Come Home to Downtown

2014 Final Report Appendix | Meriden

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# Chapter 12 - International Existing Building Code

## Table 1201.7

**SUMMARY SHEET - BUILDING SCORE**

<table>
<thead>
<tr>
<th>Proposed occupancy:</th>
<th>Existing occupancy:</th>
<th>B1 M-2</th>
<th>B1 M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year building was constructed:</td>
<td>c. 1910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Types of construction:</td>
<td>1B (assumed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent of frontage increase:</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completely suppressed:</td>
<td>Yes: X</td>
<td>No:</td>
<td></td>
</tr>
<tr>
<td>Compartmentation:</td>
<td>Yes: No: X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire-resistance rating of vertical opening opening enclosures:</td>
<td>1-1/2 Hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of HVAC system:</td>
<td>Central Boiler</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic fire detection:</td>
<td>Yes: X</td>
<td>No:</td>
<td></td>
</tr>
<tr>
<td>Smoke control:</td>
<td>Yes: No: X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate exit routes:</td>
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<td>No:</td>
<td></td>
</tr>
<tr>
<td>Dead ends:</td>
<td>Yes: No: X</td>
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<td></td>
</tr>
<tr>
<td>Max. exit access travel distance:</td>
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<td></td>
</tr>
<tr>
<td>Elevator controls:</td>
<td>Yes: No: X</td>
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<td></td>
</tr>
<tr>
<td>Means-of-egress capacity:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Emergency lights:</td>
<td>Provided with battery backup</td>
<td></td>
<td></td>
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### Safety parameters

<table>
<thead>
<tr>
<th>Description</th>
<th>Fire Safety (FS)</th>
<th>Means of Egress (ME)</th>
<th>General Safety (GS)</th>
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<tbody>
<tr>
<td>1201.6.1 Building height</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
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<tr>
<td>1201.6.2 Building area</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
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<td>1201.6.3 Compartmentation</td>
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<td>1201.6.4 Tenant &amp; Dwelling Unit Separations</td>
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<td>1201.6.5 Corridor walls</td>
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<td>1201.6.6 Vertical openings</td>
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<td>1201.6.7 HVAC systems</td>
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<td>1201.6.8 Automatic Fire detection</td>
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<td>1201.6.9 Fire alarm system</td>
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<td>1201.6.10 Smoke control</td>
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<td>1201.6.11 Means-of-egress capacity</td>
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<td>1201.6.12 Dead ends</td>
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<td>1201.6.13 Max Exit Access Travel Distance</td>
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<td>14.72</td>
<td>14.72</td>
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<td>1201.6.14 Elevator control</td>
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<td>1201.6.16 Mixed Occupancies</td>
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<td>1201.6.17 Automatic Sprinklers</td>
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<td>4</td>
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<td>1201.6.18 Stairways</td>
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<td>1201.6.19 Incidental Use Area Protection</td>
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</tbody>
</table>

**Building score: total value**

| 26 | 43.72 | 43.72 |

*** = No applicable value to be inserted.

### MANDATORY SAFETY SCORES

<table>
<thead>
<tr>
<th>Use Group</th>
<th>Fire Safety (FS)</th>
<th>Means of Egress (ME)</th>
<th>General Safety (GS)</th>
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</thead>
<tbody>
<tr>
<td>M (Most Restrictive)</td>
<td>23</td>
<td>40</td>
<td>40</td>
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</table>

### EVALUATION FORMULAS

<table>
<thead>
<tr>
<th>Formula</th>
<th>Score</th>
<th>Pass</th>
<th>Fail</th>
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<tbody>
<tr>
<td>FS-FS+ ≥ 0</td>
<td>26/(FS) - 23/(MG5) *</td>
<td>3</td>
<td>X</td>
</tr>
<tr>
<td>ME-MME ≥ 0</td>
<td>43.72/(ME) - 40/(MME) *</td>
<td>3.72</td>
<td>X</td>
</tr>
<tr>
<td>GS-MG5 ≥ 0</td>
<td>43.72/(GS) - 40/(MG5) *</td>
<td>3.72</td>
<td>X</td>
</tr>
</tbody>
</table>

FS = Fire Safety
ME = Means of Egress
MG5 = Mandatory General Safety
MG5 = Mandatory Gas Chambers
MME = Mandatory Means of Egress
MODEL BUILDING CONDITIONS ASSESSMENT

The building faces Colony Street to the west (Refer to Model Building Photos 1& 2) and East Main Street to the south (Photo 3). It is three bays wide, five bays deep, five stories high and has a flat roof. There is also a basement level, approximately half of which is finished for commercial storefront tenancy; having frontage on East Main Street (Photo 4). Unfinished portions of the basement house the mechanical and electrical equipment that serves the building. The first and second floor façades are of stone masonry and the upper three stories are of yellow brick. At the basement and first floor levels that face East Main Street to the south, and the rail line to the east (Photo 7), the walls between the pilasters are almost entirely in-filled with fairly recently installed masonry units between the pilasters. Five-story high pilasters of the composite classical order organize the East Main Street façade into five sections and the narrower sides into three sections. The shafts of these pilasters are of the same material of each respective story. The lintels and sills are of stone. The entire building is capped with a classical cornice made of terra cotta, detailed with egg and dart motifs, dentil work and scrolling vines (Photo 9).

The Colony Street main entrance (Photo 5) has a stone surround with classical details and a sloped concrete floor, most of which is covered by a large walk-off mat (Photo 6). The ramped Colony Street commercial tenant entrance (Photo 10) is paved with terrazzo and is surrounded by painted metal storefront. The East Main Street entrances’ floors (Photo 11) are surfaced with a roughly-troweled cementitious material and are surrounded by the same painted metal storefront as the Colony Street commercial tenant entrance. All storefronts have insulated glazing that appears to be in fair serviceable condition. Below the glazing, the storefronts have painted metal panel knee walls and stone bases at sidewalk level. The one-over-one windows on the second through fifth floors are not original.

The main roof is a rubberized membrane with fastened metal stripping at the perimeter. It is estimated to be over twenty years old and has been periodically and recently patched (Photo 13). The roof is accessed via the building’s rearward stairway, which is enclosed above roof level by a painted red brick/asphalt shingle-roofed penthouse (Photo 12). There is no parapet (Photo 14) at either the Colony Street (west) façade or the rail line (east) facade, and there is a tapering parapet at the East Main Street (south) façade due to the roof’s slight inward pitch toward the center. This pitch continues across the building, to the north, and ends in a single roof drain near the Penthouse (Photo 12). At this location, the parapet is approximately two and a half feet high.

Connected to the penthouse structure is curbing for the main stairway’s skylight (Photo 15), which is covered in the membrane roofing material. The skylight is translucent acrylic. One painted red brick chimney penetrates the roof near the skylight, and a similar chimney, presumed to be part of and serving the adjacent property, is attached to the façade and extends above the roof. The flashing of roof penetrations is achieved by the roofing
membrane extending up the vertical faces of the elements and attached with fastened metal strips, which also act as counter-flashing. Also present on the roof is a system of steel framework which supports approximately twenty condensers (Photo 16).

In the basement, the perimeter foundation walls are a combination of brick and both parged and unparged stone, likely granite. The piers that support the interior columns are brick. The interior basement walls are a combination of parged brick and framed partitions. The floors are poured concrete, except for the small finished portion at the main stair and elevator, which is terrazzo. The basement-level tenant spaces were not accessed for observation. The first floor framing system is mostly one-way concrete slabs, supported by reinforced concrete beams. A portion of the first floor framing, which may extend beneath the Colony Street sidewalk, is corrugated steel/concrete composite decking supported by steel beams (Photos 17, 18), and slopes downward to the west. The floor framing above the East Main Street commercial tenant spaces was not observed but is likely to also be a reinforced concrete slab & beam system.

The main entrance lobby (Photo 19) has newer ceramic tile flooring. The stair, which is open to the lobby space, is original and has black-painted steel stringers, risers and ornamental balusters. The stringers and risers support original soapstone treads and landings, and the balusters support the original wood handrail (Photos 20, 21, 22, 23). The entire lobby and the main stair have plaster walls and ceilings. At each landing of the main stair, adjacent to the elevator door, are stations of an outgoing mail collection system (Photo 24). This system terminates in an operable box at basement level (Photo 25).

The rear stair has painted wood stringers, risers, treads, landings and railings (Photos 26, 27). The landings have supplemental and non-original composite tile flooring. The walls and ceilings are also plaster. The lowest runs of stairs, through the first floor and basement levels have exposed painted brick walls and plaster ceilings (Photo 28).

The commercial tenant spaces on the first through fifth floors have carpeting, except for the lavatories which have newer ceramic tile. The ceilings are a suspended acoustic panel grid system with flush-mounted fluorescent lighting. Exterior walls are smoothly parged and painted masonry. Interior partitions are painted drywall over studs. Some of the original wood base trim remains at the exterior walls (Photos 28, 29, 30, 31).

There are separate electrical meters for each tenant space. These are modern digital types and are grouped in a dedicated electrical room in the basement. Each tenant space has its own electrical distribution panel within it, modern circuit breakers. At interior partitions, electrical wiring is concealed and feeds recessed boxes and devices. At exterior walls, wiring is in wire-mold or other type of exposed conduit and feeds surface-mounted boxes and devices.
The heating system has an oil-fueled central boiler located in the basement (Photo 32). Heating oil is stored in a fiberglass tank, which is located in a concrete masonry unit enclosure near the boiler. The boiler feeds hot water to fan-coil units distributed through the building, per tenant, which power self-contained air distribution and return systems.

Building cooling is achieved by AC condensers on the roof, which feed refrigerant to the cold coil of each tenant’s fan-coil unit. Additional cooling equipment is located in the basement (Photo 33).

Gas service from the street fuels a 40 gallon domestic water heater in the basement (Photo 34). The space served by this appliance is unknown. Two gas meters were observed (Photo 35). Additional appliances served by the second gas meter are unknown.

There is a dry-pipe fire suppression system. Sprinkler heads are located near the undersides of the floor decks, where visible (Photos 36, 37), and are likely present above the suspended acoustic panel ceiling systems in the tenant spaces. There is also a fire hose in the rearward stairwell on each floor (Photo 38), and a central fire alarm system with manual pull-boxes (Photos 39, 40).

**Recommendations**

The building’s brick, stone and terra cotta is soiled; lightly in most areas and moderately in others. Thorough cleaning is recommended. Some masonry joints have cracked and/or missing mortar and need selective repointing. Small fastener holes from the past mounting of signage and/or lighting are present in various locations on the façade and should be filled/patched. These holes are especially prevalent at the main entrance on Colony Street.

The terra cotta cornice and pilaster capitals have areas of staining and show signs of minor spalling. Also, the mortar joints do not appear to be completely intact. From street level, this damage appears to be reparable; however, a closer inspection by a materials conservator is recommended and his or her advisement for repair should be considered.

The newer masonry on most of the south and east sides of the basement and first floor is in good condition, likely in need only of a light cleaning. We recommend, however, that historical research be conducted on the original window layout and reinstate that fenestration. On the railroad side, this will afford pleasing views of the future park portion of the Meriden TOD Master Plan, and restoring the fenestration on both sides will enhance the historic architectural significance of the building.

Remove the significantly cracked concrete main entrance floor to potentially reveal original material. Restore original material if feasible; install new concrete or terrazzo floor if not feasible. Patch and clean the Colony Street commercial tenant entrance terrazzo floor. The East Main Street commercial tenant entrances’ floor covering is flaking and should be
removed, possibly to reveal an original material which may lie beneath it. Restore original material if feasible; install new material to match original if not feasible.

While no evidence of recent roof leakage was observed, the large number of patches and seam repairs present indicate past leakage. This type of roof is intended to be adhered to its substrate, and there are many areas where the membrane has become detached. In portions of these areas, the substrate is uneven and in some cases not secure. Other components of the roofing system appear to be generally intact, but are nearing the end of their serviceability. For these reasons, the entire existing roofing system, including the roof decking, is recommended to be removed and replaced. Additional roof insulation should be installed where feasible. Repoint the masonry chimneys and penthouse.

Consider replacing the storefronts with a more appropriate design for the historic character of the building. Consulting historical photographs would be of assistance in deriving the most historically accurate solution. The one-over-one sash second through fifth floor windows appear to be replacements and are in fair to poor condition. Their appearance is good to fair, while their operation is poor. Further investigation should be conducted to determine if they can be repaired or should be replaced, but we recommend that they be replaced with new energy efficient units of historical appearance and detailing.

Remove carpeting on all floors to potentially reveal historical flooring materials; possibly restore/refinish those where feasible. Consider removing the ceramic tile in the lobby to potentially reveal original material below, which may also be able to be restored. Some of the main stair’s soapstone treads are worn significantly enough to be considered potential tripping hazards and should therefore be replaced with stone to match existing. For code reasons, a gate should be installed at the top of the flight of stairs at the lobby level. This gate should be aesthetically compatible with the existing painted steel guardrails. The rear stair is in need of miscellaneous carpentry repair and repainting, especially at portions of the guardrails. This stair’s non-original composite tile flooring at the landings should be removed and replaced with awareness that it, its adhesive or both may contain hazardous material. Consider minor safety improvements such as adding handrails and applied tread nosings. Consider having all original materials assessed by an architectural materials conservator for cleaning and conservation recommendations.

Provide new accessibility and egress signage, HVAC systems, revise electrical distribution, modify existing or provide new sprinkler system and plumbing as required, based on new residential tenancy.

**MODEL BUILDING PICTURES**
See the following pages.
1-3 Colony Street

1. Colony Street façade, view east

2. Colony and West Main Street façades, view northeast
3. West Main Street façade, view north

4. East Main Street storefronts, view north
1-3 Colony Street

5. Main entrance, view northeast

6. Main entrance, view east

Photos taken February–April 2014
7. West façade, adjacent to rail line, view west

8. Colony Street façade stone and brickwork, view southeast
9. Colony Street sills, lintels, pilasters and cornice, view east

10. Colony Street commercial tenant entrance, view east
11. East Main Street commercial tenant storefronts, view south

12. Penthouse, view north

13. Portion of roof, view north
1-3 Colony Street

14. Portion of roof, view northwest
1-3 Colony Street

15. Skylight, view northwest.

17. Transition from concrete beam and slab floor structure to steel floor structure

18. Steel floor structure
19. Main Entrance Lobby

20. Main Stair

21. Main Stair

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1-3 Colony Street

22. Main Stair

23. Main Stair detail
24. Antique mail system receptacle

25. Antique mail system terminus

26. Rear Stair at Landing

27. Rear Stair

Photos taken February–April 2014
1-3 Colony Street

28. Commercial tenant space

29. Commercial tenant space

30. Commercial tenant space, view south

31. Commercial tenant space, view southwest

Photos taken February–April 2014
32. Boiler
33. Cooling Equipment
34. Water heater
35. Gas meters
1-3 Colony Street

36. Sprinkler Head

37. Sprinkler Head

38. Fire hose

39. Fire alarm manual pull

40. Fire alarm system controller

Photos taken February–April 2014
DEVELOPMENT TOOLS AND INCENTIVES

- City Planning Division
  http://www.cityofmeriden.org/Content/Planning_Division/

- Zoning Regulations
  http://ecode360.com/13396419

- Zoning Map

- Design Guidelines for Transit Oriented Development Districts

- Transit Oriented Development Information
  http://meridentod.com/

- Enterprise Zone Map

- Enterprise Zone Information
  http://www.meridenbiz.com/Content/City_Enterprise_Zone.asp

- Plan of Conservation and Development
  http://www.cityofmeriden.org/Content/Plan_of_Conservation_and_Development/

- Building Construction Standards, Specifications Rules & Regulations
  http://ecode360.com/13483104

- Tax Assessor
  http://www.cityofmeriden.org/Content/Assessment/

- GIS
  http://gis.meridenct.gov/meriden/

- Neighborhood Associations
  http://www.cityofmeriden.org/Content/Neighborhood_Associations/

- Neighborhood Preservation Program
  http://www.cityofmeriden.org/Content/Neighborhood_Preservation/
  (note: housing rehabilitation loan program suspended)
- State Funding Program for Development in Transit Corridors  

- HOMEConnecticut Program for Incentive Housing Zones  
  [http://www.pschousing.org/homeconnecticut-program](http://www.pschousing.org/homeconnecticut-program)

- Incentive Housing Zone, CGS chapter 124b  

- Meriden Transit District Bus Service  
  [http://www.cityofmeriden.org/content/Transit_District/](http://www.cityofmeriden.org/content/Transit_District/)