




Yovani Baez-Rose
Assistant City Manager/Director

Lloyd DeJesus,
Director of Development Services

David Fuller
Building Commissioner

MEMORANDUM

TO: Thomas A. Golden, Jr., City Manager 

FROM: Lloyd DeJesus, Director of Development Services

CC: Yovani Baez-Rose, Assistant City Manager/DPD Director
Dave Fuller, Building Commissioner

SUBJECT: MOTION RESPONSE: 8/22/23 - Request City Manager Provide Detailed Report (Address, Permit Issue Date, Permit Closed Date, HERS Rating) On Residential Building Permits Issued Since January 1, 2023; Including Those Issued In Accordance With The Stretch Regulations In 225 CMR 22 & 23 As Promulgated 12/9/2022; And For Permits That Have Been Closed Out, Provide List Of HERS Ratings Obtained.

Stretch energy code (Stretch Code) regulations have since 2009 been published in MA 780CMR chapters 115.aa and previously 780 CMR 110.aa under the jurisdiction of the Board of Building Regulations and Standards. The climate act of 2021 moved the authority for the Stretch Code promulgation to the Department of Energy Resources (DOER) and at the same time required the development of a new Municipal Opt-in Specialized energy code (Specialized Code). The Specialized Code includes additional requirements that form an Appendix to each of the chapters of the Stretch Code.¹

- CMR 22.00 covers Residential low-rise construction, Appendix RC includes provisions for the Specialized Code in residential construction, and
- CMR 23.00 covers Commercial and all other construction (including most multi-family), Appendix CC includes provisions for the Specialized Code for commercial construction.

The scale that measures energy efficiency in residential construction is known as Home Energy Rating System (HERS). The HERS rating system was originally adopted in 2009. On the commercial side, measurements are measured via the COMcheck software system. The lower the HERS number is, the higher the energy efficiency. The process for deriving a HERS score requires in-person inspections of air duct tightness, and insulation and a blower door test.

A blower door is a powerful fan that a trained energy professional temporarily mounts into the frame of an exterior doorway in your home. After calibrating the device, the fan pulls air out of the house, lowering the air pressure inside. The higher outside air pressure then flows in through all unsealed gaps, cracks and openings such as gaps, cracks, or wiring penetrations. If conditions do not allow for lowering the pressure in the home, the fan may also be operated in reverse, with

¹ [Stretch and Specialized code Regulation Summary 09222022.pdf \(mass.gov\)](https://www.mass.gov/info-details/stretch-and-specialized-code-regulation-summary-09222022)

air pressure increased inside the home. While the blower test is being conducted, the analyst may use an infrared camera to look at the walls, ceilings, and floors, to find specific locations where insulation is missing and air is leaking. The analyst may also use a nontoxic smoke pencil to detect air leaks in your home.²

In 2009, at adoption, a new home had to have a score of not greater than 65. Today in 2023, the new standard is 52. The Massachusetts average in 2020-2021 was approximately, 51. In 2024, the new standard of residential score will be 42. These scores will be achieved using a combination of materials and concessions. Homeowner's will be able to get credit (a lower score) if they move away from fossil fuels and convert to electric heat. Increase R-values (resistance to energy loss) with insulation will be required ceilings and floors.

With additions, it becomes difficult to mandate energy efficiency, as it is impossible to expect a small addition to a home that predates energy code to meet the standard. Homeowners get credit towards the HERS score when they install energy efficiency systems such as solar arrays and heat pumps. Newer appliances and light fixtures can also lower HERS scores. As the energy standards tighten, variables that can lower scores becomes more complex.

Presently, architects, engineers, builders, and code officials are trying to understand the elements of energy efficiency and how to correctly apply these metrics. There is a lot of work still needs to be done. The new stretch energy codes took effect 1/1/2023, so it is still early to report anything of significance. We have one permit that was pulled in January. It was recently signed off and a Certificate of Occupancy was issued. Included in the closing documentation was a HERS rating of 50 for 19 Clifton St.

There have been seven other Occupancies that have been issued this year. The permits were either issued in late 2021 or in 2022. These are the following HERS ratings.

- 1400 Gorham St. unit 41 HERS 50
- 48 Hampstead St HERS 53
- 52 Hampstead St HERS 53
- 1400 Gorham St Unit 40 HERS 51
- 1400 Gorham St Unit 39 HERS 50
- 1400 Gorham St unit 38 HERS 51
- 1400 Gorham St Unit 37 HERS 51

The threshold is 55, all units referenced above have passed. The criteria will become more stringent when we enter 2024. Please be advised these ratings are for single or attached dwelling units.

DF/ybr

² [Blower Door Tests | Department of Energy](#)