

WESTWOOD ELEMENTARY SCHOOLS BUILDING PROJECT COMMITTEE
Westwood, Massachusetts

“GREEN CHARRETTE” SUSTAINABILITY KICKOFF WORKSHOP MEETING MINUTES

January 30, 2020

Attendance and Call to Order

The meeting was called to order at 8:01am in the Jaillet Meeting Room at the Westwood Police Station by Chair Maya Plotkin. Also present were: Ken Aries, Brian Bayer, Allison Borchers, Christopher Coleman, Sarah Cronin, John Cummings, Abby Hanscom, Nancy Hyde, Lemma Jn-baptiste, Josepha Jowdy, Carol Lewis, Michelle Miller, Emily Parks, and Kate Scales. Charlie Donahue, Pam Dukeman, and Tony Mullin were absent. Allison Borchers left the meeting at 10:41am. Christopher Coleman left the meeting at 11:13am. Abby Hanscom left the meeting at 10:42am. Carol Lewis left at 9:30am. John Cianciarulo recorded the minutes.

Welcome and Introductions

All those in attendance introduced themselves. Invited guests included Tom Philbin, Town Energy Manager, Steve Harte of the Westwood Environmental Action Committee, and Kim Cullinane of Eversource.

Chin Lin of Compass Project Management represented the Owner’s Project Management team. Don Walter, Rob Fitzgerald, and Glen Gollrad, of Dore and Whittier, represented the design team.

Erik Ruoff, Principal and Michael Munn, Project Manager, of The Green Engineer, a sustainability design consulting firm; Matthew DiSalvo and Dan Sarro of G-G-D (Garcia, Galuska, and DeSousa), an engineering design firm; and Vamshi Gooje of Thornton Tomasetti, a structural engineering company, were in attendance.

Project Overview and Filing Schedule Overview

Mr. Ruoff presented.

Discussion of Scope of Project and Schedule

Fifteen options have been reviewed and estimates are currently being maintained. The PDP submission is scheduled for March 25, the PSR submission on July 8.

Team Visioning and Project Priorities

Rob Fitzgerald, of Dore and Whittier, provided a brief overview of the feedback from the community visioning sessions held in the fall and winter.

Mr. Ruoff facilitated a visioning exercise, asking the group:

- What would you want to the *Westwood Press* to say about this project when the new school is complete and occupied?
- What’s important to you if your child were attending?

After reviewing the feedback, Mr. Ruoff led a second exercise related to project priorities, asking those in attendance to rank their personal important of the following:

User Experience:

- Views and access to Outdoors
- Building as Teaching Toom
- Biomimicry
- Promotes wellness and active design

Outcomes

- Third party certifications
- Net Zero Energy
- Embodied Carbon Reduction
- Efficient Water Use and Reuse

Site Features

- EV Charging Stations
- Preservation of Natural Landscape
- Pedestrian and Cyclist Infrastructure
- Rainwater management and reuse

Building Features

- Renewable energy
- Healthy materials
- Improved air quality
- Resilient (passive survivability)

Mr. Fitzgerald shared that the purpose of this Green Charrette is to set the tone and direction that the firm will take on the project and to determine where the priorities lie.

Sustainability Commitments and Other Goals/Requirements

MSBA

- Green Schools Program: Achieve LEED-S v4 “Certified” and exceed Massachusetts Energy base code by 10%.
- Additional 2% reimbursement is available if the above is achieved *and* exceeds the Massachusetts Energy base code by 20%.

Westwood Requirement/Commitments and Goals

1. Passive House Design Standard as goal
2. Orientation of building
3. Orientation of roof/eliminating penetrations to maximize PV
4. Maximize thermal bridging between exterior wall and inside to passive house standard
5. Super Insulation – closed cell foam topped off with open cell foam to achieve R60 roof and R43 walls
6. Slab design insulated from building
7. Triple pane argon filled windows
8. Daylighting
9. HQ Air Exchange System
10. Ground Source Heat Pump heating

11. Integration of existing on-site solar into project

Mrs. Plotkin shared that the School Building Committee would like to do as much as possible, but also would like to be cost-conscious.

Mrs. Hyde shared that, during the building project for the police station, they looked at add-ons and the payback. From that, with a payback between six and eight years may be worth considering; thirty would not. While there are some that may believe of the add-ons would be worth it at any cost, she believes that anything with a payback of less than ten years should be seriously considered.

Mr. Bayer believes that relative cost is important. A lot of the items and a lot of the goals may not cost much right now.

Mrs. Lewis asked that, since there are so many options right now, how is it determined what to do first, especially if they are dependent upon which design is chosen? Mr. Fitzgerald responded that, right now, the goal is to balance the design of spaces that meet the educational program while also achieving sustainability goals.

Mrs. Jowdy asked about the need for cost options for the sustainability projects. Mr. Fitzgerald responded that the purpose of today's meeting is to discuss big picture options.

Mr. Philbin responded that most of the sustainability options are no-cost or minimal cost items: daylighting, orientation of the building, roofing that does not interfere with solar.

Mrs. Plotkin responded that, when evaluating from fifteen options to short list, sustainability is not part of the criteria. Should it be assumed that, to some extent, these apply to all? Mr. Fitzgerald responded that there is a portion of some criteria that applies.

Team Aspirational Goals

Mr. Ruoff shared that, based upon responses to the exercise, the top goals were:

- Net Zero Energy
- Promotes Wellness and Active Design
- Views and access to outdoors
- Building as teaching tool
- Renewable energy

Utility Incentives

Kim Cullinane of Eversource's Energy Efficiency group presented.

Eversource can offer financial and technical support for energy efficiency projects, such as:

- Electric Vehicle Make Ready Program.
- Demand Response: Energy Storage – Earn incentives for helping reduce peak demand and carbon emissions with energy storage
- Traditional Energy Efficiency: Financial and Technical Support
- Eversource New Construction Program Elements
 - Energy Charrette Participation
 - Technical Assistance
 - Customer Incentives

- Design Team Incentives

Vamshi Gooje of Thornton Tomasetti, presented an early design analysis.

- Energy Programming
- Climate Analysis
- Massing Studies
- Radiation/Shade Analysis
- Natural Ventilation Studies
- Daylighting
- Thermal Comfort Analysis
- Cost Benefit Analysis
- Alternative and Renewable Energy Analysis

Sustainability Strategies

The Massachusetts definition of net zero was shared: “A zero net energy building is one that is optimally efficient and, over the course of a year, generates energy onsite, using clean renewable resources, in a quantity equal to or greater than the total amount of energy consumer onsite.”

Energy

Potential sustainability strategies related to energy were overviewed.

- Building Envelope
- Window:Wall Ratio
- Windows and Glazing
- Tight Envelope
- Insulation Values
- Thermal Bridge Mitigation

G-G-D Presented an overview of options related to heating, ventilation, and air conditioning systems. These included:

- Displacement systems for classrooms, cafeteria, gymnasium, and corridors
- Displacement systems for energy conservation
- High-efficiency, gas-fired condensing boiler and electric chiller systems
- Closed loop geothermal field and heat-recovery chiller system
- Building automation and energy management system
- Sample mechanical system payback summary

An overview of lighting options was presented, including an addressable lighting control system.

Resilience

- Passive survivability
- Energy storage
- Flood risk?
- Any functions needed by town? Emergency response resources?

Mrs. Hyde confirmed that the intent is not to design a building intended to be used as an emergency shelter. Mr. Ruoff asked for confirmation. Mrs. Hyde confirmed.

Health and Wellness

- Acoustics: Indoor/outdoor
- Drinking water access
- Mother's room/rejuvenation space
- Garden

LEED Scorecard Review

A sample project checklist was shared. The Owner's Project Requirement (OPR) and Basis of Design (BOD) documents were defined.

Logistics and Next Steps

It was decided that an actional list would be provided for the community to discuss at upcoming School Building Committee meetings.

Adjournment

Mrs. Jowdy motioned to adjourn. Mr. Cummings seconded.

Vote: 10-0-0.

Result: Approved (Unanimous)

The meeting adjourned at 11:18am.

List of Documents and Exhibits Used at Meeting

- Sustainability Charrette presentation slides by The Green Engineer, dated January 30, 2020