

**Climate Resilience Zoning Task Force  
City of Cambridge, Massachusetts  
Meeting #18 Summary  
March 3, 2021**

## Task Force Members Present

1. John Bolduc, Environmental Planner
2. Doug Brown, West Cambridge Resident
3. Tom Chase, Energy & Resilience Consultant, New Ecology (3:59 pm)
4. Ted Cohen, North Cambridge/Planning Board
5. Conrad Crawford, East Cambridge/ Cambridge Redevelopment Authority
6. Nancy Donohue, Cambridge Chamber of Commerce
7. Iram Farooq, Assistant City Manager for Community Development
8. Brian Goldberg, MIT Office of Sustainability
9. Mark Johnson, Divco West
10. Tom Lucey, Harvard University
11. Rick Malmstrom, Alexandria
12. Margaret Moran, Cambridge Housing Authority
13. Mike Nakagawa, North Cambridge Resident
14. Jim Newman, Resilience Consultant, Linnaean Solutions
15. Craig Nicholson, Just-a-Start
16. Mike Owu, MITIMCo
17. Kathy Watkins, City Engineer/Assistant Commissioner for Public Works

## Project Staff and Facilitation Team Members Present

1. Jeff Roberts, Director of Zoning and Development, City of Cambridge
2. Sarah Scott, Associate Zoning Planner, City of Cambridge
3. Erik Kramer, Reed Hilderbrand
4. Drew Kane, Land Use Planner, City of Cambridge
5. Nathalie Beauvais, Climate Change Preparedness & Resilience Plan consultant, Kleinfelder
6. Elizabeth Cooper, Facilitator, Consensus Building Institute
7. Mariana Rivera-Torres, Facilitation team, Consensus Building Institute

## Next Steps

The next Task Force meeting will be held on April 1, 2021, at 5:30 pm. The Task Force will continue the process of determining what recommendations move forward with consensus support in the Task Force's package of zoning changes.

## Meeting Materials

For more details of the discussion summarized below, see the meeting materials available on the CRZTF webpage: <https://www.cambridgema.gov/CDD/Projects/Zoning/climateresiliencezoning>.

## Meeting Overview

The City of Cambridge's Climate Resilience Zoning Task Force (CRZTF) held its eighteenth meeting on March 3, 2021. The facilitator and staff from the City's Community Development Department (CDD) reviewed the timeline and process for completing the Task Force's work. Then, CDD staff provided a brief overview of the revised final recommendations, continuing last meeting's conversation. Task Force members engaged in real-time polling and deeper discussion with the goal of determining what recommendations move forward with consensus support in the Task Force's package of zoning changes. The meeting had a period of public comment at the end. This meeting was conducted via Zoom webinar as a result of COVID-19 restrictions on in-person meetings. Below is a summary of key themes and next steps discussed at the meeting. This summary is not intended to be a meeting transcript. Rather, it focuses on the main points covered during the Task Force's discussions.

## Meeting Summary

### Welcome and Housekeeping

Jeff Roberts, Director of Zoning and Development at the City of Cambridge, welcomed Task Force members and public participants to the meeting and reviewed the online public meeting guidelines. Elizabeth Cooper, a facilitator from the Consensus Building Institute (CBI), reviewed the agenda and objectives. The group also reviewed and approved the past meeting summary (Meeting 17), available on the CRZTF webpage.

### Testing Task Force Consensus on Proposed Zoning Recommendations

Elizabeth Cooper reviewed the Task Force's role and the definition of consensus. During the meeting, the Task Force sought to determine what recommendations move forward with consensus support in the Task Force package of zoning changes, through live polling and discussion focused on recommendations in Category 4 as well as the Cool Factor more generally. Based on the conversation, CDD staff would draft the report for the Task Force members to review and comment. Please refer to the revised table of recommendations on the CRZTF webpage listed above for details on each recommendation [Access Draft Recommendations Here](#).

### Revised Recommendations

City staff assembled the recommendations presented based on the discussion of the Task Force over the past several months on how to amend the Cambridge Zoning Ordinance to make the city more resilient to climate change impacts. The recommendations were grouped and discussed in five categories: (1) New or Amended Standards, (2) Large Project Review, (3) Remove Impediments in Base Development Standards, (4) Strengthen Base Development Standards, and (5) Future Study. These recommendations would need more detailed work to become specific text changes to the Zoning Ordinance. The conversation in this meeting was mainly focused on Category 4 recommendations.

Jeff Roberts provided an overview of the category, highlighted modifications made in response to previous feedback, and answered clarifying questions. Then, Task Force members engaged in

live polling to gauge whether they would be able to support the Task Force package of zoning changes if each recommendation was included. After voting, the facilitator opened up discussion to listen to remaining concerns and take note of specific feedback on how those concerns could be addressed, whenever possible.

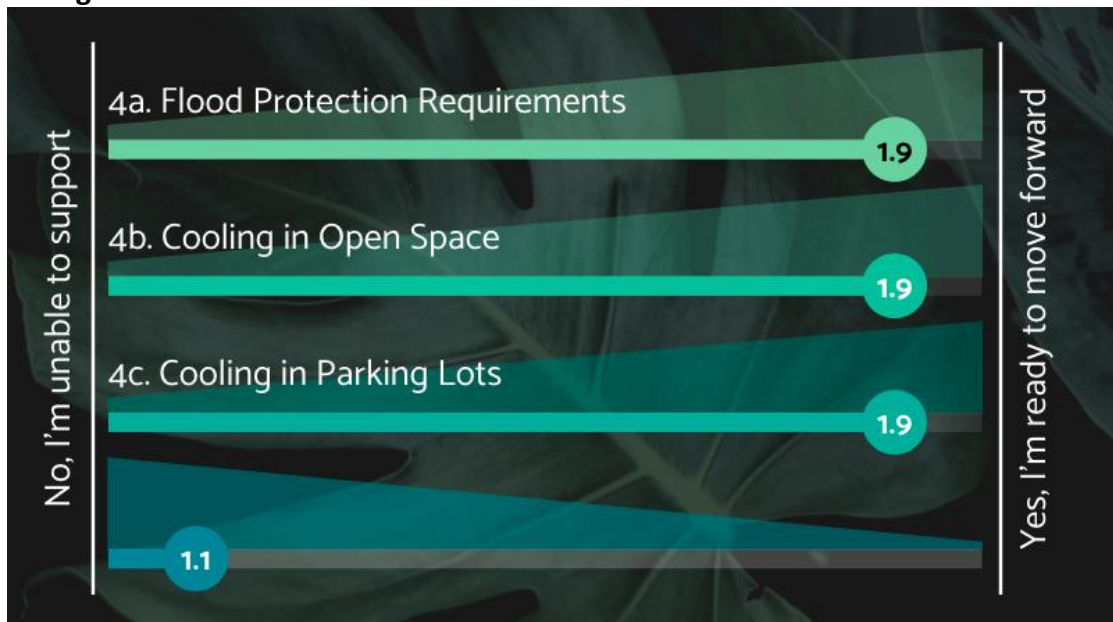
### Task Force Discussion

#### Category 4: Strengthen Base Development Standards

This category includes more stringent requirements applied to all development, affecting both large and small new construction, and having some effects on alterations to existing development.

	Topic	Recommendation
4a	Flood Protection Requirements	Require flood protection for all new construction if below 10% probability long-term flood elevations.
4b	Cooling in Open Space	Amend Open Space standards (Section 5.22) to include prescriptive requirements (e.g., minimum vegetation, high-SRI paving) or minimum Cool Factor Score. Broaden Open Space requirements to non-residential zoning districts and/or use types.
4c	Cooling in Parking Lots	Amend parking lot landscaping standards (Section 6.48.1) to increase minimum landscaping and tree planting, require SRI paving, and/or require minimum Cool Factor Score.

#### Live Polling Results



#### 4a. Flood Protection Requirements

- Staff clarified that this standard can be met by elevating the building or protecting the building in some other way. These requirements would apply to flooding vulnerabilities

of individual structures according to the flood viewer, so parcels with multiple structures on a grade may have some structures that apply and others that do not.

- A Task Force member expressed concern that the 10% level specified in recommendation 4a may not address the level of risk needed to prepare for upcoming flooding challenges and would prefer to see protection from a 1% storm level. However, most Task Force members were supportive of the recommendation as is, stating that a 2070 10% storm level is an appropriately high standard for base zoning.
- Task Force members raised the following additional questions and considerations:
  - What level of change/renovation would trigger requirements? Where to draw the line given the biggest vulnerabilities are in existing structures? Some suggested basing it on the degree to which the property is going to be renovated and/or disrupted. It could include creating additional space (e.g., increasing usable space in floodable areas, accessibility changes) and any changes that make the structure more vulnerable to flooding. Others suggested setting a value trigger, translated into amount of impact or square foot impact rather than dollar value. There was discussion about how the trigger could be tied to existing triggers in the Zoning Ordinance or other City regulations (e.g. building permit, stormwater permit, ADA conformance).
  - How to avoid overburdening individual homeowners for minor changes?
  - How would it apply to small business owners?
  - Thinking about the equity implications (between 1-10%), who bears the cost? The difference may not be significant for some property owners, but a very high lift for others.
  - If relief is offered, it would be better to have a special permit than a variance.
  - Open Space requirements in dense commercial spaces and historic districts will be difficult to meet and would need special permits to allow for upgrades and improvements, which would be preferable to a variance process.
  - Are there other approaches (other than zoning) that can help target interior renovations? The Task Force would consider learning and implementing from other requirements (e.g., accessibility).

#### *4b. Cooling in Open Space*

- In response to a question, staff clarified what broadening Open Space requirements to non-residential zoning districts and/or use types would entail. The current Open Space requirement applies only to residential uses. Some districts have “greening” Open Space requirements, others have “permeable” Open Space requirements, and in some cases “publicly beneficial” Open Space requirements. The Task Force would have to think about expectations and possible minimum targets to apply this recommendation across all zoning districts and use gaps.
- A Task Force member shared it is difficult to determine support without better knowledge of how this recommendation would affect individual buildings.
- Staff clarified public sidewalks are not regulated by zoning.

- Overall, Task Force members were generally supportive of this recommendation, as it is straightforward and easy to understand. Some suggested including vegetative prescriptive requirements in base zoning as well.
- Some Task Force members noted that it is important to have base zoning provisions to catch the small- and middle-sized properties; however, some members expressed concern about forcing too many applicants to seek variances.
- Task Force members discussed possible ways of combining the Cool Factor’s performance approach with this prescriptive standard. Some liked the idea of providing two options, since the Cool Factor is a fairly technical process. This could minimize the number of people applying for a variance. One option could be the Cool Factor, which provides flexibility. The other option could be more straightforward, providing a few prescriptive options (e.g., trees, green roofs) to meet the requirement. Adding alternatives could benefit people who do not have the capacity to do a Cool Factor score analysis, considering that the cost or complexity may be a barrier. Other Task Force members suggested either keeping the minimum thresholds embedded within the Cool Factor (as a requirement), or just keeping performance-based methods. This would minimize unnecessary complications and would discourage people from “opting out” of the Cool Factor.
- A Task Force member encouraged establishing different considerations for dense commercial and historic districts. For example, they could contribute to cooling in another part of the city if unable to comply on their lot by establishing a system like carbon trading.

#### *4c. Cooling in Parking Lots*

- A Task Force member asked whether it is possible to establish a maximum percentage of a given lot to be used for surface parking. Staff explained how zoning attempts that by setting minimum requirements for open space, along with building footprint limitations.
- Some members raised concerns with SRI paving, as the default option is asphalt, which is cheaper, particularly in small developments. They would like to avoid putting small property owners in a position where the only way to meet the standard is with SRI pavement.
- Task Force members were interested in exploring a performance-based standard that includes a combination of paving and trees. A Task Force member also suggested considering parking garages as well.
- Some Task Force members noted that it is also important to lower parking ratios in order to reduce impervious surfaces and improve site cooling.
- Since many new ideas were brought forth that need further study, a Task Force member cautioned against slowing down implementation of other strategies by dwelling on developing these recommendations.
- A Task Force member encouraged staff to pursue the same approach for 4b and 4c, noting that 4c has existing standards in place that could be potentially amended.

**Outcome:** Staff will pursue details for implementation consistent with other approaches. Base zoning would be amended to put more emphasis on heat island and flood mitigation strategies, beyond usability and permeability. Staff will be considering the special concerns and suggestions raised.

### Cool Factor

Kathy Watkins, City Engineer/Assistant Commissioner for Public Works, shared a revised Cool Factor Score Sheet [[Access Here](#)] and a Revised Cool Factor Guidance Document [[Access Here](#)]. While none of the calculations have changed in the revised sheet, the team worked on making the form more accessible, clear, and concise. They added a box on the bottom left to include the portion of the score attributed to green strategies. Categories are weighted by cooling effectiveness and the Cool Factor is focused on providing flexibility.

### Discussion:

- A Task Force member appreciated the changes done to fix the loophole for the parking lots but remained concerned with the effect of the multiplier for public right of way (PROW) benefits, using an example of how this makes a few trees in the PROW very weighty in score. Further, the member suggested lowering the shade structure value to be lower than the green roof value but higher than the original score in PROW. Lastly, they expressed concern that the high value of trees combined with the PROW boost to the score could allow too little of a contribution to meet the overall score required.
  - In relation to the multiplier for public benefit in the PROW, a Task Force member suggested thinking more broadly about where public spaces apply.
- Another Task Force member highlighted that shade structures and green roofs provide cooling in different ways. Trees and vegetation use evapotranspiration, while shade structures reflect heat back.
- Task Force members suggested finding ways to update the Cool Factor after learning about its effects after it is implemented. Staff noted that some details for implementation could be described through regulation and guidance documents. The City could revisit certain elements and requirements through an amendment if needed in the future.
- A member pointed out the prioritization of existing trees does not cover all tree sizes (with a gap between 15-35 feet). Staff also needs to clarify how tree canopy will be measured.
- A Task Force member suggested setting an upper limit to the portion of score that could come from high SRI paving.
- Lastly, Task Force members voiced reservations with having additional numbers in the sheet (e.g. percent of score achieved through green strategies) that will not factor in the calculation. Those scores will be looked at and evaluated by the Planning Board, though they are not a measure of cooling achieved, as is the goal of the Cool Factor.

#### Public Comment:

- A member of the public highlighted the importance of green strategies, beyond shade and cooling, to promote the collective natural environment that sustains life across the city. This participant has lived in the city for over a decade and has experienced flooding firsthand. Impacts included furniture and infrastructure damage, and a series of basement apartments near their house which were emptied because of flooding. They anticipate flooding to get worse in the coming years. They commended the Task Force for the ambitious efforts to support people, particularly low income and underrepresented communities.

#### Next Steps

- The next Task Force meeting will be held on April 1, 2021, at 5:30 pm. The Task Force will continue the process of determining what recommendations move forward with consensus support in the Task Force's package of zoning changes.
- Staff to draft final report, then circulate for Task Force member input and eventual submission of final report from Task Force to City Manager.

The meeting was adjourned at 8:09 PM