

MA Commercial Plan Review Checklist

Stretch Code and Municipal Opt-In Specialized Code 2023

Compliance Paths *(to be completed before building permit is issued)*



PROJECT INFORMATION.....

Applicant Name: _____ Applicant Phone: _____

Project Address: _____ Date: _____

Permit Number: _____

Project type: ☐ New construction ☐ Addition ☐ Alteration ☐ Changes of Occupancy or Use

SELECT CODE VERSION.....

☐ Base Code ☐ Stretch Code ☐ Municipal Opt-in Specialized Code

SELECT COMPLIANCE PATH (C401.2).....

STRETCH ENERGY CODE PATHS (CMR 225)¹

☐ Prescriptive Path

☐ Targeted Performance Path

☐ Relative Performance Path

☐ Passive House Path

☐ HERS Path

MUNICIPAL OPT-IN SPECIALIZED CODE PATHS (CMR 225, APPENDIX CC)

☐ Zero Energy Path

☐ All-Electric Path

☐ Mixed Fuel Path

REQUIREMENTS FOR CHOSEN COMPLIANCE PATH.....

STRETCH ENERGY CODE PATHS

Stretch Code Compliance Path 1: Prescriptive Compliance

☐ Meets C401.3, C402 through C406, and C408

☐ Attach COMcheck Envelope, Lighting, and Mechanical Compliance Certificates; and a Plan Review Inspection Checklist (Code = 2023 Massachusetts Stretch Energy Code)

Section C406 - Must achieve 15 credits in the following categories (# of credits for each category depends on occupancy type):

- ☐ C406.2 More Efficient HVAC Performance
- ☐ C406.3 Reduced LPD
- ☐ C406.4 Enhanced Lighting Controls
- ☐ C406.5 On-site Supply of Renewable Energy
- ☐ C406.6 DOAS
- ☐ C406.7 High Efficiency Service Water Heating
- ☐ C406.8 Enhanced Envelope Performance
- ☐ C406.9 Reduced Air Infiltration
- ☐ C406.10 Energy Monitoring System (when not required by C405.12)
- ☐ C406.11 FDD system (when not required by C403.2.3)
- ☐ C406.12 Efficient Kitchen Equipment
- ☐ C406.13 Type IV Heavy Timber Construction

¹ For more information about which compliance path to follow, please see the accompanying flowchart for 225 CMR 23: Massachusetts Commercial Stretch Energy Code

- ☐ C406.14 Low GWP Concrete Mix
- ☐ C406.15 Net Zero GWP Insulation

Stretch Code Compliance Path 2: Targeted Performance (C407.1)

- | | |
|---|---|
| <input type="checkbox"/> Meets C401.3, C402 through C406, C407.1, C408, and select sections of ANSI/ASHRAE/IESNA 90.1-2019 Appendix G as described in Section C407.1 | <input type="checkbox"/> The building's heating TEDI and cooling TEDI are less than or equal to the values in Table C407.1.1.5 |
| <input type="checkbox"/> Attach COMcheck Lighting and Mechanical Compliance Certificates; and a Plan Review Inspection Checklist (Code = 2023 Massachusetts Stretch Energy Code) | <input type="checkbox"/> Performance Modeling Report with the items described in ANSI/ASHRAE/IESNA 90.1-2019 Appendix G Section G1.3.2 Parts b, g, h, i, j, k, l, n, o, and q, and Section G1.3.3 |
| <input type="checkbox"/> Backstop compliance and thermal bridge derating calculations performed in accordance with latest edition of Massachusetts Stretch Energy Code Technical Guidance, Attachment A, Envelope Performance and Thermal Bridge Derating | <input type="checkbox"/> Completed calculations performed in accordance with latest edition of Massachusetts Stretch Energy Code Technical Guidance, Attachment C, Targeted Performance Simulation Guidelines |

Section C406 - Must achieve 15 credits in the following categories (# of credits for each category depends on occupancy type):

- ☐ C406.2 More Efficient HVAC Performance
- ☐ C406.3 Reduced LPD
- ☐ C406.4 Enhanced Lighting Controls
- ☐ C406.5 On-site Supply of Renewable Energy
- ☐ C406.6 DOAS
- ☐ C406.7 High Efficiency Service Water Heating
- ☐ C406.8 Enhanced Envelope Performance
- ☐ C406.9 Reduced Air Infiltration
- ☐ C406.10 Energy Monitoring System (when not required by C405.12)
- ☐ C406.11 FDD system (when not required by C403.2.3)
- ☐ C406.12 Efficient Kitchen Equipment
- ☐ C406.13 Type IV Heavy Timber Construction
- ☐ C406.14 Low GWP Concrete Mix
- ☐ C406.15 Net Zero GWP Insulation

Stretch Code Compliance Path 3: Relative Performance (C407.2)

- | | |
|---|--|
| <input type="checkbox"/> Meets C401.3, C402.1.5, C402.2.8, C402.3, C402.4, C402.5, C402.6, C402.7, C403.5, C403.7, C405.2.4, C405.13, C406, C407.2, C408, and ANSI/ASHRAE/IESNA 90.1-2019 using the Appendix G compliance pathway as modified in Section C407.2 | <input type="checkbox"/> Submit mechanical equipment schedules for all air handling equipment with the total design outdoor airflow for each unit |
| <input type="checkbox"/> Backstop compliance and thermal bridge derating calculations performed in accordance with latest edition of Massachusetts Stretch Energy Code Technical Guidance, Attachment A, Envelope Performance and Thermal Bridge Derating | <input type="checkbox"/> Completed calculations performed in accordance with latest edition of Massachusetts Stretch Energy Code Technical Guidance, Attachment B, ASHRAE Appendix G Relative Performance Simulation Guidelines. |

An airflow riser diagram with:

- ☐ The complete project boundary
- ☐ All supply, exhaust, and return air systems serving the space
- ☐ A summary of the total outdoor air supplied
- ☐ The total gross square footage served by the ventilation system
- ☐ The overall flow rate per area in cfm/ft²

ENERGY CODE SUPPORT HOTLINE: 855-757-9717

WE ARE MASS SAVE®:



Is the building a high glazed wall system (where more than 50% of the above grade wall area of the building thermal envelope is glazed)?

☐ If **Yes**: Requirements found in C402.1.5.2 must be met

☐ If **No**: Requirements found in C402.1.5.1 must be met

Section C406 – Must achieve 15 credits in the following categories (# of credits for each category depends on occupancy type):

- ☐ C406.2 More Efficient HVAC Performance
- ☐ C406.3 Reduced LPD
- ☐ C406.4 Enhanced Lighting Controls
- ☐ C406.5 On-site Supply of Renewable Energy
- ☐ C406.6 DOAS
- ☐ C406.7 High Efficiency Service Water Heating
- ☐ C406.8 Enhanced Envelope Performance
- ☐ C406.9 Reduced Air Infiltration
- ☐ C406.10 Energy Monitoring System (when not required by C405.12)
- ☐ C406.11 FDD system (when not required by C403.2.3)
- ☐ C406.12 Efficient Kitchen Equipment
- ☐ C406.13 Type IV Heavy Timber Construction
- ☐ C406.14 Low GWP Concrete Mix
- ☐ C406.15 Net Zero GWP Insulation

Stretch Code Compliance Path 4: Passive House Compliance (C407.3)

☐ Meets C401.3, C402.3, C405, C407.3 and C408

Phius or Passive House Institute (PHI) certification in accordance with C407.3

- ☐ A Passive House Verification report with results from the approved Passive House certification software which demonstrates project compliance with Phius CORE 2021 (or newer), or Phius ZERO 2021 (or newer) performance requirements; or A PHPP (Passive House Planning Package) compliance report with results from the approved Passive House certification software which demonstrates project compliance with current PHI performance requirements
- ☐ A statement from the Certified Passive House Consultant or the Certified Passive House Designer that the verification report results or Passive House Certification software results and compliance report accurately reflect the plans submitted
- ☐ Evidence of project registration from Phius or from a PHI-accredited Certifier; or a design certificate letter from Phius or a design state conditional assurance letter from a PHI-accredited Certifier

Stretch Code Compliance Path 5: HERS Index for Multifamily Buildings (C407.4)

☐ Meets C401.3, C402.3, C405, C407.4 and C408

HERS Index for Multifamily buildings in accordance with C407.4

- ☐ A HERS compliance report with a proposed HERS Index less than or equal to the appropriate value in Table C407.4
- ☐ A description of the unit's energy features
- ☐ A statement that the rating index score is "based on plans"
- ☐ Additional documentation requirements found in C407.4.2.1

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MUNICIPAL OPT-IN SPECIALIZED CODE COMPLIANCE PATHS

For New R-Use Buildings:

Dwelling units over 4,000 ft² in mixed fuel buildings

☐ Meet the requirements of CC101.3(1) and CC103 OR RE Section RC102

Greater than 12,000 ft² in conditioned floor area

☐ Meet the requirements outlined in Table CC101.2

Less than or equal to 12,000 ft² in conditioned floor area

☐ Meet the requirements outlined in the Residential Appendix RC

Municipal Opt-In Specialized Code Compliance Path 1: Zero Energy (CC103)

*Mixed Fuel Buildings using this path shall comply with CC105, in addition to requirements below

☐ Meets the requirements of C401.2.1 or C401.2.2, as well as the EV ready space requirements found in C405.13

☐ Meets CC103 and demonstrates that they are Zero Energy Buildings in accordance with Equation CC-1

Municipal Opt-In Specialized Code Compliance Path 2: All-Electric (CC104)

☐ Meets the requirements of C401.2.1 or C401.2.2, as well as the EV ready space requirements found in C405.13

☐ Meets CC104 (same as stretch code requirements)

Municipal Opt-In Specialized Code Compliance Path 3: Mixed Fuel (CC105)

*When not complying with the Zero Energy pathway

☐ Meets the requirements of C401.2.1 or C401.2.2, as well as the EV ready space requirements found in C405.13

☐ Meets CC105

☐ Meets CC106, which requires wiring for future electrification in water heating, cooking, clothes drying equipment, and other combustion equipment

Construction documents showing electric HVAC retrofit design prepared by the HVAC engineer in accordance with CC106.1.6.1, including:

- ☐ Future replacement of combustion equipment-based HVAC system with an equivalent all electric system
- ☐ Combustion equipment to be replaced
- ☐ Future electric equipment
- ☐ Supporting electrical, structural, and architectural infrastructure to be installed during building construction
- ☐ Space allotments for future equipment

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NOTES.....

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