MEETING NOTES

DORE + WHITTIER

Meeting Date: January 24, 2024
Project Name: Lexington High School
Project Number:
Subject: MEP and Sustainability Focus Group Meeting
Attendees:

Present	Name	Affiliation	Present	Name	Affiliation
✓	Cynthia Arens	Sustainable Lexington Committee Chair		David Pinnsonnault	Director of Public Works
	Susan Barrett	Town Transportation Manager	✓	Todd Rhodes	Sustainable Lexington Vice Chair
✓	Chris Bouchard	Project Engineer	✓	Mark Sandeen	Select Board
✓	Phil Coleman	Permanent Building Committee	✓	Sophie Shaw	Student
	Julie Hackett	Superintendent of Schools	✓	Nancy Sofen	Tree Committee
	Wendy Heiger-Bernays	Board of Health		Bernardo Streithorst	Student
✓	Jon Himmel	Permanent Building Committee Chair	✓	Jillian Tung	Board of Health
	Lin Jensen	Support/Resident	✓	Dan Voss	Sustainable Lexington Committee
✓	Vincent Lerow	AV Technician		Dave Wininger	Digital Learning Coach
	Tina McBride	Support/Resident	✓	Lorraine Finnegan	SMMA-Project Manager
✓	Asa Mele	Student	✓	Matt Rice	SMMA-Project Architect
✓	Shawn Newell	Assistant Director of Facilities	✓	Martine Dion	SMMA-Director of Sustainability
✓	Glenn Parker	Appropriation Committee Chair	✓	Andy Oldeman	SMMA-Director of Engineering
	Maggie Peard	Town of Sustainability and Resilience Officer	✓	Anthony Jimenez	SMMA-Electrical Engineer
✓	Brian Black	SMMA-Design Architect	✓	Rachel Rahmlow	SMMA-Project Manager for Sustainability
				Vamshi Gooje	SMMA-Principal in Charge for Sustainability
			✓	Mike Burton	Dore + Whittier
			✓	Christina Dell Angelo	Dore + Whittier
			✓	Rachel Rincon	Dore + Whittier
			✓	Elias Grijalva	Dore + Whittier

Agenda Item	Description
1.	**Introduction:** Refer to attendees list.
2.	Please refer to attached presentation for meeting materials. SMMA introduced team: Lorraine Finnegan Project Manager Matt Rice Project Architect

Martine Dion Director of Sustainability
Andy Oldeman Director of Engineering
Anthony Jimenez Electrical Engineer
Rebecca Rahmlow Project Manager for Sustainability
Vamshi Gooje Principal in Charge for Sustainability

SMMA team states that the first meeting today is to go around the room to each focus group member, hear what they are concerned about, what they want to talk about and goal at next meeting is to answer the questions and concerns.

SMMA presents the focus group objective:
Review preferred MEP systems, sustainable design features, healthy materials, environmentally friendly design and renewable opportunities.

Focus Group Timeline:
At the first meeting the agenda is to listen, at the second meeting to review and respond, at the third to confirm and recommend, and the fourth to reconvene with all of the focus groups.

SMMA explains that the project is currently in the PDP phase with the MSBA. They explain that a PDP is the Preliminary Design Program process. During this project the District and its team collaborate with the MSBA to:

Document their educational program
Generate an initial space summary
Document existing conditions
Establish design parameters
Develop and evaluate alternatives
Recommend the most cost effective and educationally appropriate preferred solution

SMMA reviews the project sustainability givens:
MSBA Green School Policy:

- Base: LEED Silver, Stretch Energy Code, MEP/BE/Ongoing LEED Commissioning, 3LEED MR/IEQ points
- 4% Additional Reimbursement: Specialized stretch code (3%), and 5 LEED MR/IEQ points

Massachusetts Specialized Code

- Full compliance with the standard stretch energy code
- 3 pathways:
    - All electric HVAC and DHW pathway
    - (2) fossil fuel heating pathways
    - Electrification of heating readiness
    - Renewable energy

Lexington Integrated Design Policy

- SBC voted 9/14/23
    - LEED Gold minimum
    - Target Platinum
    - All electric heating and cooling systems
    - Resilience Level 2 (field house/gym), level 3 (remainder)
- PBC Recommendations:
    - EUI 25% or 30% >ASHRAE 90.1-2019
    - Net zero energy
    - Optimize renewals on-site
    - Battery storage analysis

SMMA presents draft LEED scorecard and explains will further review at next focus group meeting.

C. Arens:
Thinking about the future

	Separate metering for water systems and electrical systems Measure what the building does Doing this ahead of time Tie maintenance into educational possibilities Low toxicity and avoiding red list materials Reusables outside of cafeteria, lounges What is embodied carbon? Teach students Potential for bus batteries to increase resilience Being cognizant of expansion of the systems that need to support the building Micro rhythms, educating students C. Bouchard: Goals cutting edge building latest MEP technology Integration, all electric renewable energy Net zero Batteries EV charging stations A lot of communication and collaboration with utilities Building orientation maximize solar Consider best system: life cycle cost analysis, geothermal, air source, utility costs, service, maintenance 4 pipe and 2 pipe and lessons learned Simultaneous cooling and heating at same time Backup for systems Closed loop, open loop, wells, and maintenance Heat pumps designing can be used on coldest days, etc. 10 years from now on the type of systems Electrical sub meter, plumbing sub metering, leaking, valves to shut off etc. to mitigate loss P. Coleman: Agree with Chris Bouchard Challenge for group and project is to integrate so many things into one project That itself is a lesson learned Recent schools, lessons learned, geothermal, important to get data from recent schools and bring it forward into discussion on how the design will land at the end of day Overlap with tomorrow committee with design group, efficiency of outside wall tie to mechanical to everything All interest of the town to get the best value Cutting edge design to make sure right value for every dollar spent J. Himmel: Site security safety focus session Million dollars in operating costs could save with right solution EAU Identify operating costs Design The beyond That could deliver annual sales IDP explore options as early as possible Solution not something that's simple but integrated

Tech at 1st life cycle
Grants utilize and optimize
Open PBC/SLC work session to explore the beyond the usual business
Explore parameters of grants programs, life cycle, beyond business and usual
Consultants explore solutions then presented to PBC and SLC before SBC
Viable solutions 3rd step

V. Leroy:
Theater spaces larger supply of electricity
Full rigging in space fixtures to allow for service
Storage spaces and mechanical areas that house these items
24/7 HVAC and humidity control

A.Mele:
Students' representation and aware of what's happening in the project
Encourage team to get the word out and get them to contribute and be transparent about project

S. Newell:
Echo Chris Bouchard
Viability of ASHP (air source heat pump) in the next 5-10 years and repairs on them
Integration of all these systems into one specific area and sensors, security, and look at larger system

G. Parker:
Goal to serve town meeting on recommendation on spending of the proejct
Initial cost and ongoing costs
Need robust systems that are efficient and easy to maintain

M. Peard:
Lexington place to eager to push envelope in sustainability
Not just todays best practices but beyond
Emerging technologies
Transportation: car traffic, easy egress and encourage students to bike or walk to school
Transition to electric school busses
EV chargers
Curriculum that students can learn from the building
Monitors in the school
Outdoor connection and learning spaces

T. Rhodes:
Town will have electric school buses in the future
Don't have a place to charge them
Could be offsite to charge
And could be integrated into the high school
Batteries would support the building as well
Needs to be early in the process

M. Sandeen:
Goal of IDP is for health of students and staff
If there is a tradeoff between energy efficiency and health, we will go towards health as a priority

When we model what we need for energy storage systems
All of decisions are made for health of students and staff
Recommendations from DPH and board of health
600 million CO2/3 megawatts of solar would be needed
Sensors in the building air quality so they can respond to it
Ventilation is quite large
No amount of ventilation gets rid of the toxins in the walls, carpets, etc. red list and offset of the materials being used
Significant upfront agreement with utilities
Make sure have enough energy storage and integration system agreement
Need an hourly energy model at very early stage
Modeling heating and cooling load

S. Shaw:
Increase transparency for students
Renewable energy
EV charging stations
Heating and cooling in building is very inconsistent
Important to build green spaces for students to interact with nature

N. Sofen:
Green infrastructure is the only infrastructure that doesn't depreciate
Incremental but important accomplishments
Use of trees for shading, cooling, wind
Sustainable sites would be helpful in deciding where to site the school
Health of students
Creating outdoor spaces
Look at on tree design?? To figure out where to plant trees
Landscaping to provide shade and lower air temperatures
Use of native plants

J. Tung:
Support healthfulness to minimize detrimental materials
Air quality and ventilation is important for health
Access to outdoors is important
Preferably away from roads
Exposure to natural light indoors
Acoustic comfort, mindfulness of noise levels
Consideration of maintenance of the structure
D. Voss:
Timing is critical when thinking about incorporating sustainability elements
Making building solar ready
Putting in infrastructure for solar EV
Designing building to be ready for storage
Not solutions that can be tacked on afterwards without significant cost
Ask ourselves about the cost of implications of delay

L. Jensen:
Solar ready building is critical

	Should strive for net positive Creative roofline pitch facing south Canopies Awnings Massing of building - utilize space for multifunction's Combining spaces that aren't occupied at the same time to reduce energy use Have one wing without geothermal to allow for expansion M. Sandeen: Local bike store owner Selling 3 times as many e bikes as pedal bikes Storage for e bikes are bigger and security measures/charging Next Steps: What to expect in meeting #2: Objective: The design team will speak on the topics below as well as the priorities brought up by the focus group today Topics: Lexington Public Schools experience with systems-best practices and lessons learned All electric MEP systems Renewable energy Net-Zero Energy Exterior Materials & Massing/Orientation Embodied Carbon Healthfulness Interior Materials, indoor air quality, access to daylight and outdoors Sustainable Sites
3.	**Close** The next site, safety and security focus group meeting will be held on February 12, 2024 1-3pm. Estabrook Hall, Cary Memorial Building.

Sincerely,

DORE + WHITTIER
Christina Dell Angelo
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.