

The Commonwealth of Massachusetts
Executive Office of Public Safety and Security
Fire Prevention Regulations Appeals Board
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Docket # 2024-05
55 Upland Road
Burlington, Massachusetts

FIRE PREVENTION REGULATIONS APPEALS BOARD DECISION

A) Statutory and Regulatory Framework

This matter is an administrative appeal filed in accordance with Massachusetts General Laws Chapter 22D, section 5. The Appellant is seeking the Board of Fire Prevention Regulations' review of a determination of the Burlington Fire Department to reject a proposal for the installation of a solar panel array on a residential, single-family home located at 55 Upland Road, Burlington, Massachusetts. The appeal was filed by Steve Connolly, Project Manager for Tesla Energy Systems (hereinafter referred to as the Appellant).

B) Procedural History

By notice dated October 15, 2024 and issued by the Burlington Fire Department, the Department rejected a proposal for the installation of a solar panel array on a residential, single-family home located at 55 Upland Road, Burlington, Massachusetts. The Burlington Fire Department determined that as proposed, solar panel installation would violate 527 CMR 1.00, Chapter 11, specifically 11.12.3.1.1, 11.12.3.1.2 and 11.12.3.2.3.3.

On October 23, 2024, the Appellant filed a timely appeal of the Burlington Fire Department's determination with the Fire Prevention Regulations Appeals Board. The Board held a hearing relative to this appeal on December 5, 2024, via video conference.

Appearing on behalf of the Appellant were: Steve Connolly, Project Manager for Tesla Energy Systems. Appearing on behalf of the Burlington Fire Department was Lt. Peter A. McAnespie, Sr. Present for the Board were: Chief Richard Arruda, Presiding Chair; Patricia Sheehan; Paul Kennedy, Jr. and Larry S. Fisher, Alternate. Rachel E. Perlman was the Attorney for the Board.

C) Issue(s) to be Decided

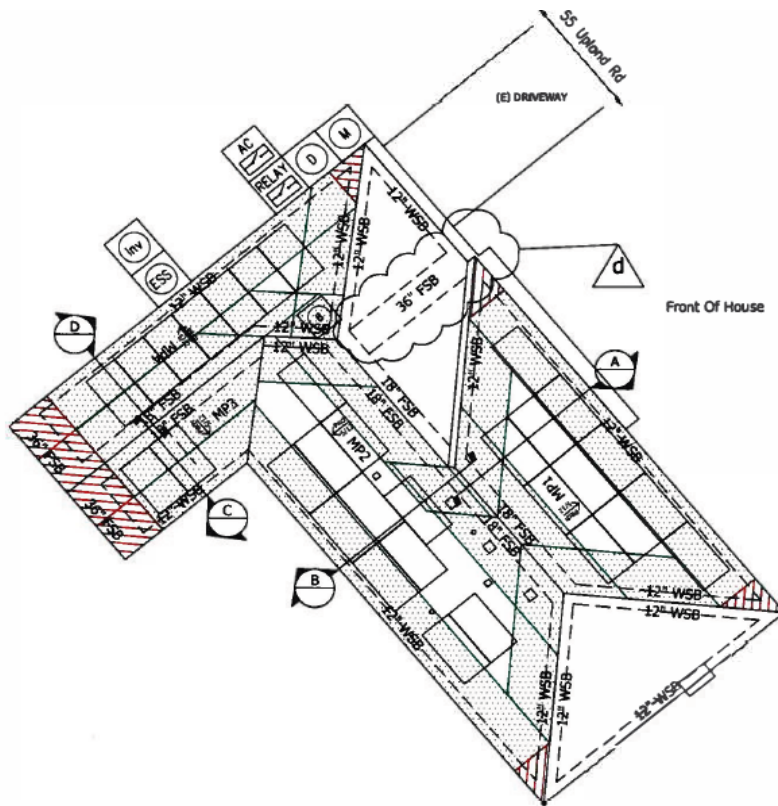
Whether the Board should affirm, reverse or modify the determination of the Burlington Fire Department regarding the proposed solar array installation in accordance with 527 CMR 1.00, Chapter 11?

D) Evidence Received

1. Application for Appeal filed by Appellant (dated 10/23/2024)
2. Statement in Support of Appeal and explanation of project
3. Photographs of the property at 55 Upland Road, Burlington, MA
- 3A. Exterior back of home
- 3B. Exterior back and side of home
- 3C. Exterior front of home
4. Site plan of home showing PV Array and Energy Storage System (dated 10/22/2024)
5. Order of Notice issued to Tesla Energy from the Burlington Fire Department (dated 10/15/2024)

E) Subsidiary Findings of Fact

1. The Appellant sought this Board's review of the Burlington Fire Department's rejection of a proposal for solar panel installation plan for 55 Upland Road, Burlington, Massachusetts. The appeal was filed pursuant to the provisions of M.G.L. c. 22D, s. 5.
2. At the hearing, the Appellant testified that the solar panels would be installed on all roof planes of a residential single-family home located at 55 Upland Road, Burlington, Massachusetts. The installation would consist of 31 total solar panels, with each panel measuring 74" x. 40" in size, in addition to an energy storage unit on the outside of the subject property.
3. The Appellant testified that the submitted site plan shows three (36 in.) access pathways are provided on separate roof planes, from gutter to ridge. The Appellant contends that this exceeds the requirements of 527 CMR 1.00, 11.12.3.2.3., which only requires not less than two (36 in.) pathways on separate roof planes, from gutter to ridge, on all buildings.
4. In support of the solar panel installation, the Appellant stated that each plane would be fully accessible (see Exhibits 2 and 4). Specifically:
 - MP1 is accessible on the same roof plane as the PV array.
 - MP2 is accessible from the adjacent roof plane (front of house on the street side of the roof).
 - MP3 has access on the same plane and also on the adjacent plane of MP4 toward the back of the house.
 - MP4 has access on the same plan and also on the adjacent plane of MP3.



5. In support of the Burlington Fire Department's determination, Lt. Peter A. McAnespie, Sr. testified that the proposal was rejected because it did not meet the requirements for 36-inch-wide access pathways for each roof plane with a PV array and because a secondary egress was not provided directly across from one of the proposed access pathways, as required by section 11.12.3.2.3.3. It was the position of the Burlington Fire Department that the roof plane labeled MP2 must, at a minimum, have its own 36 in. wide access pathway and the secondary means of egress could be on an adjacent roof plane or straddling the same and adjacent roof planes.
6. While Lt. McAnespie conceded that the Appellant was providing three (3) access pathways for the entire house, it was his interpretation that section 11.12.3.2.3.3 requires each roof plane with a PV array to have a 36 in. wide access pathway, from gutter to ridge. Thus, under this interpretation, four access pathways would be required, including an access pathway on the same roof plane as MP2.
7. Lt. McAnespie stated that once that requirement is met, 11.12.3.2.3.3 provides direction on where access pathways can be placed for a secondary means of egress, including on the same roof plane as the PV array, and on an adjacent roof plane, or straddling the same and adjacent roof planes.
8. Lt. McAnespie cited section 11.12.3.1.2 as providing him with authority to require modifications to the roof access plan to ensure proper fire department access and rejected the submitted plans, citing section 11.12.3.2.3.3, as they were lacking the 36-inch-wide access pathways and the missing secondary egress.

F) Ultimate Findings of Fact and Conclusions of Law

1. The applicable sections of 527 CMR 1.00, Chapter 11 to the subject property are as follows:
 - 11.12.3.1.1** Access pathways, setbacks and space requirements shall be required to provide emergency access to the roof, provide pathways to specific areas of the roof, provide for smoke ventilation areas, and to provide emergency egress from the roof.
 - 11.12.3.1.2** The AHJ shall be permitted to reduce or modify roof access based upon fire department ventilation procedures or alternative methods that ensure adequate fire department access, pathways and smoke ventilation.
 - 11.12.3.2.3.1** Not less than two 36 in. (914mm) wide access pathways on separate roof planes from gutter to ridge, shall be provided on all buildings.
 - 11.12.3.2.3.3** For each roof plane with a PV array, a 36 in. (914 mm) wide access pathway from gutter to ridge shall be provided on the same roof plane as the PV array, on an adjacent roof plan, or straddling the same and adjacent roof planes.
2. The Board finds that the site plan, as submitted by the Appellant, meets the requirements of 11.12.3.2.3.1 and 11.12.3.2.3.3. More specifically, three 36 in. access pathways are provided for – on separate roof planes, from gutter to ridge – on the home. Those access pathways are located on the same and adjacent roof planes to those containing PV arrays.
3. The Board finds that for all buildings equipped with PV arrays, there must be no fewer than two 36 in. wide access pathways, located on separate roof planes, extending from the gutter to the ridge. These access pathways may be situated on the same roof plane as the PV array, on an adjacent roof plane, or straddling both the same and an adjacent roof plane. This requirement ensures compliance with 11.12.3.2.3.3 without mandating that every roof plane containing a PV array have its own access pathway on the same plane. The flexibility to locate pathways on adjacent or shared roof planes balances fire safety considerations with the practicalities of PV system design and installation. This compromise ensures that solar energy goals are not hindered, while also prioritizing the life safety of first responders and building occupants during emergencies.
4. The Board finds that while the AHJ has the authority in 11.12.3.1.2 to reduce or modify roof access based upon fire department ventilation procedures or alternative methods to ensure access, that the Appellant’s plan does not require such modifications, as the Burlington Fire Department did not present any evidence that department ventilation procedures or alternative methods warranted a modification.

G) Decision and Order

Based upon the forgoing reasons, this Board **reverses** the written determination of the

Burlington Fire Department to require a rear access pathway (listed as MP2 in Exhibit 4) at the property located at 55 Upland Road, Burlington, Massachusetts.

H) Vote of the Board

Chief Richard K. Arruda, Presiding Panel Member	In Favor
Patricia Sheehan	In Favor
Paul Kennedy, Jr.	In Favor

I) Right of Appeal

You are hereby advised you have the right, pursuant to section 14 of chapter 30A of the General Laws, to appeal this decision, in whole or in part, within thirty (30) days from the date of receipt of this order.

SO ORDERED,



Chief Richard K. Arruda, Presiding Panel Member
Fire Prevention Regulations Appeals Board

Dated: December 24, 2024

A COPY OF THIS DECISION AND ORDER WAS FORWARDED BY E-MAIL AND CERTIFIED MAIL, RETURN RECEIPT REQUESTED TO:

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