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BELMONT FIRE DEPARTMENT

HEADQUARTERS
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Zoning Board of Appeals
19 Moore Street
Belmont, MA 02478

Dear board members,

The Belmont Fire Department would like to make known its position and recommendations concerning the proposed development at 91 Beatrice Circle in the current phase of review.

The fire department will ensure compliance with and shall enforce Chapter 148 of the Massachusetts General Laws, 527 CMR 1.00 Massachusetts Comprehensive Fire safety Code based on the 2015 edition of NFPA 1, as well as the fire protection sections of the Massachusetts State Building Code 780 CMR. In addition there are several aspects of this development with which the fire department is specifically concerned.

Accessibility for Fire Apparatus

As part of the planning process fire apparatus access must be evaluated and a report submitted to the fire department for review and approval prior to commencement of construction. This plan shall demonstrate the ability of fire apparatus to maneuver onto and through the property beginning on Frontage Road where apparatus would begin maneuvering into the driveway. The Belmont Fire Department will provide apparatus to confirm their ability to appropriately traverse the site. The fire department will supply the specifications of its fleet that indicate angles, lengths, height and other information from which break over angles, turning radius and other information may be obtained.

The plan must also address access with regard to 527 CMR 1.00 the Massachusetts Comprehensive Fire Safety Code. Depending on final design, the access road may require additional compliance with provisions of 527 CMR 1.00, Chapter 18. Should the dead end road be in excess of 150 feet without the ability to turn around approval from the fire department would be required.

In addition to roadway access the construction of site roads shall be confirmed to withstand the point loads of the stabilizing system of the Belmont Fire Department's aerial apparatus. The specifications of this system shall be supplied by the fire department.

It is recommended that the developer install rolled curbing on the property as opposed to granite curbing. This measure would lessen damage to apparatus tires should vehicles need to climb on a curb to achieve access in an unforeseen situation.

The fire department also recommends that measures be undertaken to prevent parallel parking of occupant vehicles along the access road. Additionally, the fire department recommends that snow accumulation be removed, rather than piled on site further restricting turning and accessibility on the roadway.

Vertical Clearance

While 527 CMR 1.00, Chapter 18 requires fire access roads to have an unobstructed vertical clearance of 13 feet 6 inches the roadway provides accessibility to only two sides of the townhouses and one side of the single family units. It is recommended that vertical clearance be unobstructed so as not to encumber access by ground ladder or aerial device to the remaining sides of the structures for purposes of firefighting or rescue.

Detection and Suppression Systems

Based on initial review of the current design it appears that the single family homes may not be required to have fire protection systems. The department strongly recommends that **all** buildings on the property be equipped with fire protection systems. Sprinkler systems in **all** the buildings on the property would work to keep a fire in check allowing occupants to evacuate and firefighting efforts to begin.

Central station monitoring of the fire protection and detection systems in the townhouses and single family units is also strongly recommended. This will generate an automatic notification

and response by the fire department and avoid potential delays during the crucial first minutes of a fire.

Construction and landscape

The Belmont Fire Department recommends the use of noncombustible ignition resistant siding such as HardieBacker or similar cement board. In addition, 527 CMR 1.00, Chapter 10 requires at least 18 inches between mulch and combustible materials around buildings. Although buildings containing 6 units or fewer are exempted in this provision the fire department recommends that no building in this development feature mulch within 18 inches of the structure, even if noncombustible siding is in use. The close proximity of the buildings and the potential for careless disposal of smoking materials to cause a fire are of concern.

The fire department recommends that it be consulted during plans for landscape construction so that other potential contributors to fire spread may be reduced or eliminated. Further, elements of landscaping may impede access to a structure, overhead, or roadway with expected growth.

Water Supply & Hazards

Once combustibles are present on site water for fire protection must be established. This initial supply may be temporary or permanent. Ultimately with permanent water supply accessibility to a new looped water main with at least two fire hydrants must be available. The department recommends fire hydrants installed 50 feet or less from fire department connections.

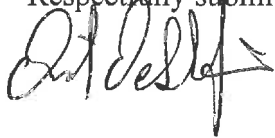
The fire department also recommends that designated outside smoking areas be established away from any combustible material and rubbish containers not be allowed between the buildings but kept away from other combustibles. The Belmont Fire Department also recommends that it be included in the process for building number labeling so as to ensure clarity and reduce any potential for confusion in responding to emergencies.

Conclusion

The Belmont Fire Department exists to protect the life and property of the residents and visitors of Belmont. It is our mission to secure the safest conditions in our community and respond to any fire or emergency with the utmost efficiency. We seek to work with residents and

developers as well as all town agencies to fulfill this goal. Please don't hesitate to contact us to be of service.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "David DeStefano", with a stylized flourish at the end.

David DeStefano, MPA
Chief of Department

Attachments

Attachment 1- Belmont Fire Apparatus Specifications

	GVW	Wheel Base	Turning Radius	Length	Width	Height
Engine 1	30,240	178"	32'	31'-5"	100"	10'-6"
Engine 2	40,000	180"	32'	29'-11"	96"	10'-4"
Engine 3	25,500	219"	34'	29'-5"	96"	9'-8"
Engine 4	40,000	180"	32'	29'-11"	96"	11'-6"
Ladder 1	50,940	230"	32'	41'-11"	100"	11'-6"
Ladder 2	51,000	230"	37'	37'-8"	96"	11'-1"

Aerial Apparatus Stabilizers

The maximum design jack (point) load is 75 psi using the jack pad.

Jack pad is 24x24 or 576 square inches

576 square inches x 75 pounds per square inch = 43,200 pounds

Jack spread (side to side) is 11 feet

Attachment 2- Approach/ Departure Angles

NFPA 1901 Minimum Standard

- Approach angle of 8 degrees
- Departure angle of 8 degrees