

101 Federal Street, 6th Floor Boston, MA 02110 T: 617 748 7800

T: 617.748.7800 F: 617.748.7801

www.cosentini.con

Drawing Reviews
Building and Fire Code Consulting
Life Safety, Egress, and Accessibility
Negotiation and Equivalencies
Fire/Smoke Modeling
Special Inspections and Commissioning
Hazardous Materials and Process Analysis
Smoke Control System Design
Due Diligence and 3rd Party Reviews

April 5, 2019

Louis Hasbrouck Building Commissioner 212 Main Street Northampton, MA 01060

Re: Curtain Wall Wood Timber Intumescent Coatings

Smith Neilson Library - Northampton, MA

Dear Mr. Hasbrouck.

Cosentini Associates has reviewed the proposed wood mullions to be utilized along the exterior façade at the north and south jewel box of the Neilson Library project at Smith College. The wood mullions are made from Baubuche beechwood and will include an intumescent coating to achieve a Class A rating per ASTME E 2768. Accordingly, the timber mullions are considered acceptable for the proposed application based on the following analysis.

TIMBER MULLION DETAILS

Exterior walls of Type IB construction are required to be of non-combustible materials (MSBC §602.2). Fire-retardant treated wood may be used as part of a non-bearing exterior wall that does not require a fire-resistance rating (MSBC §603.1).

Fire-retardant treated wood must meet the following requirements in accordance with MSBC §2303.2:

- Tested in accordance with ASTM E84 or UL 723.
- Listed for a flame spread of 25 or less,
- · Show no signs of progressive combustion when tested for an additional 20 minutes, and
- Flame front must not progress more than 10.5 feet beyond the centerline of the burner at any point.
- Impregnated with chemicals by a pressure process or other means during manufacturing.

The fire-retardant treated BauBuche beechwood mullions are 3-inches thick and provided with a FlameSafe Fire Poly FP100 intumescent coating that provides a Class A rating when applied to wood products and tested in accordance with ASTM E 2768 which is equivalent to ASTME E 84 extended for an additional 20 minutes to show there are no signs of progressive combustion. As such, the timber mullion will have a flame spread index of 25 or less and would not have a flame front that progress more than 10.5 feet during such a test as required for fire-retardant treated wood.



The intumescent paint will be factory applied on the exterior surface of the timber mullion and will not be impregnated with chemicals. However, given the proposed limited use of the timber mullions on the exterior walls, it is not anticipated to significantly contribute to the fuel load of the building. The exterior wall in the location of the wood mullions is otherwise comprised primarily of a glass façade. It is also noted that the timber mullion is 3 inches thick and in the event of a fire would develop a char layer inhibiting a rapid burn of the entire member. This provides additional protection for the proposed mullion as thinner fire-retardant treated wood products are permitted to be utilized in this condition.

CONCLUSION

Based on the fire-resistant qualities that the timber mullions will include and the limited use of such material on the exterior wall, it is considered an acceptable material for the proposed application. The timber mullions will not exhibit sustained flaming and will not significantly contribute to the fire load of the building. Accordingly, the use of the proposed timber mullions provides a reasonable level of safety as intended by the codes.

If you have any questions or comments, please do not hesitate to contact me.

COSENTINI ASSOCIATES, INC.

Heith Standery

Keith Flanders, PE | Fire Protection Code and Fire Engineering Group

kflanders@cosentini-ma.com

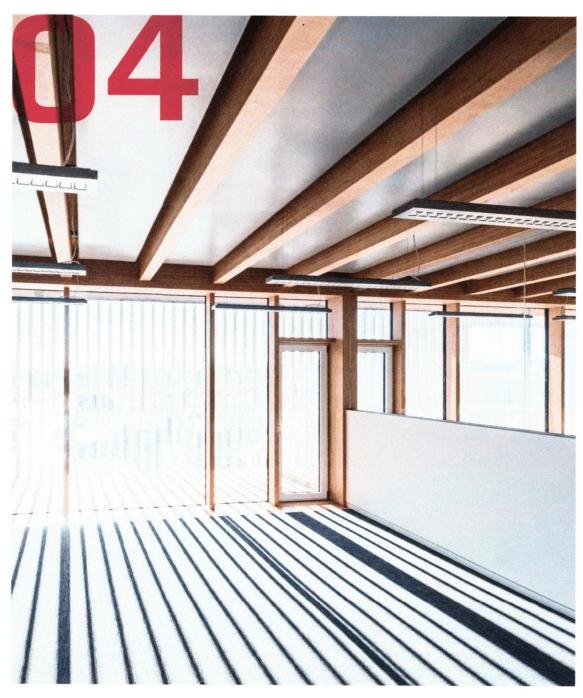
Cosentini Associates, Inc. - A Tetra Tech Company

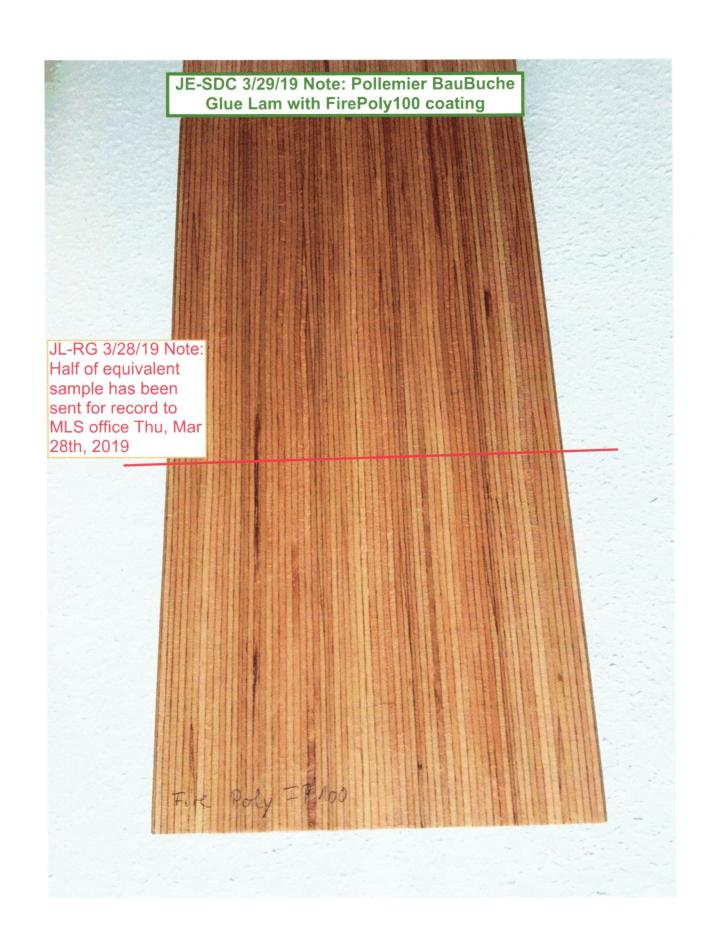
104 Federal Street - Seile 60 Boston, MA 02110 www.cosentini.com



BauBuche Beech laminated veneer lumber

Characteristic static strength values and dimensioning tables





Fertigungsüberwachung Stahlbau und Korrosionsschutz Proj. - "SCNL" / Production Control steel work and corrosion protection, project "SCNL"

RoschmannGROUP

zum Prüfprotokoll-Nr.:

Datum/ Date:

Anlagen / annex

FÜ 04 for the check report No: FÜ 04

18.03.2019

Anlagen zum Fertigungsüberwachungsbericht /

Nr. / no.: 3 Status

Annex for the production control report

Fire retardant test No.1

product company:

Flame Safe

FIRE POLY FP 100



