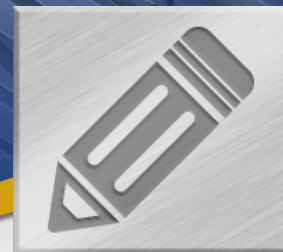




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APPLICATION NOTES

August, 2018

Re-Envisioned Space: Well•Spring Dining Expansion

The hip-roofed expansion of the auditorium and dining room of the upscale Well•Spring, a Life Plan Community in Greensboro, NC, was more than creating a new space for the residents. It needed to open up the corridors to facilitate flow and better accommodate a population with a range of mobility. New Millennium's steel solutions did that, and a central open space became a landing spot with lounge and casual seating so residents and guests can stop and linger.



Phyllis Brinkley, District Sales Manager for New Millennium Building Systems, oversaw the expansion of the dining room of the upscale Greensboro, NC, life plan community: Well•Spring. The project saw the delivery of 108 tons of standard and specialty steel joists and five different kinds of standard steel decking.

"Well•Spring is one of the country's most prestigious senior living communities and we wanted to make sure the job is done perfectly," says Phyllis. "It was an intricate erection involving trusses, specialty gable joists, Form Deck, B Deck, and Composite Deck."

Accommodating range of mobility

A key part of the project was a re-envisioning of the community's dining services. Where before there was one traditional dining room with wait service, Well•Spring added a bistro with an open kitchen and a market-stall service approach for casual dining.

"But the architectural demand we needed to enable with our long-span joists and steel decking was the accommodation of a population with a range of mobility," Phyllis adds. "Corridors were opened up to facilitate easier flow of the resident traffic. Plus a central open space became a landing spot, with lounge and casual seating so residents and guests can stop and linger."

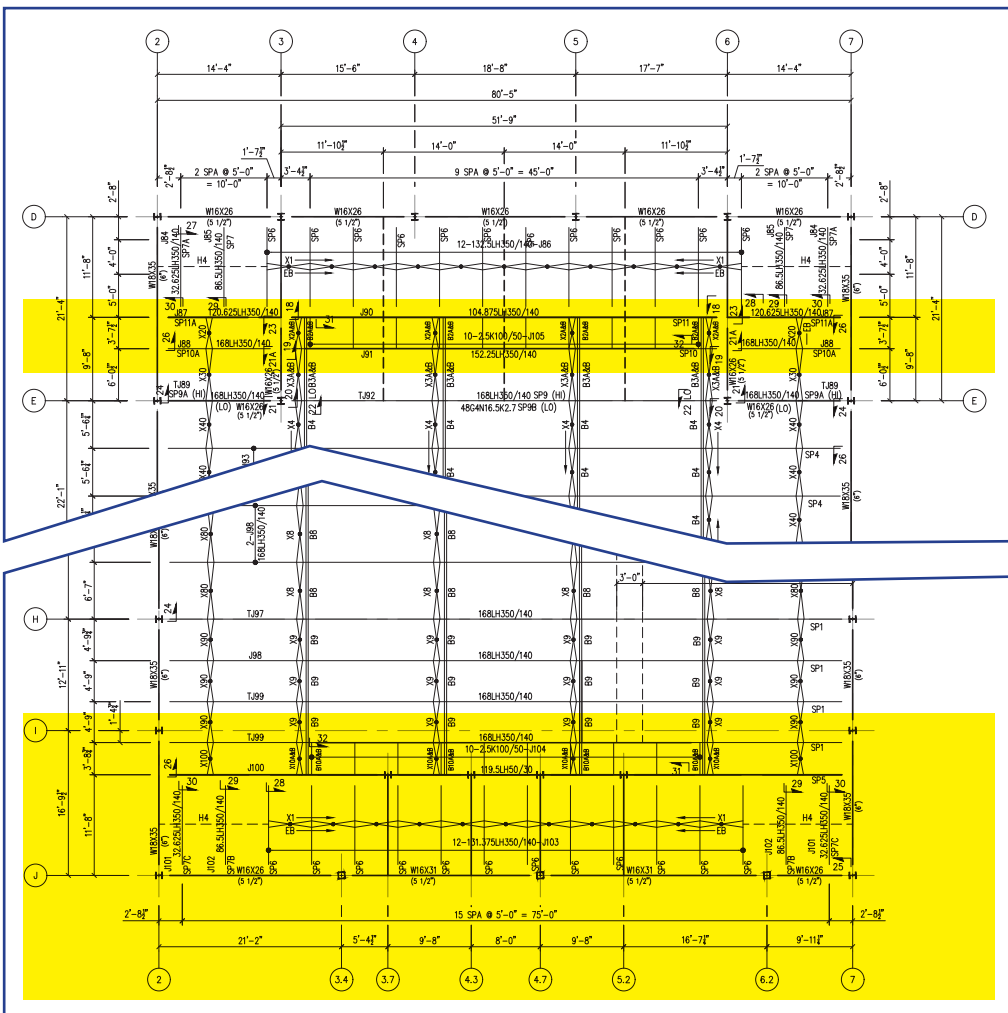
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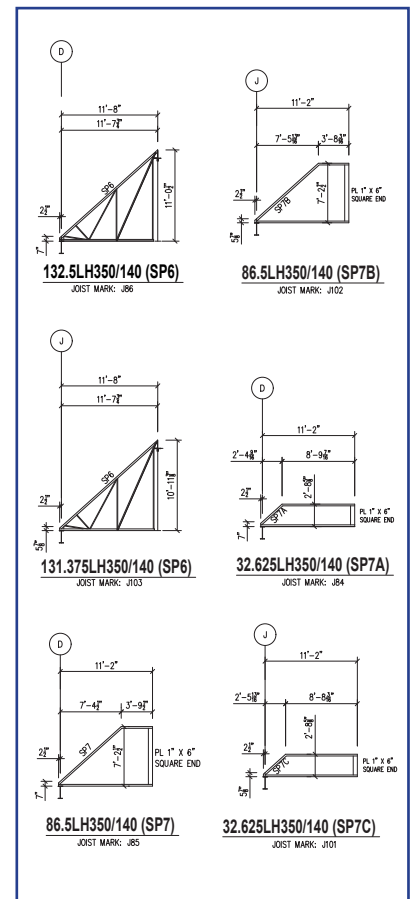
Many different kinds of steel systems were used to create the expansion of the dining area of Well•Spring, A Life Plan Community, such as this specialty gable joist being installed for the hip roof.

The hip roof

The architect designed the expansion to have a flat-topped hip roof, which complicated the structural steel used to support it. A hip roof has four sloping sides, as opposed to a gable roof which has two. “The reason this complicated the design and construction is that a hip roof requires smaller, secondary members. They’re positioned perpendicular to the main primary joists that run along the width of the building to provide the slope along the hip,” says Robert Ferguson, Engineering Manager. “The orientation of the secondary members and their connections to the main ones are very complicated with unique geometries.”

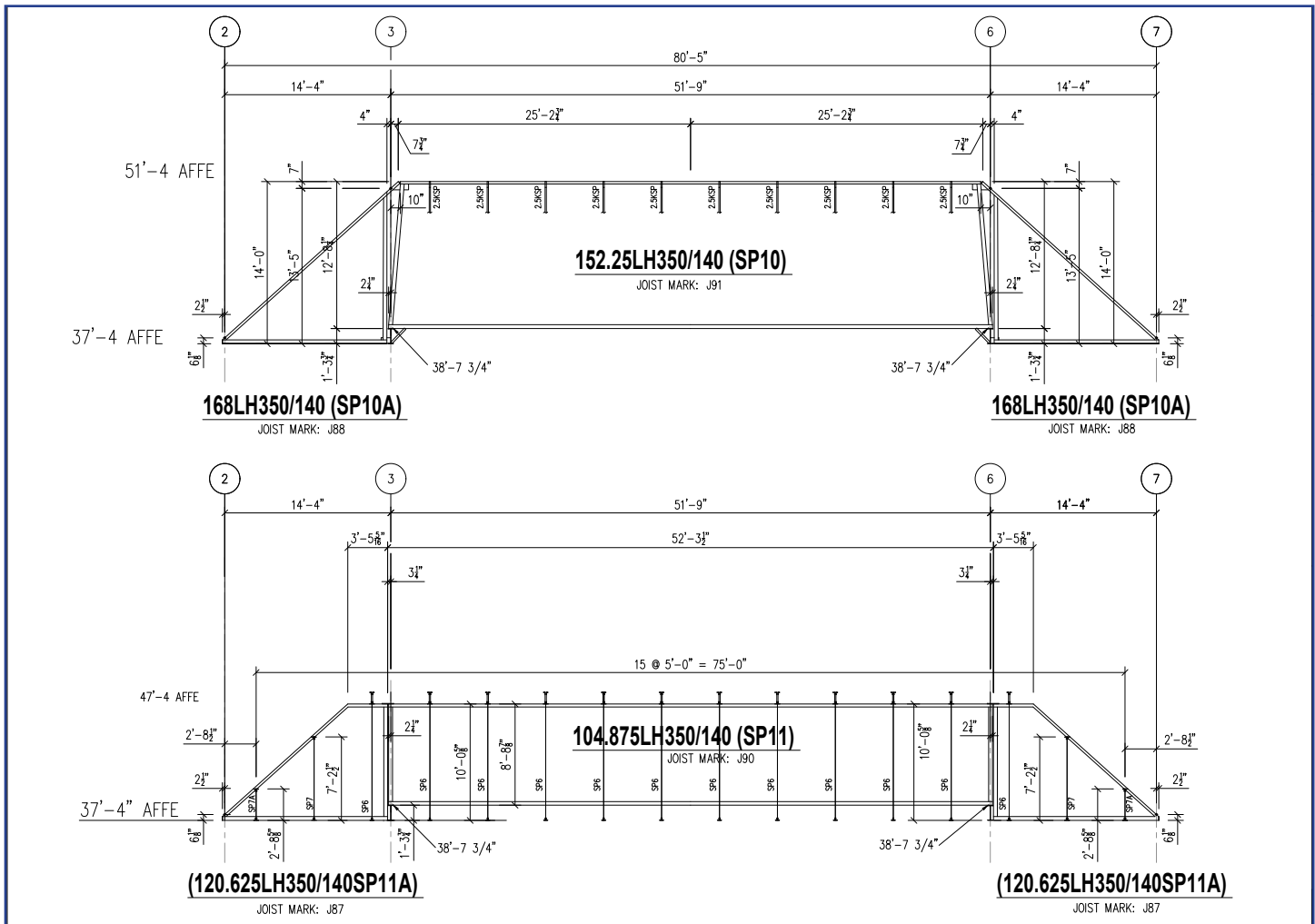


This drawing detail shows the secondary members (highlighted) that run perpendicular to the main roof joists to accommodate the hip roof.



The various shapes and depths of the complex special roof connections for the Well•Spring expansion project illustrate just how intricate a hip roof can be.

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As shown in this drawing detail, the raised section of ceiling was accommodated by splitting that portion of the roof into three sections: a large rectangular section in the middle with triangular ends.

New Millennium steel solutions used:

- Standard and Specialty Joists: 108 tons
- Standard Deck: Form Deck, B Deck, Composite Deck

In addition to accommodating the complexity of the hip roof, the architect designed one portion of the ceiling to be raised to accommodate special lighting. The original drawing called for the bottom chord to change elevation. New Millennium Building System's Engineering department realized this wasn't going to be feasible and provided a workable solution. They split that portion of the roof into three sections to accommodate

the raised portion of the ceiling. "Just another special tweak we needed to include in our early phase collaboration to accommodate some of the unique challenges this project presented," Robert says.

The dining room expansion was opened to the delight of the residents in July 2018.



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