cooling is done at rooftop level. James O’Brien asked about Dave Siedentopf’s opinion. Dave will reach out in the area and find other schools with displacement systems. Liz pointed out that summer school programs are in the schools all summer. Heather Sepulveda asked how long displacement systems have been around. Dominick Puniello said first in MA was at Bourne School in 2007. Displacement ventilation has been around for decades. You will see them in auditoriums. For 7-8 years they have been designing these systems. Chad Crittenden said that Rochester has displacement with dehumidification only and Hanover has a displacement system with full air conditioning. There are other schools with these systems around the area. There are less moving parts and it is a simple system. Chad will set Dave up to take a look at some of those buildings. Dominick Puniello said there will be Increase air flow in larger areas like the cafeteria and the gymnasium. Those areas would have their own units that are sized for their own space. Stephanie Gavin asked if the committee will get information about cost during this phase. Dominick Puniello will provide this information as part of the SD phase. Anytime you can size plants/piping it can be eliminated with a package approach. There can be Chill beams for all classrooms if desired, but it is a more complex system to install and maintain and may result in added costs.

1. **PMA Schedule Update – Next Steps**

Matt LaRue and Chad Crittenden showed the schedule/calendar with what is coming up next. The next meetings will be held on 8/3/15 and 8/17/15 both at Carver Town Hall. There will be value management totals by 8/31/15 at Carver Town Hall. They will have the estimates for 9/8/15 meeting at Carver Town Hall. Estimates and budgets are due to MSBA by 9/17/15. Schematic design needs to be submitted to MSBA by 10/1/15. MSBA board approval of schematic design by 11/18/15. The Carver Town Meeting vote on the project funding date is TBD.

1. **Community Outreach**

Carver Old Home Day is July 25 at Shurtleff Park. An informational packet will be distributed that includes site plans. Dick Ward will go to Carver mobile home parks with a presentation. There will also be a Chance Court outreach meeting after design is more detailed. There will be a table during the Carver Farmers Market which is held on Sunday afternoons some time during September. Liz said there will also be available at the Back to School Nights at the schools. There are also plans to have easels at Carver Public Library.

1. **New Business**

Michael Milanoski went back to schedule for 8/3/15 and 8/17/15 meetings and asked about objectives. Chad Crittenden said there would be discussion about façade materials, mechanical systems life cycle, and electrical and lighting. Jon Delli Priscoli asked about the primary interior finishes and flooring. There will be alternatives to choose from with a range of costs. There are also choices about exterior finishes, roof line, and the shape of the building. Chad Crittenden said there will be a choice for the method of procurement (General Contractor or CM at Risk). The next meeting is scheduled for Monday, August 3, 2015. Stephanie Gavin, 4 Kestrel Way asked about the size of school and the number of classroom per grade level. Would it be 6 or 7 classrooms per grade level? She is afraid the building will not be big enough because we need more classrooms if more people move into town because we have a new school. Liz said it is a concern on the South Shore at present that towns are worried about design enrollment numbers on the South Shore because it is a hot real estate area. Families are moving into this area. At present, there are 862 students next year in the elementary school including the preschool. Kindergarten will be 7 classrooms and grade 5 if it gets bigger will be 7 classrooms as well. If we tried to change the building design we will have to go back to the eligibility phase. Chad Crittenden said the number of classrooms as calculated by the MSBA is based on population. Design enrollment uses a space template. Right now there are 30 full size classrooms and 6 K and 3 pre-K classrooms, which is 3 more classrooms than the MSBA space template calls for. The current plans allow for future expansion that could add potentially 4 classrooms, but the cost for the additional space would need to be covered by the Town as this will be above and beyond what is allowable under the MSBA’s program. This could be addressed prior to bid when the 2017-2018 enrollment figures are available. Matt LaRue concurred with what Chad said. The current MSBA allowable space guideline may not solve unanticipated long term increases. If at last minute we wanted to add classrooms Liz asked would it be shared coast or total cost to the town and Chad said total cost to the town. Jon Delli Priscoli asked about structure of building. eHe

He asked if it would have steel with pan floors, and a masonry veneer with potential insulated panels. PAM responded that there would be structural steel with metal stud backup, exterior sheathing and an air vapor barrier. There were no more questions.

Liz Sorrell moved that we adjourn at 8:35 p.m. James O’Brien seconded the motion.

Unanimous.

Respectfully submitted,

Pauline Lopez

Acting Recording Secretary

Carver School Building Committee