



## CASE STUDY LIONSGATE, YONKERS, NY



### Can You Hear Me Now?

In 2021, Nation's Roof just completed a studio roof for Lionsgate near Yonkers, NY. Once production began in the studio, the recording engineers identified a serious problem that needed to be solved in the design and construction of the studio. The studio was adjacent to the Yonkers train station with over 100 trains passing daily. The exterior sound levels were so high and that the sound was being picked up by the microphones inside of the studio.

When they were approached with an opportunity again to create another stage building a few blocks away from the original, they knew they had an opportunity to improve the soundproofing. They mobilized a team of manufacturers including Georgia-Pacific, Carlisle, Rockwool, and Beacon to solve the sound problem in the roof assembly itself before installation. The team delivered the client a strong, durable roof with a robust STC rating of 55, that will help keep exterior noise outside, and protect the building envelope.

### The Roof Assembly

There are three fundamentals to reducing sound transmission through a roof assembly MASS, ABSORPTION & DECOUPLING.

To keep the unwanted exterior environmental noise outside where it belongs a plan was established with the assistance of ROCKWOOL. The ROCKWOOL Building Science team used the results from their highest performing assembly to model a further improved assembly using INSUL. The resulting STC rating of 55 is a very robust rating which exceeded the client's demanding requirements for this challenging site.

### Quick Facts

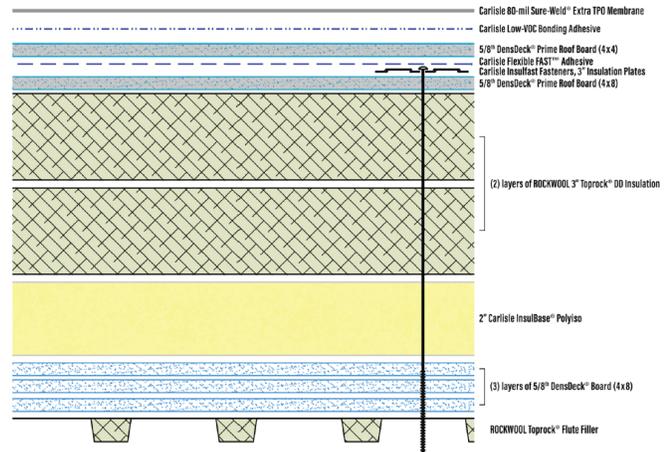
- **30,000 Square Feet**
- **Roof System Includes:**
  - 5/8" DensDeck® Prime
  - Carlisle Flexible FAST Adhesive
  - Carlisle Insulfast Fasteners, 3" Insulation Plates
  - Carlisle InsulBase Polyiso
  - Carlisle Low-VOC Bonding Adhesive
  - Carlisle 80-mil Sure-Weld Extra TPO Membrane
  - Rockwool 3" TopRock DD Insulation
  - Rockwool TopRock Flute Filler
- **Key Companies:**
  - Nation's Roof
  - Beacon Roofing Supply
  - Rockwool International
  - Carlisle Construction Materials

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Measuring over ten and a half inches deep, the full assembly is an array of roofing products. Together they provide the sound blocking properties required to reduce outside inside sound transmission.



## DensDeck® Roof Board

The roof assembly included Georgia-Pacific's DensDeck® products. Directly over the roof deck, three layers of DensDeck Roof Board not only provide additional mass but also serve as a thermal barrier. Two layers of DensDeck® Prime board protect the assembly as a double coverboard — both mechanically attached and adhered. While ROCKWOOL provided extra sound absorption, DensDeck and Rockwool were able to provide a superior sound proofing system suitable for the studio's needs.

The Partially Adhered Roof System (PARS) is separated into two sections between the top two layers of DensDeck Prime. The layers of the lower section are fastened using 12" Carlisle Insulfast™ fasteners with 3" insulation plates. The upper layer of DensDeck Prime is adhered using Carlisle Flexible FAST™ Adhesive which provides the decoupling – reducing sound transmission through the assembly.

## Quiet On The Set

The Lionsgate Studio on 90 Warburton opened in the beginning of 2024. The studio will now be home to both episodic and motion picture productions without outside distraction thanks to the collaboration between all four manufacturers. In 2024, the assembly won the NRCA's Gold Circle Award for Innovative Solutions demonstrating the power of teamwork. When you watch a Lionsgate film recorded in Yonkers, you'll only hear the sounds that were meant to be heard inside the studio thanks to this roof system.

[LEARN MORE](#) ABOUT THE PROJECT!

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