



MULTI-LEVEL

Garage Systems

 Kerkstra



Planning to build or expand at home? Kerkstra's Multi- Level Garage Systems is your solution.

Make the most out of your building footprint by utilizing the wasted square footage below your garage.

Our Multi-Level Garage Systems open up the space underneath the garage for extra storage, living space or parking. Hollowcore floor plank can also be used for the entire main floor of your house and provides a soundproof, wide open space. Kerkstra's hollowcore is ideal when using in-floor radiant heating systems. Your space can also be heated and cooled by the homes conventional HVAC system. It provides excellent fire ratings and can be used as a safe room.

Hollowcore floor plank can be easily incorporated into your house plans and is compatible with any other method of building including traditional wood construction, cast in place concrete, other precast concrete products, steel etc.

Because of the longer clear spans available, a completely open, column and beam-free space can be provided underneath your garage or main floor. With a two week lead time, industrial strength prestressed concrete is available in 8", 10", 12", 16". 8" hollowcore can clear span up to 28', 10" can clear span up to 35' and 12" can clear span up to 44'. Jobs are typically completed in one day.

Built-In Benefits of a Multi-Level Garage System

All of the following benefits are achievable when working with Kerkstra to gain functional space below your garage.

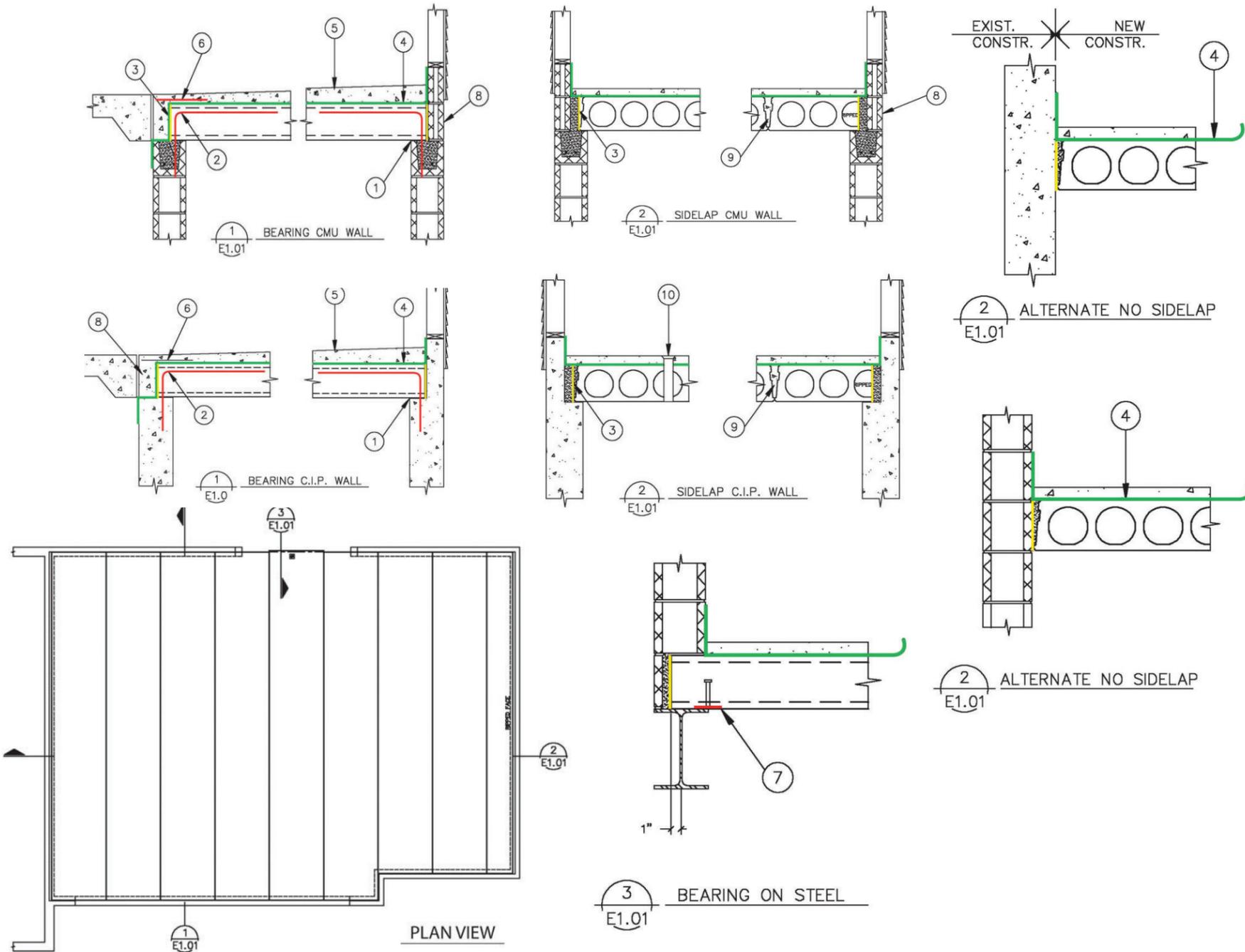
100% usable space for whatever you want // Excellent fire ratings // Soundproof // Less maintenance



Why pay to fill space with dirt when you could have more square footage of functional space?

Filling in the foundation with dirt provides no functional square footage. When you choose hollowcore, you receive a greater return on your investment and more functional square footage underneath your garage for whatever you want. **Simply put, we like to say you get a garage above and more space below.**





Floor Plank: Installation Details

1. Plank length is determined by adding the amount of plank bearing to the inside-to-inside dimension of your bearing walls. The plank bearing surface typically required for concrete and masonry is 4". A bond beam is required for masonry bearing. Field measurements will be taken by Kerkstra.

2. A mechanical connection between the precast plank and your structure is required. Shown here are drilled bent bar connections which are provided by Kerkstra. Connections will be shown on Kerkstra's shop drawings one to two weeks after the job is awarded.

3. In cold weather climates, insulation should be placed around the entire perimeter between the plank and the wall and at the entrance between the plank and topping edge. Insulation is provided and installed by the home builder.

4. A commercial water proofing membrane is highly recommended to be installed (by others) on top of the plank prior to placement of concrete topping. The membrane should be capable of flexibly bridging the insulation and small gaps around perimeter walls. It should return up the walls and terminate at the top of the topping slab. The membrane is necessary to prevent water from penetrating the plank, which could cause deterioration of plank reinforcing and concrete in future years. It will also act as a vapor barrier in cold climates where the area below the floor is heated.

5. Quality, high strength, air-entrained concrete, placed by qualified personnel is the final step to your project. Minimum concrete topping thickness is 2", and must be positively sloped to the garage door to ensure drainage and prevent water from ponding on the floor. If interior drains are used, the concrete should be sloped to the drains, and the drain fixture should be capable of draining moisture from the membrane, which is installed by others. Reinforcing is recommended in the topping, and a concrete sealer should be applied after curing.

6. Additional reinforcing, such as mesh, properly placed in the topping at the door entrance can minimize the possibility of a crack developing in the topping along the base of your overhead door.

7. At steel beams, plank bearing must extend at least 1" past the beam web center to prevent beam rotation. A weld plate or other mechanical connection is required. This detail will be shown on the shop drawings.

8. Masonry should not be installed above plank-bearing elevation prior to plank installation, as it is highly susceptible to damage during plank erection.

9. Plank key way joints are grouted by Kerkstra when installed.

10. Round holes for drains can be drilled (by others) after installation, through the center of the plank cores. Hole diameter can be 1" less than core diameter.

How it Works: Quick and Easy Installation



Step One.

Kerkstra brings the precast pieces and a crane to set your garage floor in place.



Step Two.

After the rebar has been drilled into place, the key ways are grouted.



Step Three.

The homeowner or builder installs a waterproof membrane over the plank.



Step Four.

The homeowner or builder pours Redi-Mix concrete on top of the plank to make the finished driving surface.



 **Kerkstra**

Need more space? Call us today.

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