

**Town of Watertown  
School Building Committee  
Three Elementary School Projects  
Wednesday, May 18, 2022  
via ZOOM 6:00p.m. – 7:00p.m.**

**M I N U T E S**

**Committee Members Present:** Mark Sideris (chair), John Portz (vice-chair), Deanne Galdston, Lindsay Mosca, Steve Magoon, Leo Patterson, Paul Anastasi, James Kane, Tom Tracy, and Vincent Piccirilli

**Committee Members Absent:** Kelly Kurlbaum and Heidi Perkins

**Others Present:** Daren Sawyer, Andrew Cunneen, James Jordan and Nate Williams (Ai3 Architects); Tom Finnegan, Vivian Varbedian and Alana Forbes (OPM, Hill International), Kris Bradner (Traverse Landscape Architects), Christy Murphy (Compass Project Management), Stacey Phelan and Erin Moulton

**1. Call to Order:** Chairman Sideris called the meeting to order at 6:06 p.m. John Portz took a roll call of School Building Committee members present.

**2. Approval of Meeting Minutes – May 18, 2022**

Chairman Sideris made a motion to approve the Elementary Meeting Minutes for April 20, 2022. Vincent Piccirilli motions to approve the Elementary school meeting minutes and John Portz seconded. All were in favor on a roll call vote.

**3. Review / Approval of Elementary Schools Monthly Invoices, Contract Amendment 7 and Change Order No.1**

Vivian Varbedian presented and reviewed the Elementary school April monthly invoices, Change Order No.1 and Contract Amendment 7.

**April 2022 invoices are as follows w/total at \$1,166,843.47:**

- Hill International – \$90,210.00
- Ai3 Architects (Basic Services) –\$37,140.46
- Ai3 Architects – (Reimbursables Services) - \$4,968.80
- Brait Builders (Payment Req # 23) – \$647,004.67
- CTA Construction Managers (Payment Req # 2) - \$303,407.02
- Colliers International - \$12,095.28

Chairman Sideris made a motion to approve the Elementary School projects invoices. Vincent Piccirilli motions to approve the Elementary school project invoices totally \$1,166,843.47. Steve Magoon seconded. All were in favor on a roll call vote.

### **Contract Amendment 7 – Additional Services at Lowell Elementary School Project**

Vivian Varbedian presented and reviewed Contract Amendment 7 for additional services at Lowell Elementary school project for \$7,308.40. This is for Ai3 professional structural engineering services related to the elevation of the existing concrete structure at the kitchen walk-ins.

Chairman Sideris made a motion to approve Contract Amendment 7. Vincent Piccirilli moves with John Portz seconded; all were in favor on a roll call vote.

### **Change Order No.1 – Lowell Elementary School Project**

Vivian Varbedian presented and reviewed Change Order No.1 for Lowell Elementary school. These change orders are identified by L-001 which reflects Lowell ES. The list shows a brief description with cost totaling \$324,126.42.

Chairman Sideris made a motion to approve Change Order No.1. Vincent Piccirilli moves with both John Portz and Steve Magoon seconded; all were in favor on a roll call vote.

## **4. Executive Summary**

Vivian Varbedian reviewed and presented the Executive Summary highlights for May 2022.

Hosmer Elementary school Z section utilities have been disconnected. The demolition of the Z section has started on Monday May 16<sup>th</sup> with children and people in the community watching the demolition.

Demolition will last for a week longer. The construction of the ball field has begun and will continue until the end of September 2022.

Currently, Lowell Elementary school, Asbestos Abatement will begin on Monday, May 16<sup>th</sup> and will continue for (3) weeks. The site contractor will begin utility work and foundation excavation. The demo permit was issued for Hosmer Elementary school, and all is trending well for Lowell Elementary school.

## **5. Elementary Schools Project Updates**

### **Hosmer Elementary School - Photovoltaic Design Update**

Vivian Varbedian briefly discussed and presented the Photovoltaic design update slides. Upon review, Ai3 Architects is seeking approval to proceed into final design and pricing. There are a few options that will be presented and hoping to have a selection by the School Building Committee made to go into final design and pricing. Daren Sawyer (Ai3 Architects) as well as Kris Bradner of (Traverse Landscape Architects) spoke in detail about the Photovoltaic Design. Daren Sawyer discussed in detail the real estate on site for relocation of the (2) canopies from Hancock Street. Canopies being discussed are C3 and C6. The goal is to recreate equal solar gain from original C3 and C6 PV structures. Traverse Landscape Architects has recreated several options with input from the Civil Engineer. Utilities were overlaid, drainage and storm water management systems on the site were coordinated for the relocation of the canopies. Ten options were looked at throughout the site. Several of the options were ruled out because the negatives/cons far outweighed the positive aspects for relocation of the canopies.

The list of cons are underground utility conflicts, playfield conflicts, neighborhood visual conflicts, vertical and horizontal spatial conflicts, lower solar gain, outside of current limit of disturbance and conflict with sidewalks and parking. Options #3, #4, #5, #6, #8 and #9 was looked at to place canopies within location reflected on the slide. Several negatives were found with placing them which included utilities and proximity to the parking with the low portion being over the parking area. The recommendation would be to eliminate these options / locations. A more viable option for locations is #1 and #2 canopies straddling the play areas. This option is located near Hancock, Chauncy and Boylston Street as indicated in the presentation. Canopies C3 and C6 are highlighted with colors (Purple #1) and (Green #2) which would be a replication and relocation of the canopies. These canopies must work in conjunction with each another. You will always have a purple (C3) and green (C6) canopy somewhere on the site.

Option #1, placement of one of the canopies would be over the Amphitheater area. Looking at the pros and cons of option #1 it is doable. Option #2 not great but will be doable if relocated at that portion of the site. These options do not require play space redesign. Also, option #7 where the current canopies are located on Boylston Street parking area, we proposed placing one of the green canopies down along the back stop and splitting the smaller of the (2) canopies into two pieces. This will add on to the structure that is already there making the green canopy a little bit longer. One of the cons is that you will lose (3) parking spaces due to footing location. This will be a complete relocation of the (2) canopies. The last option would be option # 10. The canopies would be near Winthrop and Mt. Auburn Street and they would be placed over the batting cage. With Option 10, you would still have to find a place for the purple canopy, the smaller of the (2). You can combine it with Option #1 or part of Option #7. This would provide some shading over the batting cage. You would have to consider if this is the path you want to take due to coordinating the height of the canopy with the fence that surrounds the basketball court. You must make sure you have enough clearance underneath for the batting cage as well as utilities. You will also need to make minor path adjustments. These options are the most viable to relocate the PV canopies.

Vincent Piccirilli asked Chairman Sideris if he is ready to make a motion. He stated that there have been good suggestions from members of the Committee as well as the public. Vincent Piccirilli thinks the consensus is to have Ai3 Architects proceed with placing (C3) at location #7 and placing array (C6) at location #10 with both facing east. The motion is made. John Portz seconded. Vincent Piccirilli was willing to amend the motion to consider the cost option of #2. He didn't hear a lot of support for location #1 discussion with the Committee. With motion amended, Vincent Piccirilli said (C3) at #7 and (C6) at #10 both facing east. Tom Tracy seconded; all were in favor on a roll call vote

### **Elementary School Questions / Comments**

**Question 1** – Vincent Piccirilli asked if the date for substantial completion for Lowell ES is being moved from when to when?

**Response** – Vivian Varbedian stated that it is being moved from June 2023 to July 2023. It will not impact the school move-in date of September 2023.

**Question 2** – Vincent Piccirilli thanked the Architects for looking into all the different options. Would it make sense to put the green canopy (C3) where option #2 and the purple canopy (C6) where option #7 is. Will that work? Two basic concerns that started this whole process is one, the impact on the neighbors. Some of the options like #3 and #9 would have a big impact on the neighbors and no one would want to do that. The concern also was putting it in the south field was both too close to the playground and the trees would have to be cut down so putting them where #2 is seems to be a good choice. Also, from a construction standpoint, there is already a conduit on the array behind, so it is not a big impact. If you were to put the purple canopy where #7 is, it wouldn't come down as close to where Brigham House is, you wouldn't lose the parking and it would be an extension of the array that is already there. The other slide which shows canopies #1 and #2, #2 seems like it has the most benefits and least detriment. Canopy #7 seems to be the least impactful to just extend the purple and not do the green at this location assuming this ties into the existing conduits / arrays that are there. The impact of the neighborhood and the users of the fields, those would seem to have the least amount of impact putting into those two locations. Is it possible? Interested to see what my fellow committee members think.

**Response** – Daren Sawyer (Ai3 Architects) stated that it is possible. Any combination of a purple and green on the site, needs to be replicated to make sure to get the PV output to continue Net-Zero. Yes, you can take any one of these options and combine a purple and a green PV throughout the site at the

locations shown.

**Question 3** - Leo Patterson stated that at the last meeting, we talked about this topic that there was quick consideration locating the (C6) smaller canopy between #1 and #2 on the plan. It would cover the walking area and spanning. What was the impetus not to explore this as an option? Was it deemed not beneficial for the views? Was it too much?

**Response** – Daren Sawyer (Ai3 Architects) stated that this was reviewed. He knew that Leo looked at it as well and that it was mentioned to try to tuck them between the (2) canopies that are already scheduled to go over by the parking lot areas. The C3 canopy does not fit in between there as you can see by the slide. Placing it out in front would detract from the views coming off Chauncey Street that is why they were slid to the side, one to the north one to the south. Leo Patterson said listening to member Piccirilli, he suggested that (C6) could be in #7 position and (C3) could be closer to area #4. Reversing position could be beneficial as well, consideration of (C3) at location #7. Not sure if it can extend directly off the current condition or check back to make sure parking is maximized. Also, Daren is in support of location #10 but would prefer to see (C6) there as it is overall less of a skill condition covering a batting cage. Daren says that they can put the (C3) over at location #7. We can also split the canopy in half like (C6). On (C3) there are (5) foundations or structural points where you can put a combination or (3) below. Leo Patterson said just if it is cost effective do not split if it is better to end the current run and start the new one with the full (C3).

**Question 4** – Jim Kane asked about the structural steel and whether it can be reused with what has already been ordered or is there any modification or new steel that needs to be ordered that can impact any of these locations?

**Response** – Daren Sawyer (Ai3 Architects) stated that all the structuring steel for the canopies are currently on site. All the proposed relocation does utilize the existing steel structures. The only thing that may need to be modified would be the footings or the foundation for the structures if it needs to be raised for clearances. It is a concrete change not a steel change.

**Question 5** – Steve Magoon asked Daren Sawyer (Ai3 Architects) if he can explain why a (C6) and a (C3) is needed?

**Response** – Daren Sawyer (Ai3 Architects) stated that you need (C3) and (C6) to replicate those to generate 970 kW of solar energy to be net-zero. You need to replace in like size basically the footprint of the square footage of the PV panels somewhere on site to maintain the PV output for net-zero.

**Question 6** – Leo Patterson stated that in the #7 location, the arrays that are there are oriented towards the West, the left one is oriented West and the right one oriented East. Assuming location #10 can be oriented towards the West without much impact. Is this correct?

**Response** – Daren Sawyer says that you can rotate that 180 degree. We felt it was a better solution to have the high portion of the canopy towards the field to get the batting cage to fit underneath it. Kris Bradner (Traverse Landscape Architects) added that it will be really tall as it needs to clear 13' ft. Also, the footings will be swapped unless they figure out a structural design, they will have the footings on the eastside of the batting cage which is between the path and the batting cage. This will have to be tilted in the other direction to face west. There could be some constraints with flipping it.

**Question 7** – Attendee Carol Blackwood asked if you could go over where the parking will be to see the full impact?

**Response** – Daren Sawyer stated that the purple areas will go over some parking which will be maintained underneath and as you get down at the green areas down towards the south end of that canopy is where the (3) parking spaces will have to go due to the array that was placed in that location. All the other parking throughout the site is maintained with these options.

**Question 8** – Attendee Diane asked how much faculty parking will there be and where?

**Response** - Kris Bradner (Traverse Landscape Architects) says that faculty parking is noted where #5

and #6 panels are along that stretch. The visitor parking is assigned at the front of the school and the parking lot where #7 is general use, staff, and community parking.

**Question 9** – Attendee AnnMarie Cloonan asked what is the least expensive option?

**Response** – Daren Sawyer states that he does not have an answer for that without going through the exercise with the contractor and looking at utilities that need to be placed. If modifications need to be made to concrete foundations, we must develop these further and get them to the contractor so they can start putting some numbers on them.

**Question 10** – Steve Magoon asked about comparison purposes. What is the clear height on the ones that are installed over by the parking, the ones near #7 structure?

**Response** – Daren Sawyer (Ai3 Architects) stated that currently the design for the low end is roughly 8.5 ft to the bottom of the structure and the high end is almost 17 ft.

**Question 11** – John Portz needed clarification about raising the arrays about 5ft on the low end.

Would you still have to do that if it is oriented to the east? Would the height of the arrays be similar to the way the ones that are currently there on Boylston area?

**Response** – Daren Sawyer (Ai3 Architects) stated “Yes” because the batting cage itself is 13 ft to the top so you would need to clear the structure of the canopies to get over that batting cage. You would have to raise it higher. The underside of the high end currently as designed would be about 17 ft then it would angle down from there. The rise is 3 inches over 12 inches. Not sure of the width of the batting cage so more study would have to be done.

**Question 12** – Leo Patterson said if there could be a possible supplemental steel footing connection that could orient the canopies flatter so that you can flat lid them or close to flat condition just above the 13’ that you need. Does the existing pitch running east need to be maintained or is that variable?

**Response** – Daren Sawyer stated that this was looked at and the current pitch is about 42 degrees which is the optimal slope in order to maximize your solar output. Once you start to go flatter, you’re starting to lose output. No calculations have been done but was told that you can go down to a three-degree angle on them but your losing capacity once you start losing that slope.

**Question 13** – Attendee Armond asked if #5 can be moved towards #10 so it looks part of the school?

**Response** – Daren Sawyer stated that this was reviewed but the problem with this is that you’re tucking it behind the school and the school will be on your Southern exposure so you would not get the benefits of the solar as it would be too much shading at that location per the solar consultant.

**Comment A** – Paul Anastasi thought it was ashamed to put anything across the front of the brand-new beautiful building. It is a disservice to our Architects who designed such a beautiful building. We will lose all our curb appeal driving down Chauncey Street. We won’t be able to see the front of the building. You will see the top levels, but you have to give up something. As far as foul balls, you probably should investigate the netting to capture more foul balls and do less damage on the PVs. He believes that you will have to look into to any conflicts with public utilities. There used to be a road at one point and a water main in the area. Due to paying for a large change order at Cunniff ES to move a water line, you want to make sure that DPW is involved with any of these choices, and we don’t end up paying big money to move a water line because of us moving locations for PVs. Daren Sawyer (Ai3 Architects) stated once we have direction to move forward, we will definitely engage DPW. We will get as-builts. A lot of the information is accurate according to the as-builts we have so far. As far as the netting is concerned, it was looked at. The back stops themselves are behind the soft ball fields which is 32 ft tall. The netting that continues beyond that is 20 ft tall because it continues beyond the back stop on either side. The durability of the PV panels was looked at as well.

This question was asked specifically to the PV consultant who stated that these are tested to withstand a hailstorm. A piece of hail about an inch and a half in diameter travelling at 60 miles an hour, these panels can withstand that type of storm. These are durable enough to withstand a hailstorm whether or not a softball or baseball is traveling at that speed. We built backstops in the netting, and we could take a look at increasing the netting height if we wanted to.

**Comment B** – John Portz agreed with what Vincent Piccirilli proposed with at least moving one component to where #7 is. It makes a lot of sense. Questions is where would the other component go? The idea of (2) is a possibility although it would be nice to keep that area if we are going to plant a few trees, have shade from the trees and open grass area in addition to the playground. He wonders with option #10 because option #10 there is no trees there regardless. This is a space that is wide open to the solar panels. He would like to hear a little more about putting the batting cage under that; how is that going to work? If the panels are there, would they face East or would they face West? Daren Sawyer (Ai3 Architects) stated that they are on Eastern exposure. The low end would be on the basketball playground side and the high end is facing the softball field. We may have to increase the footing heights of the structures to make sure we have enough clearance underneath for that batting cage. John Portz asked if these wouldn't be in direct line to foul balls from the fields? Daren stated "Yes" because the high end is towards the softball field on the lower end on the other side.

**Comment C** – Superintendent Deanne Galdston acknowledged the solutions certainly meet a lot of the needs we describe from the school department viewpoints. If we had a combination of #7 and #10, that would allow for the open playground area, a little bit of the field and not having the double rows of PV panel would be ideal. At this point, it is an improvement over the previous plan or by Hancock Street. Deanne Galdston thinks we are right where we should be. She likes #10 because it is tucked into a place where we are sacrificing anything by having it there except for the occasional foul ball. Newton North, they have PV panels right by the varsity baseball field. It maybe interesting to ask if they had any issues with that. I don't think it is unusual to have them by a ballfield. Expressing from the school department side, we favor #7 and #10. Looking forward to hearing from the rest of the committee and the community.

**Comment D** – Lindsay Mosca joked that the (3) parking spaces is a big deal. She likes Leo Patterson idea of having the smaller (C6) array in the #10 spot. The area underneath for a batting cage is not like grass is growing anyway, not losing anything there either. It is also beneficial that both the #7 and #10 choice is eastern facing so you don't compromise anything in terms of the direction with gaining solar. She agrees with others not liking the idea of double rows of PVs of what it would look like in front of the school. It would be nice to have #2 and #3 not there as there is nice open area that would be disrupted by the big PV. Lindsay likes the idea that Leo Patterson suggested using #7 and #10 but possibly having the bigger one over in the #10 spot.

**Comment E** – Chairman Sideris has concerns with #7 being both arrays as it is too much. We talked about impacting neighbors. We are doubling one array. He believes we can put one there. My original thought is to put where #2 is because it impacts less neighbors. Also, #10 is a good option but it is still a ballfield away from the Winthrop Street neighborhood. Thank you, Jim Kane, for asking about the question about utilizing the steel. We just voted a change order for several thousand dollars because we awarded a bid late and construction cost continued to go up. We will run into a budget problem if we have to change what we are using. Thank you, Jim, for that question and thank you Daren for saying we can utilize what we have. Vivian Varbedian stated that we can utilize the steel but there will be a change associated with making a selection for the concrete footings that need to be redesigned as well as fees associated with redesigning. Daren also stated utilities too. We will try to get them tied

into the existing utilities that is already there. The PV panels are onsite already so these would be reused as well as the structural steel that is already onsite.

**Comment F** – Lindsay Mosca thought about impacting neighbors. Looking at option #2 and thinking about Boylston and Concord Road neighbors which has a large array already planned there then to add (2) more arrays, is already impactful to the view and neighborhood.

**Comment G** – Attendee Kendra Foley states using #7 and #10 sounds like it makes the most sense for both the schools and neighborhood.

**Comment H** – Attendee, Wife of Fred spoke about option #10 and what Vincent Piccirilli has proposed. Also, #2 and #7 and/or #7 and #4 over on Concord Street. O’Connell Park is continuing to be chipped away and it is a public park. By placing a dominant structure on the park takes up more of the parks space plus it being a high 13’ ft structure will face east in the middle of our house. The glare reflects off our home right now. Additional glare coming in from option #10, taking away from O’Connell Park and where #1 and #2 are on the school property was always supposed to have solar on that side. This is a drastic change for us and our home.

**Comment I** – Attendee Jack Dargon thanked the Committee for all their efforts they put into this once again. He had a different spin on #10 than Attendee AnnMarie. He thinks #7 and #2 appeals to him however #7 and #10 appeals more. Ascetically it looks better. Facing the arrays to the west would leave the abutters on Winthrop Street looking into the underside of #10 if it was to go there. It would be more pleasing appearance if the abutters are looking at the surface of it as he doesn’t know about the glare. The batting cages are awful looking and canopying them with the solar arrays might mitigate some of that.

**Comment J** – Attendee Jocelyn Tager wanted to make (4) points. You are considering having the arrays onsite cause it is a net-zero school, wherever the arrays are placed needs to be efficient as they were in their first location, given the escalating cost of everything placing them where they are already conduits as #2 and #7 make sense which will decrease the cost and lastly in terms of the batting cages and batting fields, if you’re going to put arrays where #10 is, we need to be really serious about netting them so no one is hurt by flying balls.

**Comment K** – Attendee AnnMarie Cloonan commented about taking additional green space off O’Connell Park and reflects directly on the Winthrop Street neighbors.

**Comment L** – Attendee Maureen Foley feels the only place to put the solar panels can only be on the Z building site. Nothing should be placed on Boylston Street due to the density of the present panels. It is not fair to that neighborhood. Also, to put the panels on Mount Auburn Street is unsightly. I think we all agree that the options that are towards Mount Auburn Street were already reviewed and indicated recommending to not pursue those options. The ones that are in question would be #7 which would be the Boylston as well as locations where the Z building is currently. Option #7 and #2 that Vincent Piccirilli proposed is a great option. #10 is on O’Connell Park. Do any of the new options we are looking at require cutting down of trees? Vivian Varbedian does not believe any of the options that we are looking to move forward with being #1, #2 #7 or #10 require any removal or cutting down of trees. The ones that already had options #8 on Mount Auburn Street had some trees that needed either to be relocated or cut down; already eliminated that option or recommended to eliminate that option.

**Comment M** – Attendee Kendra Foley says the green space in the playground is equally valuable to the green space on O’Connell Field.

**Comment N** – Chairman Sideris stated that the Committee would have to make a decision on which way to go before we can get accurate pricing. We are looking for the Committee to make some decisions this evening so we can keep going and keep the project on somewhat of a schedule.

**Comment O** - Tom Tracy realizes that the Committee is leaning towards #7 and #10 but to really make a decision he would like to also see the cost related to #7 and #2. The concern is with #10, the utility move and the height. He would like a cost comparison with #7 and #10 or #7, #1 and #2.

**Comment P** – Lindsay Mosca had concerns that #10 array would get too tall based on having a batting cage. She likes #1 better than #2 because it provides some shade and does not interrupt the grass space at that section of the park. She states that it makes sense for a back-up plan both for cost purposes and potential height that #10 would have to be since we haven't fully explored it yet.

**End of Elementary School Project Business Meeting**

Chairman Sideris ended the Elementary School Project Business meeting at 7:21 pm.