

Building/Fire Code Board of Appeals
Meeting Minutes
September 8, 2014

Board Members Present:

Gary Landhauser, Chairman
Sarah Coleman
Bill Knapp
Richard Good

Board Members Absent:

Carol Hustad
Matt O'Neal
Dave Hogan

Also Present:

John Echeverri, EJ Engineering Group, Inc.
Vance McKinnon, Fire Marshall
Steve Dunham, Fire Captain
Kevin Ciabatti, BSD Director

Ray Nees, BSD Manager
Duncan McCallum, Plans Examination Coordinator
Roni Messer, Recording Secretary
Dawn Kolosik, Recording Secretary

Board Chair Landhauser brought the meeting to order at 10:07 AM. Minutes from the previous meeting were not available and will be reviewed at the next scheduled meeting. Chairman Lanhauser requested the minutes be sent to all Board members once available.

An appeal had been filed by EJ Engineering Group, Inc. on behalf of Discount Tire Company regarding the modification/interpretation of Building or Fire Code regarding additional sprinkler requirements at Discount Tire located at 3050 Wiley Blvd SW, Code Sections 8.12.5.3 and 8.12.5.3.3 Sprinklers Under Grated Obstruction under 2012 NFPA.

EJ Engineering Group, Inc., representative John Echeverri introduced the appeal. Code Sections 8.12.5.3 and 8.12.5.3.3 were provided to all Board members. Issue concerns open grating as an obstruction to the overhead ESFR system. Mr. Echeverri stated that under Chapter 8.12 in NFPA 13, whether looking at isolated obstructions below the elevation of the sprinklers, continuous obstructions below the sprinklers or obstruction of sprinkler discharge, the three locations in Chapter 8 indicate there are special obstruction allowances that are specific to the listing. It specifically says, "The sprinkler with a special obstruction allowance shall be installed according to their listing." The sprinkler EJ Engineering Group is looking at installing is a Viking VK510 (K25.2). This specific sprinkler is FM approved. In the footnotes specific to the listing, it indicates that the FM data sheet shall be followed with regards to obstructions. Referencing FM data sheet 8-3, it indicates that grated shelves are permitted within the rack as long as "the grating is at least 70% uniformly open". Mr. Echeverri stated this is without providing any additional sprinklers beyond the overhead system. The actual grating does not occur within the racks; it is simply access grating for the employees to safely access the tires from the 9 foot level to the 18 foot level without getting on a ladder. FM data sheet HS-3 states that if you have open grating that is at least 70% open and it is in the racks, additional sprinklers are not required below. If you look at the rest of FM 8-3, there is no requirement for sprinklers below open grating or obstructions in addition to that. Mr. Echeverri stated the access grate is 86% open. With the addition of these approximately 4 or 5 sprinklers, he believes it would simply not be permissible per the listing of the sprinkler. All of this falls under the NFPA 13 provision that Mr. Echeverri spoke to initially.

Chairman Landhauser asked if the grating was being used between the 9 ft and 18 ft level if that constituted the grating being a flooring. If so and they are walking on that surface, would that by the Code only allowed to be 4 ft wide? Mr. Echeverri stated the grate design is by the architect and grate manufacturer; the limitation of the width of the grate is not something they have had to deal with because previous additions of factory mutual data sheets have indicated up to 10' wide grates in tire storage are acceptable without any sprinkler additions below the grating. This can be found in the FM data sheet 2-2. It is specific under walkways, 2.3.2.3 entitled "Walkways". He quoted, "Walkways are located between storage structures for material-handling purposes. In order to be considered grated, the grating of a walkway must be at least 70% open. Treat grated walkways wider than 10 ft as grated mezzanines. No additional sprinklers are required under single-level grated walkways that are no more than 10 ft wide." Mr. Echeverri also referenced 2011 edition of FM 2-0 updated 2014 regarding sprinklers in open grids and walkways.

Vance McKinnon referenced NFPA 13 under 8.5.5.3.1.1 stating any open grating greater than 4 ft is to be sprinkler protected underneath with an intermediate temperature sprinkler head (not an ESFR sprinkler head) with protection from the head above. He also stated that NFPA discusses avoiding open grated walkways with either a solid grating or reduce to the 4 ft level so sprinkling isn't required underneath.

Steve Dunham pointed out that the Plans Examiner required the addition of the sprinklers. He also stated that the FM data sheets provided on 2-2-14 open grids, ceilings, mezzanines, and walkways, avoid the installation of open grids because of their obstruction; ceiling-level sprinklers as an alternative make the mezzanine or walkway a solid or protected in accordance with 2.2.1.5. Specifically and less recommended, otherwise and irrelevant occupancy specific data sheet 2.2.1.4.3 of this data sheet, install sprinkler protection under open grids using the 160° normal rated quick response sprinkler heads in the same. Install storage sprinklers under open grid ceilings with a maximum lineal spacing of 8' of a maximum area sprinkler 94 cf used in the same branch-line pipe sprinklers. Storage sprinklers are not required under open grids when the six listed conditions are met, which Fire Marshall McKinnon had followed. Steve stated EJ Engineering Group had pointed out they did not meet the six listed conditions of the requirements for specific allowance. The Viking factory listings would need to be used as a general obstruction 8.5.5.3.1.1 which would require the open grid grating have sprinkler system protection underneath because the specific criteria hadn't been met.

Chairman Landhauser asked where the definition of rack storage of certain specified materials could be found with regards to technical data sheets on the ESFR pendants (referring to the Viking Technical Data Sheet VK510). John stated Approval Chart 2 (FM) located on page 124e is specific to what they are doing. He stated tires would not be stored on the rack in question.

Chairman Landhauser opened the floor for a motion to approve or deny the appeal. Bill Knapp stated he would like more information concerning the appeal. Steve Dunham provided a picture of the site layout. Steve stated seven intermediate sprinkler heads would need to be added which would activate immediately. It is his opinion that if these were installed, it would meet the code and not stop the ESFR system from doing its job. Vance McKinnon agreed with this last statement.

Bill Knapp made a motion to deny this appeal; Rich Good seconded. No further discussion on this motion. All approved. Motion carried. Appeal denied.

Discount Tire Appeal

September 8, 2014

Page 3 of 3

Vance McKinnon asked John to submit another set of prints with heads installed under the grading. John stated they can't because of the professional engineering standard prevents them from installing something that is, in their professional opinion, detrimental to the overhead system design. Vance asked if there was a contractor whose bids were already out and installing the system. John stated the sprinkler system installation is nearly installed or completed and the contractor is Black Hawk Automatic Sprinklers. John also stated this company is the one who submitted the shop drawings. Vance stated we would contact Black Hawk to resubmit the plans.

Chairman Landhauser stated it would have been beneficial if the information referenced by EJ Engineering Group, Inc., would have been provided to the Board ahead of time. He asked when the plans were submitted. Steve Dunham stated the plans were submitted to him 4/21/14 and returned to EJ Engineering Group, Inc., on 4/22/14.

Rich Good made a motion to adjourn the meeting; Bill Knapp seconded. All in favor. Meeting adjourned at 11:13 am.

Respectfully submitted,
Roni Messer, Recording Secretary
Dawn Kolosik, Recording Secretary