



Laurie Leader <lr@portlandmaine.gov>

FW: Further Portland Hall plan review comments

1 message

Tyler Barter <tbarter@oakpoint.com>
To: Laurie Leader <lr@portlandmaine.gov>

Thu, Jun 8, 2017 at 1:06 PM

Good afternoon Laurie,


Below is the summary on the construction of the fire wall as requested. Let me know if you have any questions. If needed, I can get Laura Clebak, our FPE on the phone as well.

Tyler

TYLER G. BARTER | Senior Architect, AIA, LEED AP BD+C

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From: Laura Clebak [<mailto:lclebak@oakpoint.com>]
Sent: Thursday, June 8, 2017 12:55 PM
To: Tyler Barter <tbarter@oakpoint.com>
Subject: RE: Further Portland Hall plan review comments

Tyler,

Regarding Laurie's question on the fire wall vestibules and size of fire wall openings...

As previously discussed, the criteria of the 2015 NFPA 221 double fire walls was utilized. NFPA 221, Section 6.10.3, states that for double fire walls, the openings shall be protected using one fire door in each separate wall. The annex to this section references Section A.5.8.4 which states the following: "An example of an arrangement where the alternative of providing two fire doors on a freestanding, fire-resistive vestibule is used and where the opening is used as part of the means of egress is shown in Figure A.5.8.3 (b). Where this alternative is used and where the opening is used for egress, the vestibule should be long enough to allow both doors to swing in the same direction and open completely." The figure depicts a vestibule similar to what we have designed, with a large spacing between the doors that do not line up with the majority of the fire wall. For guidance in determining the minimum required vestibule width, we turned to the 2009 IBC, Section 1008.1.8, for doors in series. This section requires two doors in series to be separated by a minimum of 48-inches plus the width of a door swinging into the space, for this scenario, a minimum of 7'-0".

Both NFPA 221, Section 6.10.1, and the 2009 IBC, Section 706.8, limit the openings in fire walls to not more than 25 percent of the length of the fire wall (clarified to per story in NFPA 221). On the left hand double wall, the length is 152', 25 percent of this length is 38', and openings are limited to 24' at the lower level, and 11' (of ductwork) coming from the second floor. On the right hand double wall, the length is 225' at the first floor, 25 percent of this length is 56', and openings are limited to 55'. At the second floor, the length is 85' (measuring just the two story portion), 25 percent of this length is 21', and openings are limited to 11' (of ductwork).

Thank you,


Laura

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