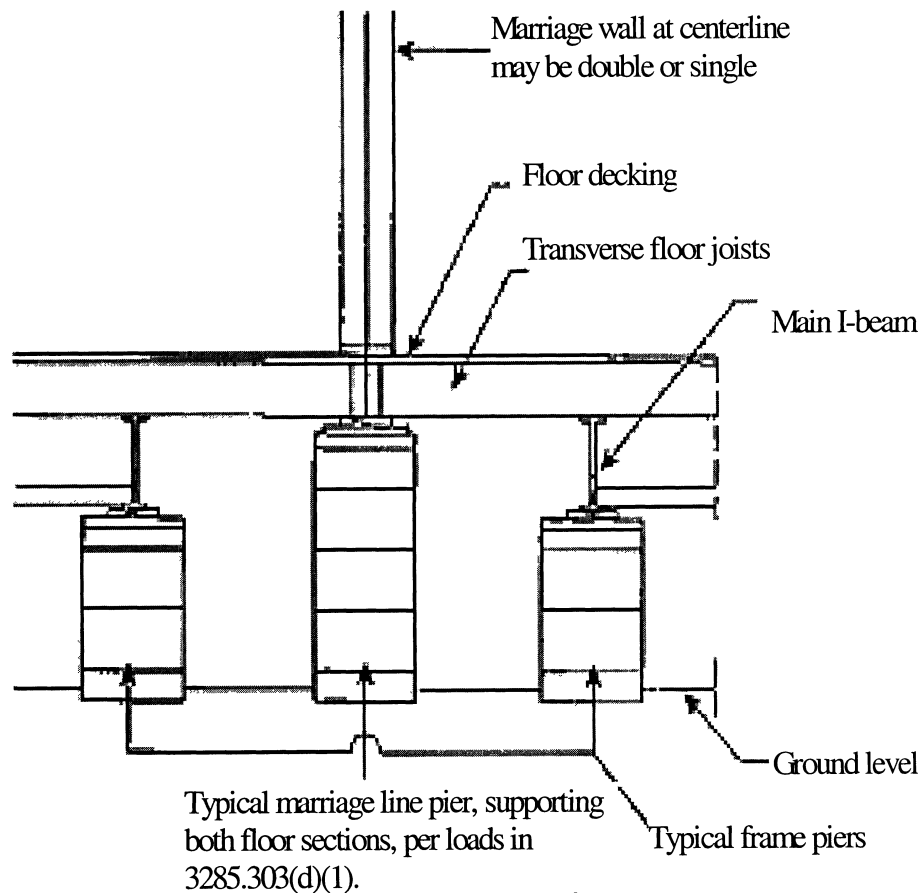


Figure C to § 3285.310 Typical Mate-Line Column and Piers.



NOTES: 1. Mate-line column support piers are installed with the long dimension of the concrete block perpendicular to the rim joists.

2. Pier and footing designed to support both floor sections. Loads as listed in Table 3 to § 3285.303 are total column loads for both sections.

§ 3285.311 Required perimeter supports.

(a) Perimeter pier or other supports must be located as follows:

(1) On both sides of side wall exterior doors (such as entry, patio, and sliding glass doors) and any other side wall

openings of 48 inches or greater in width, and under load-bearing porch posts, factory installed fireplaces, and fireplace stoves).

(2) Other perimeter supports must be:

(i) Located in accordance with Table 2 to § 3285.303; or

(ii) Provided by other means such as additional outriggers or floor joists. When this alternative is used, the designs required by § 3285.301 must consider the additional loads in sizing the pier and footing supports under the main chassis beam.

(b) For roof live loads of 40 psf or greater, a professional engineer or architect must determine the maximum sidewall opening permitted without perimeter pier or other supports.

(c) The location and installation of any perimeter pier support must not take the home out of compliance with the Manufactured Home Construction and Safety Standards (part 3280 of this chapter).

§ 3285.312 Footings.

(a) Materials approved for footings must provide equal load-bearing capacity and resistance to decay, as required by this section. Footings must be placed on undisturbed soil or fill compacted to 90 percent of maximum relative density. A footing must support every pier. Footings are to be either:

(1) *Concrete.*

(i) Four inch nominal precast concrete pads meeting or exceeding ASTM C 90-02a, Standard Specification for Loadbearing Concrete Masonry Units (incorporated by reference, see § 3285.4), without reinforcement, with at least a 28-day compressive strength of 1,200 pounds per square inch (psi); or

(ii) Six inch minimum poured-in-place concrete pads, slabs, or ribbons with at least a 28-day compressive strength of 3,000 pounds per square inch (psi). Site-specific soil conditions or design load requirements may also require the use of reinforcing steel in cast-in-place concrete footings.

(2) *Pressure-treated wood.*

(i) Pressure-treated wood footings must consist of a minimum of two layers of nominal 2-inch thick pressure-treated wood, a single layer of nominal 3/4-inch thick, pressure-treated plywood with a maximum size of 16 inches by 16 inches, or at least two layers of 3/4-inch thick, pressure-treated plywood for sizes greater than 16 inches by 16 inches. Plywood used for this purpose is to be rated exposure 1 or exterior sheathing, in accordance with PS1-95, Construction and Industrial Plywood (incorporated by reference, see § 3285.4).

(ii) Pressure treated lumber is to be treated with a water-borne adhesive, in accordance with AWP A Standard U1-04 (incorporated by reference, see § 3285.4) for Use Category 4B ground contact applications.

(iii) Cut ends of pressure treated lumber must be field-treated, in accordance with AWP A Standard M4-02 (incorporated by reference, see § 3285.4).

(3) *ABS footing pads.*

(i) ABS footing pads are permitted, provided they are installed in accordance with the pad manufacturer installation instructions and certified for use in the soil classification at the site.

(ii) ABS footing pads must be listed or labeled for the required load capacity.

(4) Other Materials. Footings may be of other materials than those identified in this section, provided they are listed for such use and meet all other applicable requirements of this subpart.

(b) *Placement in freezing climates.* Footings placed in freezing climates must be designed using methods and practices that prevent the effects of frost heave by one of the following methods:

(1) Conventional footings. Conventional footings must be placed below the frost line depth for the site unless an insulated foundation or monolithic slab is used (refer to §§ 3285.312(b)(2) and 3285.312(b)(3)). When the frost line depth is not available from the LAHJ, a registered professional engineer, registered architect, or registered geologist must be consulted to determine the required frost line depth for the manufactured home site. This is not subject to the provisions in § 3285.2(c) that also require review by the manufacturer and approval by its DAPIA for any variations to the manufacturer's installation instructions for support and anchoring.

(2) *Monolithic slab systems.* A monolithic slab is permitted above the frost line when all relevant site-specific conditions, including soil characteristics, site preparation, ventilation, and insulative properties of the under floor enclosure, are considered and anchorage requirements are accommodated as set out in § 3285.401. The monolithic slab system must be designed by a registered professional engineer or registered architect:

(i) In accordance with acceptable engineering practice to prevent the effects of frost heave; or