

April 10, 2024

Navigating the new norm: meeting the challenges of integrating ERVs in midrise projects

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In the complex world of construction, where precision reigns supreme and efficiency is non-negotiable, the recent updates to Washington state's energy codes have sent ripples of change throughout the industry. With an emphasis on the mandate to incorporate energy recovery ventilators (ERVs) in residential midrise multifamily construction, developers and contractors are grappling with a new level of complexity.

Gone are the days when midrise contractors, engineers and architects could rely on traditional approaches to meet building codes. The landscape has shifted, compelling them to adopt coordination and pre-planning techniques usually reserved for high-rise projects. This evolution isn't merely about compliance — it's redefining how we approach energy efficiency and indoor air quality.

PRECONSTRUCTION PLANNING IS ESSENTIAL

The inclusion of ERVs in the 2018 code cycle revision marked a significant milestone. ERVs are a component of the ventilation system designed to optimize energy efficiency and ensure healthier indoor air quality. Unlike earlier methods that often resulted in heat loss during the fresh air exchange, ERVs operate by balancing moisture and exchanging hot or cold air, thereby reducing the burden on heating and cooling systems.

However, integrating ERVs into wood-framed, midrise multifamily projects isn't a straightforward task. It demands meticulous preconstruction coordination among stakeholders to mitigate schedule and cost disruptions. From routing ductwork to avoid non-movable structural items to confirming code-required clearances are maintained at the exterior terminations, each step requires careful planning and coordination to avoid conflicts that could jeopardize the project timeline.



Photo courtesy of Tiscareno [\[enlarge\]](#)

AN OUNCE OF PREVENTION

This level of coordination necessitates the adoption of proven techniques — such as checklists and quality assurance/quality control (QA/QC) reviews — to identify potential issues early on. Additionally, leveraging building information modeling (BIM) and online collaboration tools traditionally used in more complex building types, enables real-time pre-planning coordination across disciplines that can prevent issues from snowballing into costly rework.

Careful consideration and coordination with the mechanical and fire sprinkler consultants, structural engineer and wood joist supplier can lead to less rework in the field due to conflicts.

Architects, with their expertise in overseeing project alignment and problem resolution, play a pivotal role in this process. Their ongoing review and direction ensure that all aspects of the

project seamlessly integrate, minimizing the risk of cost escalation due to time delay.

THE SOONER THE BETTER

Embracing a proactive approach that involves early involvement by contractors, sub-consultants and engineers is key to successful ERV integration. By initiating the coordination early in the process, teams can better integrate building systems and avoid costly changes during construction.

EMBRACING THE FUTURE

The journey to successful ERV integration goes beyond simply complying with regulations — it's about driving innovation and collaboration to meet the ever-evolving challenges of modern construction. By doing so, we pave the way for more efficient, sustainable, and resilient buildings that enhance both our environment and our communities.

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