# **Buell Heminway**

· A R C H I T F C T S

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May 12, 2009

City of Portland Inspection Services Division 389 Congress St. Portland, ME 04101

(BC: 038-F-006

Attention: Ms. Jeanie Bourke

Subject: 245 Commercial Street 1<sup>st</sup> Floor ~ Fire Rated Ceilings in Lavatories Applicant; C & S Restaurant LLC

Dear Ms. Bourke,

It has come to my attention that the specified fire-rated ceiling treatment in Men's/ Women's Lavatories and access hallway needs to be modified due to required maintenance on sprinkler heads and plumbing above level of the finish ceiling.

Therefore, we propose to achieve the required one hour fire rating for the ceiling/floor assembly by protecting the existing  $2^{nd}$  floor deck with 5/8" fire-rated gypsum wall board, finish taped and caulked, applied between existing floor joists in these three areas; the same treatment as described in our letter of 4/13/09. Existing structural steel beams will be protected with 2 layers of  $\frac{1}{2}$ " gypsum wallboard in accordance with UL Design No. L524 -"Unrestrained Beam Rating – 1 Hr."

The finish ceiling below will consist of a non-rated suspended ceiling system.

Please contact me should you require anything further on this matter.

Sincerely, **Buell Heminway** 

Copy to: Mike Collins, CEO Charles Bryon

MAY 1 3 2009

# Armstrong Fire Resistant Ceilings

### Code Compliance and Standards

Local building codes for safe construction rely on two ratings to evaluate compliance:

- Material Flame Spread Rating\*
- Construction Assembly Fire-resistance\* Rating

These ratings are based on ASTM standards. Compliance is determined by several independent, nongovernmental testing services such as Underwriters Laboratories, Inc.

Armstrong ceiling panels and suspension systems listed in fire-rated assemblies are designated as Fire Guard " products and are identified with the Fire Guard icon throughout this catalog.

Fire Guard Ceilings are specially formulated to provide enhanced resistance against structural failure

Fire Guard Suspension Systems have patented expansion reliefs, to help maintain structural integrity of the ceiling.

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Main Runner expansion relief

#### Selecting the Right UL Fire-Rated Assembly

- 1. Establish the hourly rating needed to meet code requirements.
- 2. Determine the existing or planned building elements, including structural, mechanical, electrical and finish materials, in the fire-rated assembly
- 3. Refer to the Fire Resistance Rating Summary (armstrong.com/ulfire) to determine the UL design numbers and ceiling system products that correspond to the fire-rated assemblies that meet your needs.
- 4. Refer to the Fire Resistance Selector information on the Ceilings Selector chart on page/238 for a list of Fire Guard fire-resistive ceilinge

Two types of fire-rated construction assemblies pertain to acoustical ceiling systems:

#### **Roof/Ceiling Assemblies**

Ceiling system, lighting, HVAC outlets and other penetrants through the ceiling, the plenum, roof support structure and roof assembly including deck, insulation and roofing system.

#### Floor/Ceiling Assemblies

Ceiling system, lighting, HVAC outlets and other penetrants through the ceiling, the plenum, structural system, subfloor and finish floor.

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Call -> Peter To confirm he wants to order read and firm

\*Note: Flame spread and fire-resistance ratings are separate issues, and must be addressed independently in selection and specification.

For UL Fire Resistive Ceiling Assembly Details, see armstrong.com/ulfire

### Armstrong Resources Available to You:

- · armstrong.com/fireguard
- TechLine at 1 877 ARMSTRONG (276-7876)
- CS-3959 Suspended Ceiling or Open Plenum Making the Right Choice Summary listing, UL Fire-Resistive

Ceiling Assemblies - armstrong.com/ulfire



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Fire-Resistance Rating of a Ceiling Assembly (ANSI/UL 263 - ASTM E119 and NFPA 251) (CAN/ULC - S101M)

The degree to which (measured in hours) the entire assembly, not individual components, withstands fire and high temperatures. Specifically, it is an assembly's ability to prevent the spread of fire between spaces while retaining structural integrity.

The resulting fire-resistance rating relates to the assembly in its entirety and is published or classified in the UL Fire Resistance Directory.

#### Flame Spread Rating of a Ceiling Material (ASTM E84) (CAN/ULC - S102M)

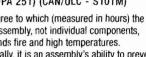
The relative rate at which a flame will spread over the surface of the material. This rate is compared against a rating of 0 for inorganic reinforced cement board and a rating of 100 for red oak Class A ceilings have flame spread ratings of 25 or less - the required standard for most commercial applications.

Armstrong fire resistant ceiling panels and tile meet both Class A surface burning characteristics per ASTM E84 as well as fire-resistive construction requirements as classified in the UL Fire Resistance Directory.

#### Continuous Versus Open Plenum Ceilings

A continuous ceiling may allow sprinklers and smoke detectors to activate faster, providing added escape time for occupant evacuation.

In buildings where a ceiling is not in place, the height of the space is normally greater and could delay the operation of the fire sprinkler or smoke detector systems.



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CBL: 038 F-006

April 13, 2009

City of Portland **Inspection Services Division** 389 Congress St. Portland, ME 04101

APR 1 5 2009

Attention: Ms. Jeanie Bourke

Subject: 245 Commercial Street 1<sup>st</sup> Floor ~ Fire Rated Ceilings Applicant; C & S Restaurant LLC

Dear Ms. Bourke,

Pursuant to an on-site meeting this morning with CEO Mike Collins at the subject project, the following was agreed upon with respect to ceiling treatments and protection to achieve a one hour fire rating between the 1<sup>st</sup> floor restaurant/assembly and office occupancy on the 2<sup>nd</sup> floor. The following amends and supplements actions described in my previous letter of April 6<sup>th</sup>.

We propose to protect the 2<sup>nd</sup> floor deck with 5/8" fire-rated gypsum wall board, finish taped and caulked, applied between the floor joists throughout the entire space, including above the ceiling soffitts. This means that the soffits and associated suspended ceilings will not need to carry a fire rating.

The Kitchen ceiling will consist of 2 layers 5/8" one hour fire-rated gypsum wallboard which will protect existing wood joists, deck, and structural steel.

In addition, the east wall of the kitchen will receive one layer of 5/8" fire rated gypsum wallboard over metal studs furred over the existing masonry party wall.

Please contact me should you require anything further on this matter.

Sincerely,

**Buell Heminway** 

Copy to: Mike Collins, CEO Charles Bryon