

Warrant Article 17 – Amend Article VI of the Town’s Zoning By-Laws to increase the requirements for EV ready parking spaces.

Report of Land Use, Zoning and Sustainability Subcommittee

Recommendation:

Favorable Action, as amended, by a vote of 6-0 with 0 abstentions.

Executive Summary:	<p>The Petitioners’ motion would amend Zoning By-Law Section 6.00 and Section 6.04 as follows:</p> <ol style="list-style-type: none"> 1) In Section 6.00 adds Paragraph 7 (parking facilities). 2) In Section 6.04 deletes paragraph 15 (Electric Vehicles). 3) Adds a new Section 6.10 (Off-Street EV Readiness) 4) For Residential Parking Areas (all uses) with 1 (down from 15) parking space or more, increase the proportion of EV Ready Spaces from 15% to 100% (Multifamily/Three-Family only; does not apply to one/two family residential) 5) For Non-Residential Parking Spaces with 7 (down from 15) parking spaces still requiring that the proportion of EV-Ready Spaces be 15% 6) Adds the option of a Minimum Prescriptive Standard and a Minimum Performance Standard using an Automatic Load Management System (ALMS) (Multifamily/Three-Family only; does not apply to one/two family residential)
Voting Yes will...	<p>Instruct the Building Department to require new Construction Permits to provide: in Residential Parking Areas 100% EV Ready Spaces using either the Prescriptive or Performance Standards provided in the Zoning By-Law. In Non-Residential Parking Areas, with 7 or more spaces, to provide at least 15% EV Ready Spaces</p>
Voting No will...	<p>Leave Zoning By-Law Section 6.00, Section 6.04 and current EV Ready Space requirements unchanged.</p>
Financial impact [if any]	<p>Unlikely, as the Building Commissioner does not believe there would an increase in work load for the staff at the Building Department.</p>
Legal implications [if any]	<p>The Attorney General Office would need to evaluate if this Warrant Article is in conflict with the Massachusetts Electrical Code or the Massachusetts State Building Code.</p>

Introduction

Warrant Article 17 is the result of the vote of Fall Town Meeting 2021 on Article 25 to refer the then proposed by-law amendments to the Department of Planning and Community Development for further development. The Department of Planning and Community Development (DPCD), in extensive consultation with the Building Department, propose these new amendments to our Zoning By-Law in order to increase availability of Electric Vehicle Ready Spaces in both

residential and non-residential parking areas throughout town. As there is an increase in the adoption of electric vehicles, there is a clear need for a greater number parking spaces with electric chargers. The goal of the Town Departments is to provide adequate charging standards so that most of the charging can take place overnight at the owner's residence. Research also shows that the cost of EV Ready spaces is lower in new construction than when retrofitting existing spaces, so the Departments believe it is reasonable to require that new parking spaces be EV Ready in anticipation of future adoption.

This Warrant Article is one more step towards combating climate change and reaching the Town's carbon reduction goals.

Evaluation Methodology/Research

- The Building and Planning and Community Development department worked together.
- Massachusetts Electrical Code, Massachusetts State Building Code, International Building Code and the International Residential Building Code.
- Brookline Zoning By-Law
- Explanation EV Charging memo March 9, 2022
- Making Parking "EV Ready": Requirements for New Construction & Incentives for Existing Buildings (Brendan McEwan/AES Engineering and Electric Mobility Canada February 2022) <https://emc-mec.ca/wp-content/uploads/EMC-Position-Paper-EV-Ready-Parking-2022.02.24-Formatted-EMC-Format.pdf>
- EV Ready" Requirements for New Buildings: A Best Practice Guide for BC Local Governments (Brendan McEwan/AES Engineering April 2021) <https://docs.communityenergy.ca/wpcontent/uploads/EV-Ready-Requirements-for-New-Buildings-Final.pdf>

Discussion

The Land Use, Zoning and Sustainability Subcommittee of the Advisory Committee held a (virtual) public hearing on Warrant Article 17 on Tuesday April 5, 2022. Subcommittee members, Carlos Ridruejo (Chair), Scott Ananian, Anita Johnson, Georgia Johnson, David Pollak, Linda Olson Pehlke and Lee Selwyn attended. Other attendees included Maria Morelli from the Planning Department, among others attended.

The Subcommittee is very supportive in general terms, of this Warrant Article and its goals towards combating the effects of climate change and reducing the carbon footprint of the Town. The Subcommittee reviewed the differences between the current WA17 and predecessor FASTM WA25 to evaluate how the town departments have amended the original warrant article. In essence, the goals of both articles are the same, but the new version (WA17) allows for compliance to happen through either a Prescriptive Standard or a Performance Standard. The addition of the Performance Standard introduces the option of using an Automatic Load Management System, which make compliance of larger projects much more easily and at a reduced cost. When an ALMS is used, multiple chargers can be connected to one circuit rated for one charger. When all chargers are charging simultaneously, they must share power the max allowed power distributed by the ALMS.

The standard requires that the ALMS provide a minimum of 1.92 kW per hour, which is reasonable for an overnight charge. The concept of the minimum power-transfer standard has been widely adopted in various counties in Canada that mandate 100% EV readiness in residential parking areas. The sub-committee amended the Warrant Article to require verification that the ALMS actually be installed. This was requested in order to prevent any loopholes if an ALMS is promised but never installed. The installation of the EVSE (Electric Vehicle Supply Equipment) is not required to be installed. The WA also gives an alternative to an ALMS through the use of a level 2 EVSE with dual ports that meet the requirements of the by-law.

Town Staff pointed out that an ALMS option might not be the right for every project, so the Warrant Article provides, other alternative prescriptive standard that requires compliance with EV Ready as defined in the State Building Code, a third option that would be a combination of the two standards.

Members of the subcommittee are concerned on how the Attorney General's Office will rule on such Warrant Article, especially after the AGO struck down recent Fossil Fuel Free Warrant Articles for being in conflict with the Building Code and other Massachusetts regulations. The subcommittee learned that Town Counsel is skeptical of the AGO approving this Warrant Article for the same reasons, so there was extensive discussion of what would happen if the WA was struck down. The unintended consequence of this situation could be that we would either lose the existing requirement of 15% EV Ready, or perhaps have a requirement of 100% EV ready without an ALMS which would be economically infeasible.

Town staff added that there is work being done at the state level to include these charging options in future Building Code editions or new Stretch Code options.

A subsequent additional subcommittee public meeting was held (virtually) on Warrant Article 17 on Thursday, April 14, 2022. Subcommittee members, Carlos Ridruejo (Chair), Scott Ananian, Georgia Johnson, David Pollak, Linda Olson Pehlke and Lee Selwyn attended. Other attendees included Maria Morelli from the Planning Department, Building Commissioner Dan Bennett. Subcommittee member Anita Johnson was not present for the public meeting. In this public meeting, the subcommittee reviewed the amended Warrant Article.

There was a lengthy discussion between the Building Commissioner and subcommittee members on how Town Officials would enforce the Warrant Article. The Building Commissioner is very comfortable with this referred version of the original Warrant Article 25. There was also further discussion with Town Counsel on the possibility of the AGO striking a portion of the Warrant Article and what the unintended consequences would be. For this reason, an amendment was added which would void the whole Warrant Article, if the AGO makes substantial changes, such as striking out the AMLS option.

The difference between the two building codes, the International Building Code (IBC) and the Residential Building Code (IRC), and how to determine which code applies to which projects, was also discussed at length. The Warrant Article has clear definitions on which code applies to what: One- and Two-Family Dwellings (including Townhouses three stories and under) are all

under the IRC. All other projects are under IBC. Mixed-use, multi-unit projects and all-residential multi-unit (more than 2) projects are all included under the IBC. For projects under the IRC, at least one parking space per dwelling unit would need to be EV Ready. Projects under the IBC would be required to have 100% of the spaces EV-Ready.

Town Staff is hopeful that the three standards provided in our definition of EV Ready Spaces C serve not only to assist multifamily property owners with a cost-effective solution for EV charging but also to offer parameters around minimum charging rates in a way that the Building Code might not be nuanced enough to provide.

Recommendation

The Subcommittee recommends Favorable Action as amended by a vote of 6-0 with 0 abstentions.

Yes	No	Abstain	Absent
Carlos Ridruejo	(None)	(None)	Anita Johnson
Georgia Johnson			
Scott Ananian			
David Pollak			
Linda Olson Pehlke			
Lee Selwyn			