Tall Wall Design Procedures For Versa-Lam®

Versa-Lam® tall wall members shall be designed to resist the followings:

- Factored gravity axial loads:
  - [*1.25Dead Load + 1.0 Live Load + 1.5 Snow Load*] or
    [*1.25D + 1.5 Live Load + 1.0 Snow Load*], whichever magnitude is higher

- Factored wind load acting on the face of the wall

- The combined action of factored axial loads and factored wind load on the face of the wall, including the effect of the axial loads eccentricity (1/6 of the width or depth) and the P-Δ effect.

- Wind load deflection using the following criteria:
  - Span (un-supported length)/360* for structural members supporting brick cladding or brittle finishes
  - Span (un-supported length)/240** for structural members supporting flexible finishes and drywall
  - Span (un-supported length)/180* for all other structural members
  - Deflection of the wall sheathing between studs does not need to be considered except where this deflection will affect the serviceability of the wall cladding. Exterior walls and gable ends shall be sheathed where***:
    - The exterior cladding requires intermediate fastening between supports;
    - The exterior cladding requires solid blocking;
    - The exterior cladding does not have enough strength to resist the factored external wind loads.

** NBC 2015 Structural Commentaries (Part 4 of Division B)*
*** Gypsum Construction Handbook*
**** Engineered Guide for Wood Frame Construction*