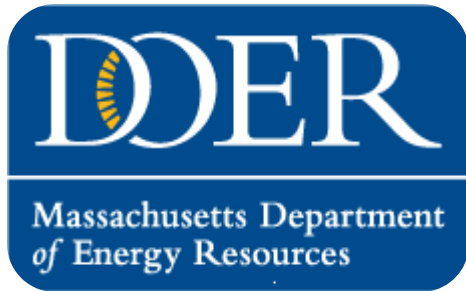


*Creating a Clean, Affordable and Resilient Energy Future for the Commonwealth*



# Codes for the Future

**Paul Ormond**  
**DOER**





# Nelson Place School

Photo credit: Fontaine Brothers, used with permission





Photo credit: Lamoureux Pagano, used with permission

City of Worcester

Lamoureux Pagano

Fontaine Brothers

Tishman Construction

Seaman Engineering

The Green Engineer

TNZ Energy Consulting

Eversource

National Grid



- *efficiency first*
- *maintenance friendly*
- *readily available*



wall	R19+21ci
roof	R45ci
wwr	20%
window	U=0.21

External shading  
Condensing heating  
Displacement ventilation  
Energy recovery

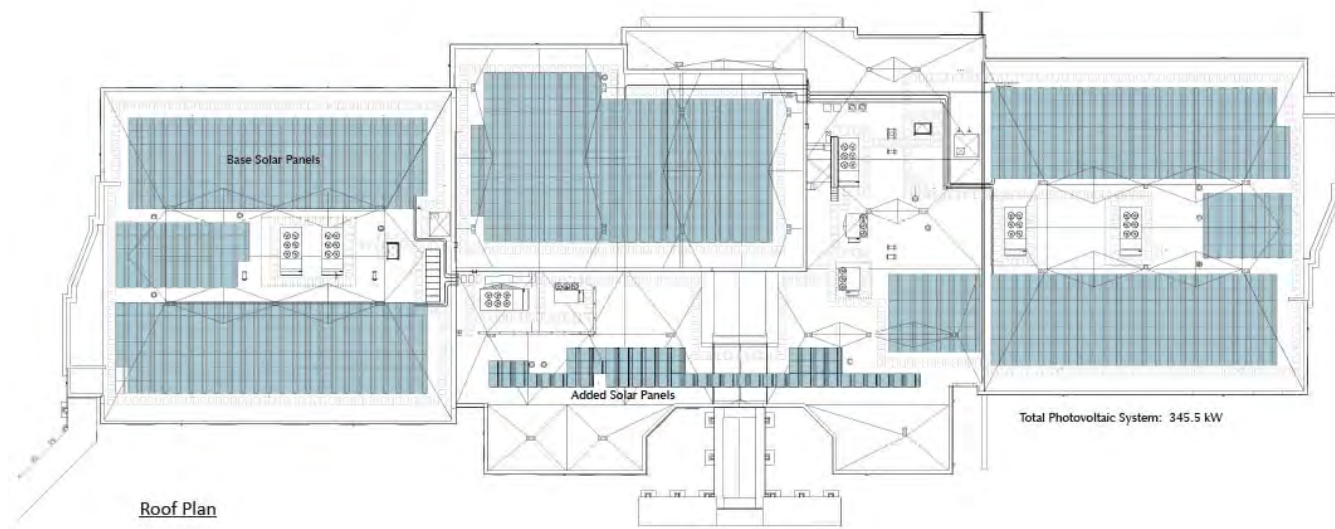
Photo credit: Lamoureux Pagano, used with permission

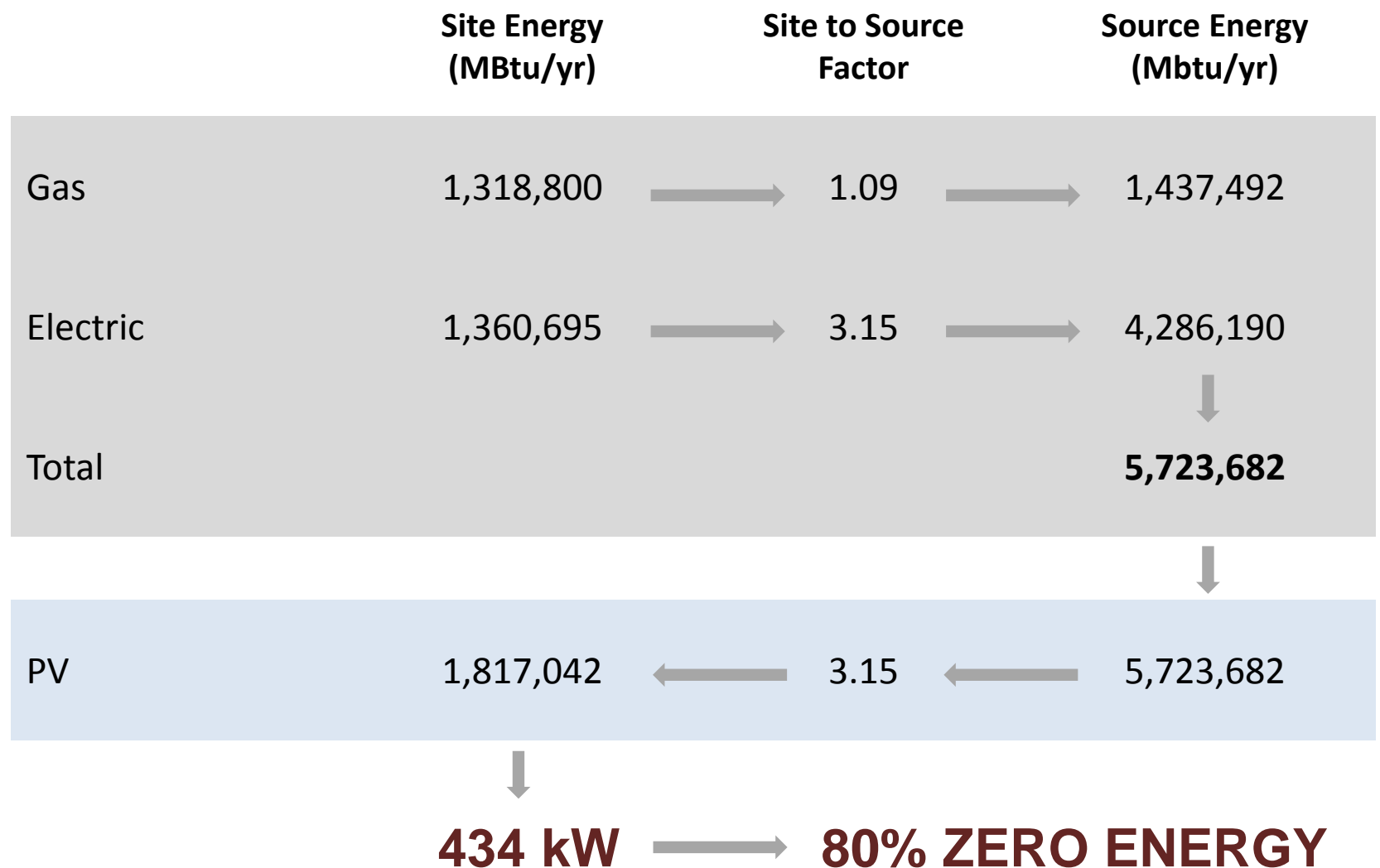


# 345 kW

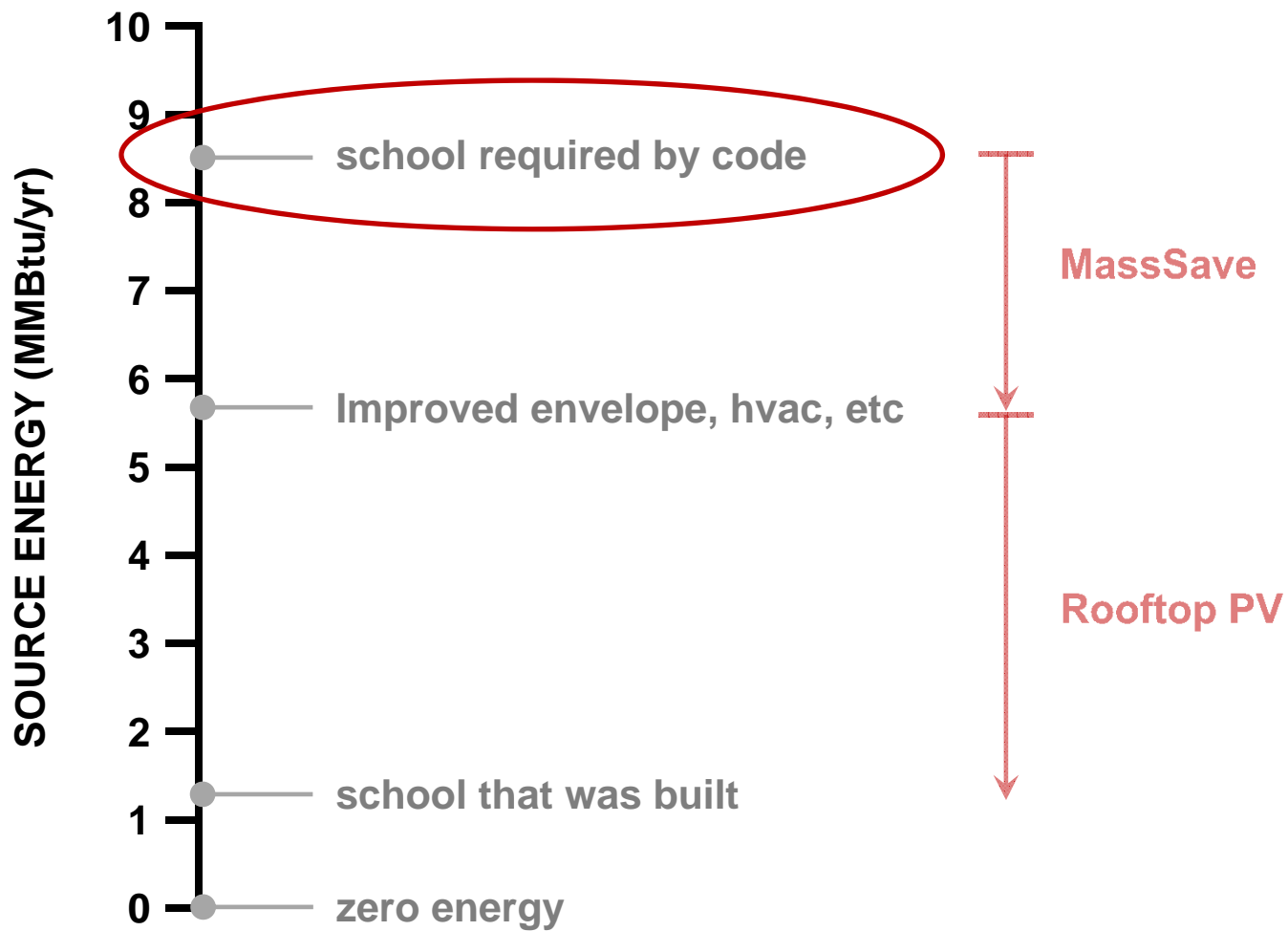


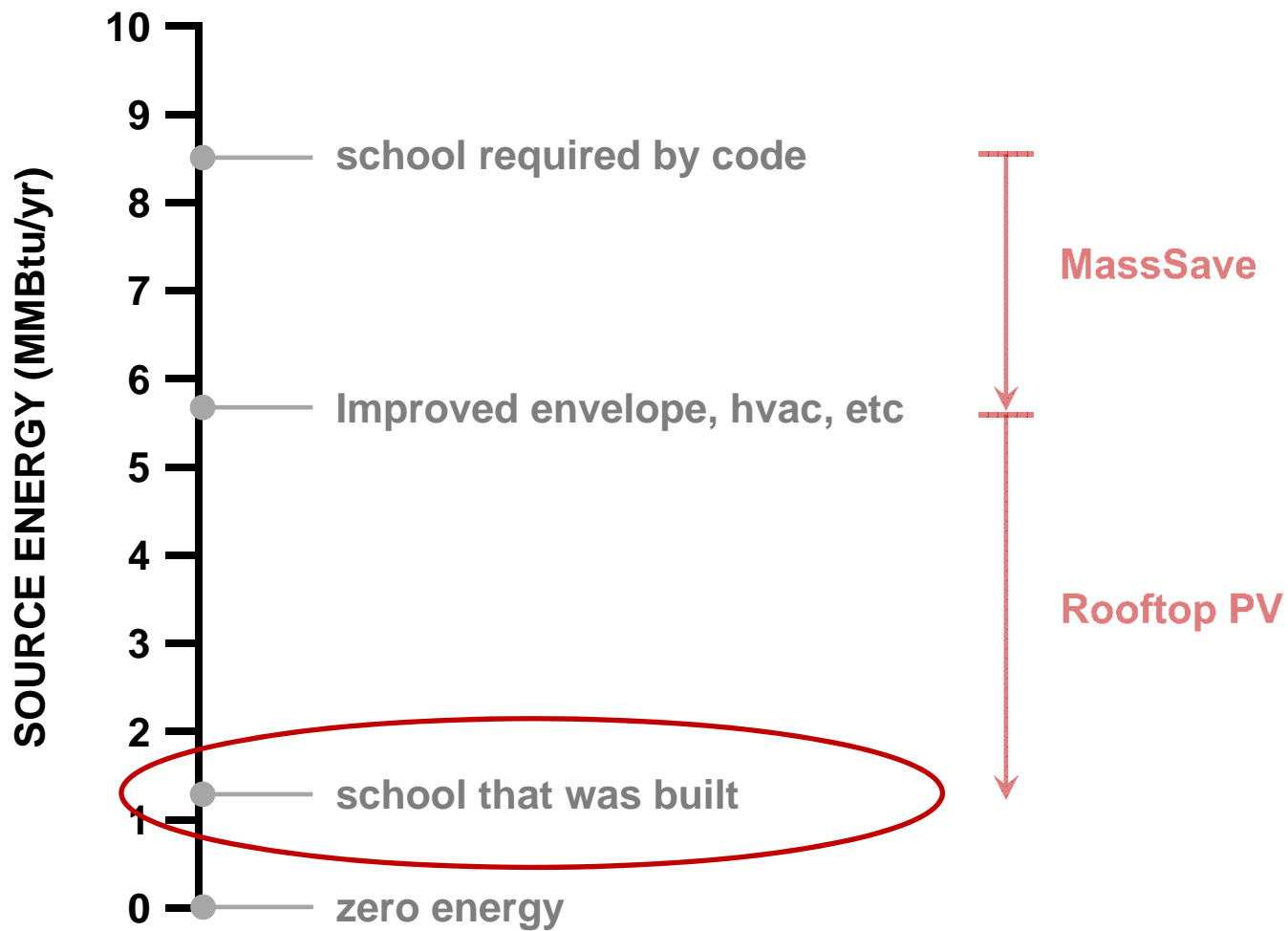
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Lamoureux Pagano, used with permission



# ***Codes of the future***

**Buildings are already closer to zero energy than they are to the energy consumption of the “last code”**

Focus on envelope and rooftop PV

Avoid envelope tradeoff

Learning from passivehouse

EUI requirement?

EUI requirement for regulated loads

