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| Project: | Lexington High School | Project No: | |
| Subject: | School Building Committee Meeting | Meeting Date: | 10/28/24 |
| Location: | Hybrid (146 Maple Street & Zoom) | Time: | 12:00 PM |
| Distribution: | Attendees, Project File | Prepared By: | J. Greco |
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| Present | Name | Affiliation | Present | Name | Affiliation |
|---------|----------------------|---|---------|-----------------------|-----------------------|
| ✓ | Kathleen Lenihan* | SBC Chair & SC Member | ✓ | Mike Burton | DWMP |
| ✓ | Michael Cronin* | SBC Vice-Chair & LPS Facilities | ✓ | Christina Dell Angelo | DWMP |
| ✓ | Julie Hackett* | Superintendent | ✓ | Jacob Greco | DWMP |
| ✓ | Kelley Axtell* | Interim Town Manager | | Chris Schaffner | Green Engineer |
| ✓ | Joe Pato* | Select Board Chair | ✓ | Lorraine Finnegan | SMMA |
| ✓ | Mark Barrett* | Public Facilities Manager | ✓ | Rosemary Park | SMMA |
| ✓ | Charles Favazzo Jr.* | PBC Co-Chair | ✓ | Matt Rice | SMMA |
| ✓ | Jonathan Himmel* | PBC Chair | ✓ | Brian Black | SMMA |
| ✓ | Andrew Baker* | Interim Lexington High School Principal | ✓ | Erin Prestileo | SMMA |
| ✓ | Carolyn Kosnoff* | Finance Assistant Town Manager | | Anthony Jimenez | SMMA |
| ✓ | Hsing Min Sha* | Community Representative | ✓ | Martine Dion | SMMA |
| ✓ | Kseniya Slavsky* | Community Representative | ✓ | Anoush Krafian | SMMA |
| ✓ | Charles Lamb | Capital Expenditures Committee | ✓ | Michael Dowhan | SMMA |
| ✓ | Alan Levine | Appropriation Committee | | Pete Timothy | A.M. Fogerty |
| ✓ | Dan Voss* | Sustainable Lexington Committee | | Rick DeAngelis | Recreation Department |
| | Maureen Kavanaugh | Director of Planning and Assessment | | Cindy Arens | Recreation Department |

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| | Andy Oldeman | | | Melissa Battite | Recreation Department |
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| Item No. | Action Item | Requested by | Ball in Court |
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| 21.3 | Translate the Geothermal Conductivity Unit | M.Sandeen | SMMA |
| 21.7 | Update the Criteria Matrix | SBC | SMMA |

- Please click [here](#) for the presentation
 - o This will be referenced in the meeting minutes with slide numbers called out to refer to.

| Item No. | | Description |
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| 21.1 | Call to Order & Intro: Called to order by Kathleen Lenihan at 12:01 pm | Record |
| 21.2 | Approval of October 15 - 2024, October 21 - 2024 Meeting Minutes: <ul style="list-style-type: none"> • A motion to approve October 15 - 2024, October 21 - 2024 Meeting Minutes made by J.Hackett and seconded by M.Cronin • Discussion: None Roll Call Vote: A. Baker – Yes , M. Cronin – Yes, C. Favazzo – Yes, J. Hackett – Yes, J. Himmel – Yes, C. Kosnoff – Yes, J. Pato – Yes, K. Slavsky – Yes, H.M Sha – Yes, K. Lenihan – Yes, D. Voss - Yes, K.Axtell - Yes, M. Barrett - Yes 13-0-0. | Record |
| 21.3 | Geothermal Update <ul style="list-style-type: none"> • A.Oldeman provided an update on the geothermal wells <ul style="list-style-type: none"> o Bedrock at 70ft o Unstable borehole conditions at 190ft - Bloody Bluff o Low thermal conductivity: 1.3 Btu/hr-ft*F o Next Steps <ul style="list-style-type: none"> • Additional test bore holes proposed to confirm • Refine system sizing • M.Sandeen noted that the Hastings report had conductivity values of 1.3 and 1.9, and he will look into it <ul style="list-style-type: none"> o L.Finnegan noted they will review it again also | Record |

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| | <ul style="list-style-type: none"> • M.Sandeen asked if SMMA can translate the unit into something that is easier to understand such as tons per well <ul style="list-style-type: none"> ◦ SMMA agreed • M.Sandeen asked when they would get the new reports from the additional test wells <ul style="list-style-type: none"> ◦ L.Finnegan noted they are not sure but hopefully faster this time due to the testing company being located in North Carolina as they were impacted by the hurricane. She noted at best 3-4 weeks. | |
| 21.4 | <p>Life Cycle Cost Analysis (LCCA) Update</p> <ul style="list-style-type: none"> • M.Dion reviewed the PSR adjusted LCCA <ul style="list-style-type: none"> • Incremental Costs and Paybacks • Summary HVAC Systems Costs and [Construction] Incentives • 75-yr. LCCA PSR Update • Peak Load Analysis – In Progress • Planning a 2nd integrated meeting with Eversource: <ul style="list-style-type: none"> ◦ Electrical Infrastructure Planning ◦ Solar PV/Interconnection ◦ Demand Response ◦ EV Charging Stations • M.Dion reviewed the costs associated with the LCCA (Slides 10 to 13) • M.Dion reviewed the post occupancy incentives <p>PRELIMINARY LCCA Peak Load Analysis – in progress:</p> <ul style="list-style-type: none"> ◦ Update to SDA Solar PV monthly peak harvest output analysis ◦ Energy Model: Monthly estimated energy model peak load demand ◦ Utility Programs - Demand Response: <ul style="list-style-type: none"> • Connected Solutions: Summer months - max 150% of your peak from storage • HVAC BMS virtual program – preset HVAC systems' controls reductions • To be further discussed with FM team and Eversource <p>Additional LCCA Annual Savings:</p> <ul style="list-style-type: none"> ◦ GSHP - Alternative Energy Certificates (AEC) - RECs ◦ Solar PV - SMART Program – TBD <ul style="list-style-type: none"> • J.Pato clarified a comment that the two systems have instant payback, not that there is no payback. <ul style="list-style-type: none"> • L.Finnegan noted to achieve the IRA incentives the system must be fully commissioned • J.Hackett asked if it can be clarified where the \$1.1 million in savings from electricity comes from. <ul style="list-style-type: none"> • M.Dion noted that value came from M.Sandeen's memo and that the LCCA value could increase with the post occupancy savings. • M.Burton noted that this also includes the geothermal or air source incentives and not any of the other ones such as a solar/battery storage • M.Burton noted that the upfront costs provided are for the systems only and do not include rebuilding the fields under the geothermal options | Record |

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| | <ul style="list-style-type: none"> • L.Finnegan noted that the yearly savings represent the cost you would save versus an average baseline if a fossil fuel system was used it is not comparing it to the existing system • H.M. Sha noted that these values may change after the election next week if the IRA incentives are removed. He asked why the costs for the fields are not included. <ul style="list-style-type: none"> • L.Finnegan noted that this model was supposed to compare the two systems and did not include the project costs, she noted they could add the dollar value, so it is easier to understand • H.M. Sha asked when they needed to choose a system. <ul style="list-style-type: none"> ◦ L.Finnegan noted in Schematic Design the SBC must choose • M.Sandeen noted that the numbers presented here seem consistent with the estimates. Sandeen asked if they could relook at the IRA value for geothermal <ul style="list-style-type: none"> • M.Sandeen noted there are some things that have to be excluded and the updated PSR costs may change it, but they will look into it. | |
| 21.5 | <p>Solar Photovoltaic (PV) Update</p> <ul style="list-style-type: none"> • M.Dion reviewed the current Solar PV analysis starting on Slide 17 <ul style="list-style-type: none"> ◦ Estimated building annual energy usage is still 3.3 - 3.5 Megawatts based on an EUI of 25 • B.Black walked through the renderings of the solar PV canopies starting on Slide 23 • D.Voss asked to confirm that the choice of the ground source vs air source is the difference in roof space <ul style="list-style-type: none"> ◦ M.Dion noted yes • D.Voss noted that if they have a note for additional costs for net positive it should be noted that the extra intake will make money for the town. He noted the slide should show the net cost. <ul style="list-style-type: none"> ◦ L.Finnegan noted that the intent of it was to show that there would be more costs than what is currently being carried and presented in the PSR cost. ◦ D.Voss noted that makes sense but when presenting this it should be known that being net positive will actually produce revenue for the town • M.Dion noted that Eversource may not take net positive metering, and the project team is meeting with them again this week to review it. • D.Voss noted that the image used to portray the long span canopy uses a roof system with canopies on top and that is not what would be used as the high school would use a framed system with canopies on top. Voss noted that the best idea would be to go for a field visit to experience both types of canopies | Record |

| | <ul style="list-style-type: none"> K.Lenihan noted that they have their net zero requirement and LEED Gold requirement and asked that they need all three sections to meet these goals <ul style="list-style-type: none"> M.Dion noted yes, the choice is between long span canopies or normal solar canopies K.Lenihan also noted that if an expansion is created it would use more energy <ul style="list-style-type: none"> L.Finnegan noted that it would also increase roof space for PV A.Levine asked where solar panels could go that would not shade vegetation and listed walkways, streets, the Clarke Street turnaround area <ul style="list-style-type: none"> B.Black noted those are all possible, but the team is not there yet in having to look at those options and they would not add the amount of energy that long-span canopies would. B.Black noted that any PV canopies used would be designed to be incorporated into the design and make them aesthetically pleasing H.M. Sha asked how much leeway there is in the design phase to decrease energy usage <ul style="list-style-type: none"> L.Finnegan noted that the number presented is not as conservative as the high school is used all day, every day, and all year. A.Levine asked if the 25 EUI is hard to reach? <ul style="list-style-type: none"> M.Dion noted no it should not be hard to reach M.Cronin noted that in all buildings EUI 25 is a large milestone and it is hard to reach just not in this specific project | | | | | | | | | | | | | | | | | | | |
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| 21. 6 | <p>Student Enrollment Considerations</p> <ul style="list-style-type: none"> L.Finnegan reviewed the current student enrollment considerations (Slide 34) <table border="1"> <thead> <tr> <th>Increase #of Students per Class and Classroom Utilization Rates</th><th></th><th></th></tr> <tr> <th># of Students per Class</th><th>Classroom Utilization Rate</th><th>Total # of Students</th></tr> </thead> <tbody> <tr> <td>23</td><td>85%</td><td>2395</td></tr> <tr> <td>24</td><td>85%</td><td>2480</td></tr> <tr> <td>25</td><td>85%</td><td>2546</td></tr> <tr> <td>25</td><td>90%</td><td>2695</td></tr> </tbody> </table> <ul style="list-style-type: none"> Increased Class Size: This would be across the board except in rooms that have identified capacities. E.g. special education, technology labs where safety is a concern; science lecture/labs. In each of these cases, additional rooms need to be added. Utilization: It is industry standard to program a High School at 85%. One cannot simply translate an increased utilization rate to an increased number of students. Utilization is the percentage of time a room is used. The higher the rate, the reduced opportunity for students to be accepted into the desired classes. The higher the rate the more difficult it is for Administration to schedule the spaces. | Increase #of Students per Class and Classroom Utilization Rates | | | # of Students per Class | Classroom Utilization Rate | Total # of Students | 23 | 85% | 2395 | 24 | 85% | 2480 | 25 | 85% | 2546 | 25 | 90% | 2695 | Record |
| Increase #of Students per Class and Classroom Utilization Rates | | | | | | | | | | | | | | | | | | | | |
| # of Students per Class | Classroom Utilization Rate | Total # of Students | | | | | | | | | | | | | | | | | | |
| 23 | 85% | 2395 | | | | | | | | | | | | | | | | | | |
| 24 | 85% | 2480 | | | | | | | | | | | | | | | | | | |
| 25 | 85% | 2546 | | | | | | | | | | | | | | | | | | |
| 25 | 90% | 2695 | | | | | | | | | | | | | | | | | | |

| Plus Expansion into Central Office Space | | |
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| # of Students per Class | Classroom Utilization Rate | Total # of Students |
| 24 | 85% | 244 |

- **Central Office Retrofit:** At this level of analysis this space has been calculated as general education classrooms only, although some of that space may need to be SPED or Admin space.

| Plus Additional Expansion | | |
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| # of Students per Class | Classroom Utilization Rate | Total # of Students |
| 24 | 85% | 256 |

- **Expansion Space:** At this level of analysis this space has been calculated as general education classrooms only, although some of that space will most likely need to include SPED classrooms, Additional Dining and Media Center capacity and Admin space.
- K.Lenihan noted that there are only three high schools in the state north of 3,000 students. She noted it is not about how you fit 3,000 students into a high school, it is a conversation about how the town approaches it.
- A.Baker noted that so much of the life of the school is driven by eating time and spaces and asked for any creative ideas about dining locations and additional places to eat.
- J.Hackett noted they are at 95% utilization rate currently and she noted that when the enrollment peaks it does not stay that high. She thinks it would be good to have a conversation about how many students they would want to have in the school and when it is too large.
- J.Himmel noted that if the project changes central office to classrooms during construction, would the cost change? Himmel noted that if his numbers are correct, it would be about \$30 million to add the 256-student expansion space based on \$1,440 per square foot. He asked how that compares with a two phased project and if you are better off just spending the money now. Himmel noted that he is hearing that the maximum number of students may be 3,000 and that there may be a healthy size for the building that should be figured out.
 - M.Burton noted that the cost would be very close to the same for changing the central office to classrooms
- Himmel noted that there should be bookstore to the size of the school and that the school will not just keep growing and getting larger as the population does.
- K.Lenihan noted that it is good to remind everyone that MSBA does not do two phased projects with gaps in between
- A.Levine asked where the limit in size and student population would stop functionally efficiently. He asked if this number of expansions is 500 or larger?

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| | <ul style="list-style-type: none"> • A.Baker noted that J.Himmel's question may not actually have a mathematical or scientific answer as everything is case by case basis. He noted that in this community it would be good to talk about what limits are too large for Lexington. • K.Slavsky noted that they have built multiple ways to expand the project, and it seems like they are already reaching the upper limits of what high school should be. She asked if there are certain milestones and dates that the SBC should be aware of where escalation and costs should be an issue. She clarified by asking if they are slowing down any of the processes to accommodate any of the issues being discussed <ul style="list-style-type: none"> ◦ L.Finnegan noted no they are not as they are planning around 2,395 students. She noted during Schematic Design they will be creating actual layouts of the school, and this is when they would have to choose including extra cafés or bathrooms for future expansion. ◦ B.Black noted the site team will also be working during this time, and it is important to not claim space that will be needed in the future. ◦ L.Finnegan noted that they have not even discussed the increase in parking that would be needed • M.Burton noted that he has never had an MSBA project that changed enrollment, and it would be precedent setting. Burton noted that this would setback the project in many ways, but he is not sure how. <ul style="list-style-type: none"> ◦ L.Finnegan noted that they would at least have to restart the design and get new cost estimates ◦ J.Pato noted that there are also elements that are at their maximum • J.Himmel asked what the maximum size the high school could be with the footprint currently reserved by Bloom? He noted that they have shown how they can expand, and the answer may be that they should not expand any further • H.M. Sha noted that the 500-design capacity is the right number, and the team has spent a lot of time reviewing this. He noted that anything larger should be handled outside of this project and not by a larger school, he noted it is not the responsible solution. | |
| 21. 7 | <p>Criteria Matrix Evaluation</p> <ul style="list-style-type: none"> • B.Black reviewed the current criteria matrix to be shared at the community meeting about why the two options left were selected (Slide 38) • J.Himmel noted that all these options satisfy the statement of interest requirements and anything else proposed would also have to satisfy these requirements as well as the education plan. <ul style="list-style-type: none"> ◦ The project team would note they would add it • J.Hackett noted a line could be added about how easy MEP systems can be maintained and replaced | Record |

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| | <ul style="list-style-type: none"> J.Pato noted committee members should be prepared to share their reasoning | |
| 21.8 | Public Comment <ul style="list-style-type: none"> Please see the linked recording for public comments. https://lexingtonma-org.zoom.us/rec/share/lr3BqzIHK8kwYV19KXJlfT2KqU043spN8Gzg_tRK_eYU36jHWHaxHxOJWbiDphWoA.gWEHRVXqh6ugAedH | Record |
| 21.9 | Reflections/Action Items - None | Record |
| 21.10 | Adjourn: Motion to adjourn at 1:55 was made by J.Hackett and seconded by M.Barrett Roll Call Vote: A. Baker – Yes , M. Cronin – Yes, C. Favazzo – Yes, J. Hackett – Yes, J. Himmel – Yes, C. Kosnoff – Yes, J. Pato – Yes, K. Slavsky – Yes, H. Sha – Yes, K. Lenihan – Yes, D. Voss - Yes, K.Axtell - Yes, M. Barrett - Yes 13-0-0. | Record |
| | | |

Sincerely,

DORE + WHITTIER

Jacob Greco

Assistant Project Manager

Cc: Attendees, File

The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.