

Sustainable Buildings Initiative

WA21 – Prohibition on new fossil fuel piping in new construction and significant renovation

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Why did we propose this by-law?

- Brookline's 2050 Climate Action Plan goal: zero GHG emissions.
- This is a necessary step to meet that goal.
- New construction and significant renovations are the most cost-effective times to start transitioning to fossil-fuel free infrastructure to meet our goal.

Cost sources: RMI & USGBCMA



What was included already in the original proposed by-law?

- Trigger: new construction / significant renovation
- Prohibits: installation of new fossil fuel piping (gas or oil)
- Does not prohibit: existing piping, boilers, stoves, water heaters
- Exemptions: emergency generators
- Effective date: June 1, 2020



Feedback summary

- 3 community feedback sessions
- EDAB, SB, HAB, PC public hearings/meetings
- Added by request & supporting data:
 - Restaurant exemption
 - Large central hot water exemption (with engineer's statement)
 - Waiver process for practical or financial infeasibility
 - Clarification of significant renovation threshold.
- These additions improve our original goal: practical transition to a fossil fuel free future.



Feedback summary

- Not added:
 - Broad commercial exemption
 - Exemption for all but single family
 - Exemption for all renovations
 - Exemption for all cooking
- Basis for modifications prior to Town Meeting:
 - Changes that help ensure practicality of transition to fossil fuel free future



How do you define “major renovation”?

- Includes the reconfiguration of space and/or building systems, **AND**
- Work Area includes more than 50% of the total building floor area (excludes areas of repairs, refinishing, incidental work)
- Easily assessed by Building Department as part of permit drawing review procedure
- NOTE: ***By-Law does not require removal of any gas piping or replacement of equipment***



Examples of typical renovations in a Triple Decker

- Triple Decker (3-Family) house
- Typical housing type in many parts of Brookline
- Three similar size units, one unit per floor
- Could be three apartments or three condos -- work area trigger related to total building area, not to ownership



Examples of typical renovations in a Triple Decker

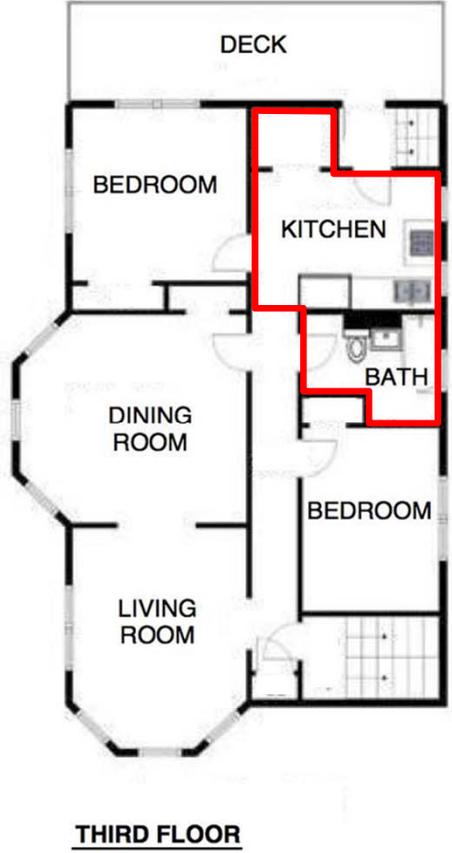
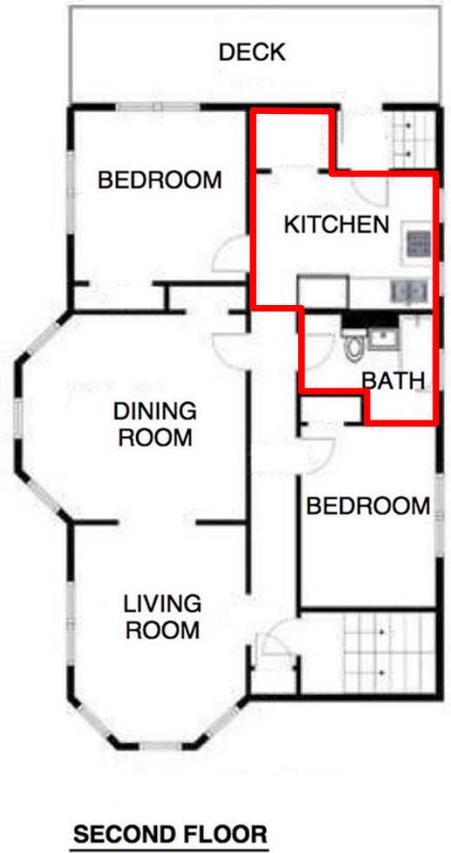
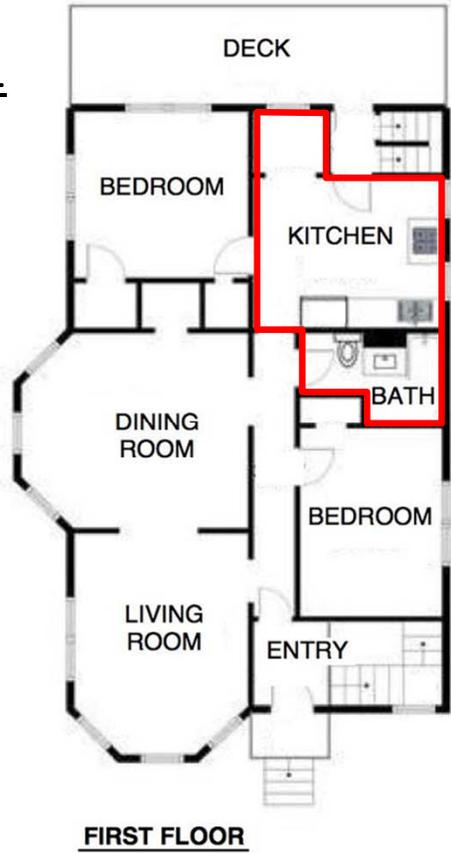
Renovation Scenario 1

Renovate Kitchens and Baths, all three floors

Paint throughout

Refinish wood floors

By-Law would not apply -- Work Area less than 50%



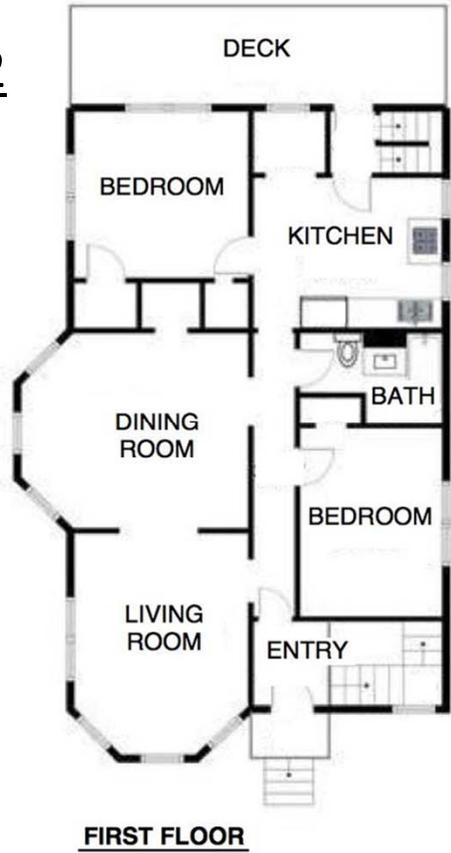
Examples of typical renovations in a Triple Decker

Renovation Scenario 2

Gut Rehab entire unit on one floor

New insulation, drywall, partitions, doors, flooring, electrical, plumbing, throughout

By-Law would not apply -- Work Area less than 50%



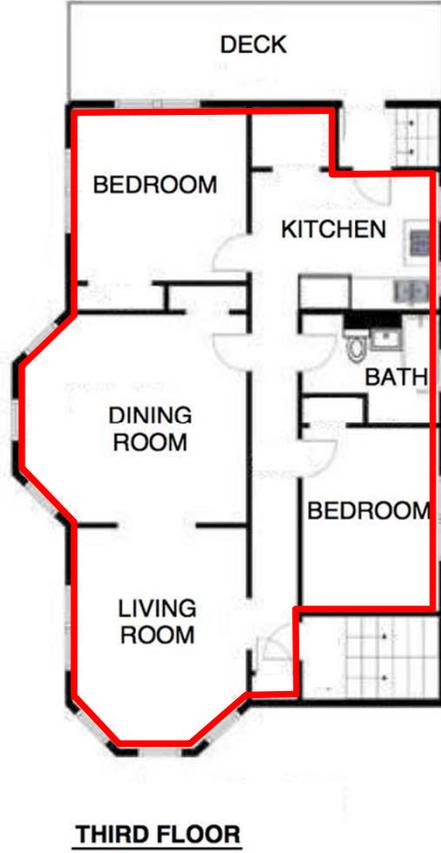
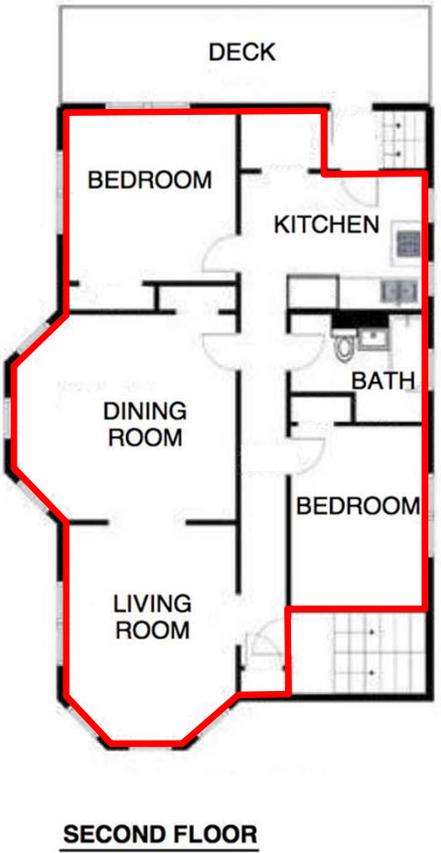
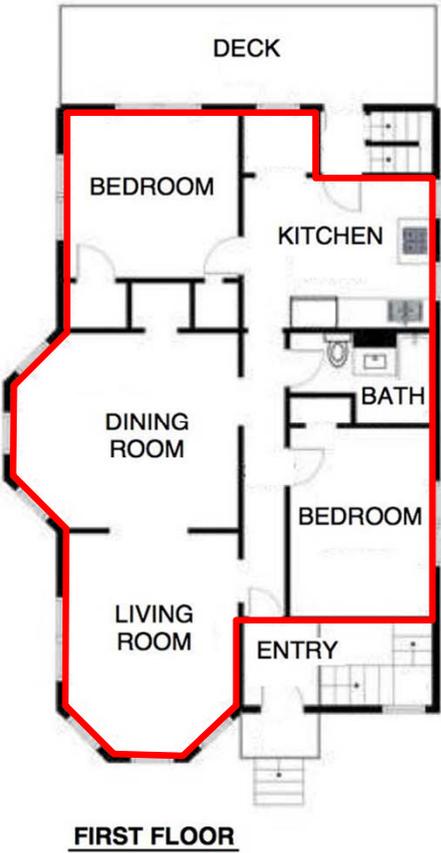
Examples of typical renovations in a Triple Decker

Renovation Scenario 3

“Gut Rehab” entire building, three units

New insulation, drywall, partitions, doors, flooring, electrical, plumbing, throughout

***By-Law would apply -
- Work Area more than 50%***



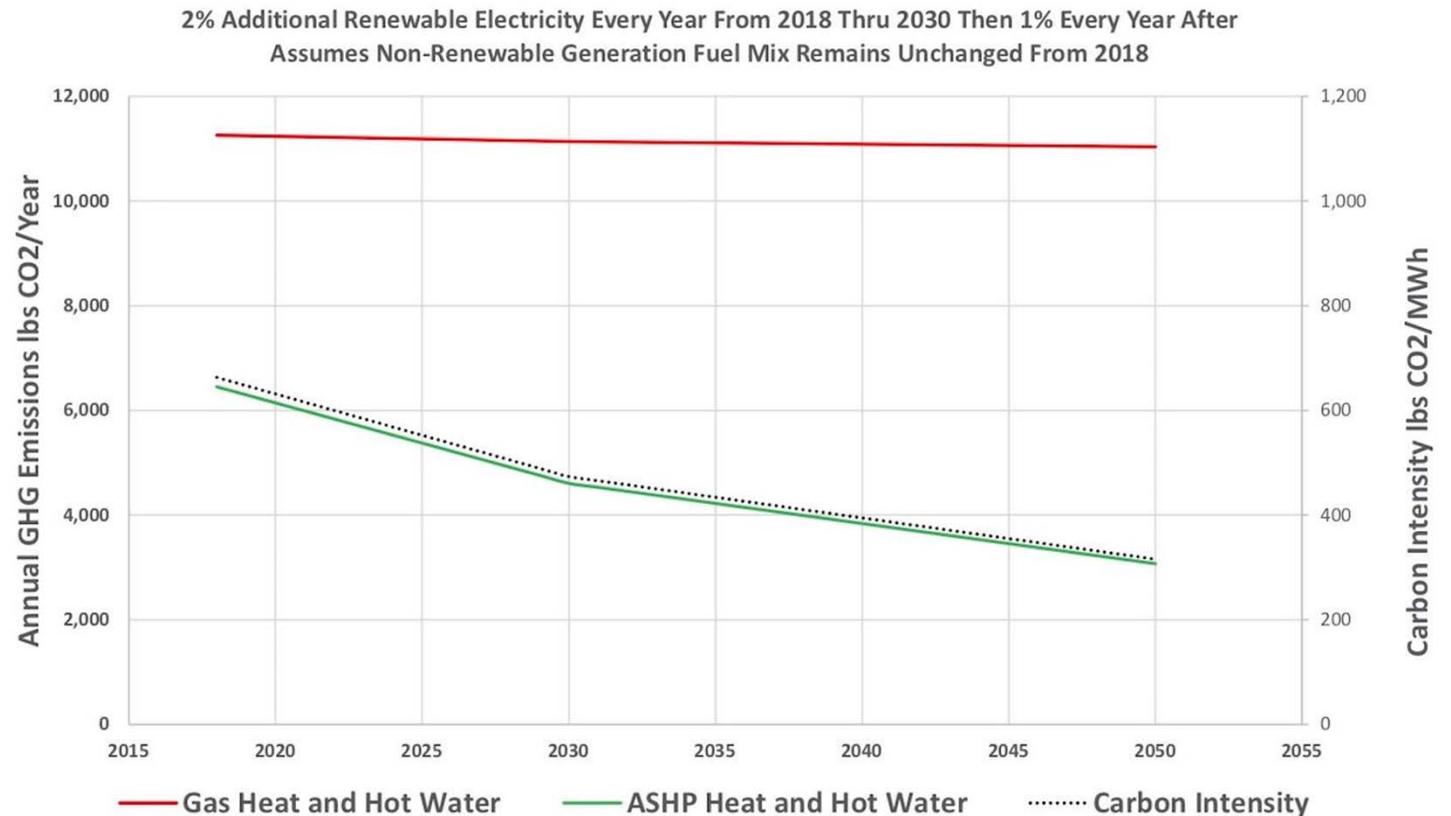
Impact of the by-law on emissions of a new single family home

Town-wide impact:

If we assume 0.5% of buildings “turn over” per year:

-15% of buildings could be fossil fuel free by 2050.

-10% reduction in fossil fuel usage in our town.



The figure compares the Greenhouse Gas Emissions of an all-electric 2500 sq ft single family house (green) with Air Source Heat Pumps to a house with natural gas heat and hot water (red)