

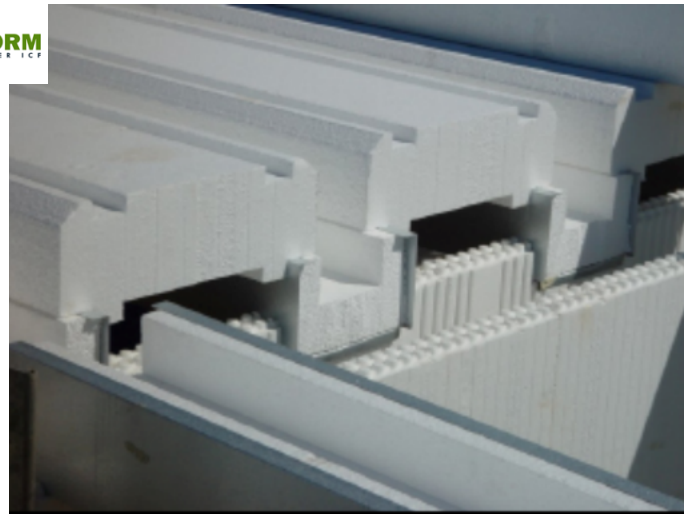


The ARKFORM Midfloor

ARKFORM is delighted to supply the ECO-Block midfloor. The ideal product for the discerning home owner or builder who wants a quiet, solid floor, no squeaky noises and no problems with water overflow in an upstairs laundry or bathroom.

Why choose this product?

- ◆ Easy for your builder to use.
- ◆ Very cost competitive.
- ◆ Great acoustics.
- ◆ High R value – no heat loss between floors.
- ◆ Sustainable non-toxic, eco-friendly products.
- ◆ No creaking or cracking.
- ◆ Light weight construction techniques despite being concrete. No cranes required.
- ◆ Fully engineered.
- ◆ Less bracing required so faster, cheaper.
- ◆ Easy for electrical, plumbing and mechanical sub trades.
- ◆ Can be used on any suitable wall system.



ARKCON Mid floor system components are lightweight and individually designed. The beam form consists of EPS stay in place form, complete with a zincalume jacket on the sides and bottom of beams. This provides not only form support but strong attachment surfaces for mechanical and electrical trades. Beam forms are available in standard lengths or can be ordered in exact lengths for job specific installation.

The floor panel consists of an EPS panel that interlocks between and above the beam forms to create a level floor deck with integral beams at 600 mm centers. These can be made closer if longer spans are required. The standard floor panel creates 130 x 230 mm beams which are capable of spans up to 8 M when combined with a 100 mm floor slab. For long span applications deeper floor panels can be supplied creating deeper beams as well as decreasing the space between beams.



Once the ARKCON Mid floor system components are installed standard reinforcement steel is added to the beam voids. Reinforcement varies depending on design loads and is to be specified by qualified structural engineer on a job specific basis.

The ARKCON Mid floor system's advantage over other methods is its ability to provide the structural component of the floor without requiring the slab to be placed at the same time. The EPS floor panel, once beams are cast, provides a strong stable floor deck to continue building the next level. This not only saves time but requires only a

fraction of the bracing for support during casting and curing. ARKCON Mid floor systems can also be poured including the floor slab as in other systems, however there are many advantages for both the system installer and the trades to follow; all benefit from placing the structural beams separate from the floor slab.

Design Consideration

The ARKCON Mid floor systems makes designing simple. Components will fit to all wall systems. Reinforcement design is to be completed by a qualified structural engineer considering design and point loads that may be required. When casting structural beams separate from the floor slab, more reinforcement may be required within the beam; this may or may not reduce the slab reinforcement required.



ARKCON Mid floor systems are working on providing to supply basic span tables for several design loads to be used as guidelines for designers. The span charts are run at standard load cases with simple reinforcement. In cases where un-bonded post tensioning can be used, span distances can often be doubled. The reduced loads when floor slabs are not placed at the same time as the structural beams result in a fraction of the bracing required. In most cases providing bracing again when slabs are to be place will not be necessary. Less bracing means less congestion below the floor system.

Benefits

The ARKCON Mid floor systems not only saves money on your project but saves time for all trades involved. The requirement for concrete pumps and number of pours is reduced when walls and floor beams are placed at the same time. Once the beams are cast, work can continue on the next level within hours as there is no slab to damage. The beams at 600mm centres provide attachment points for any required bracing without damaging the slab.

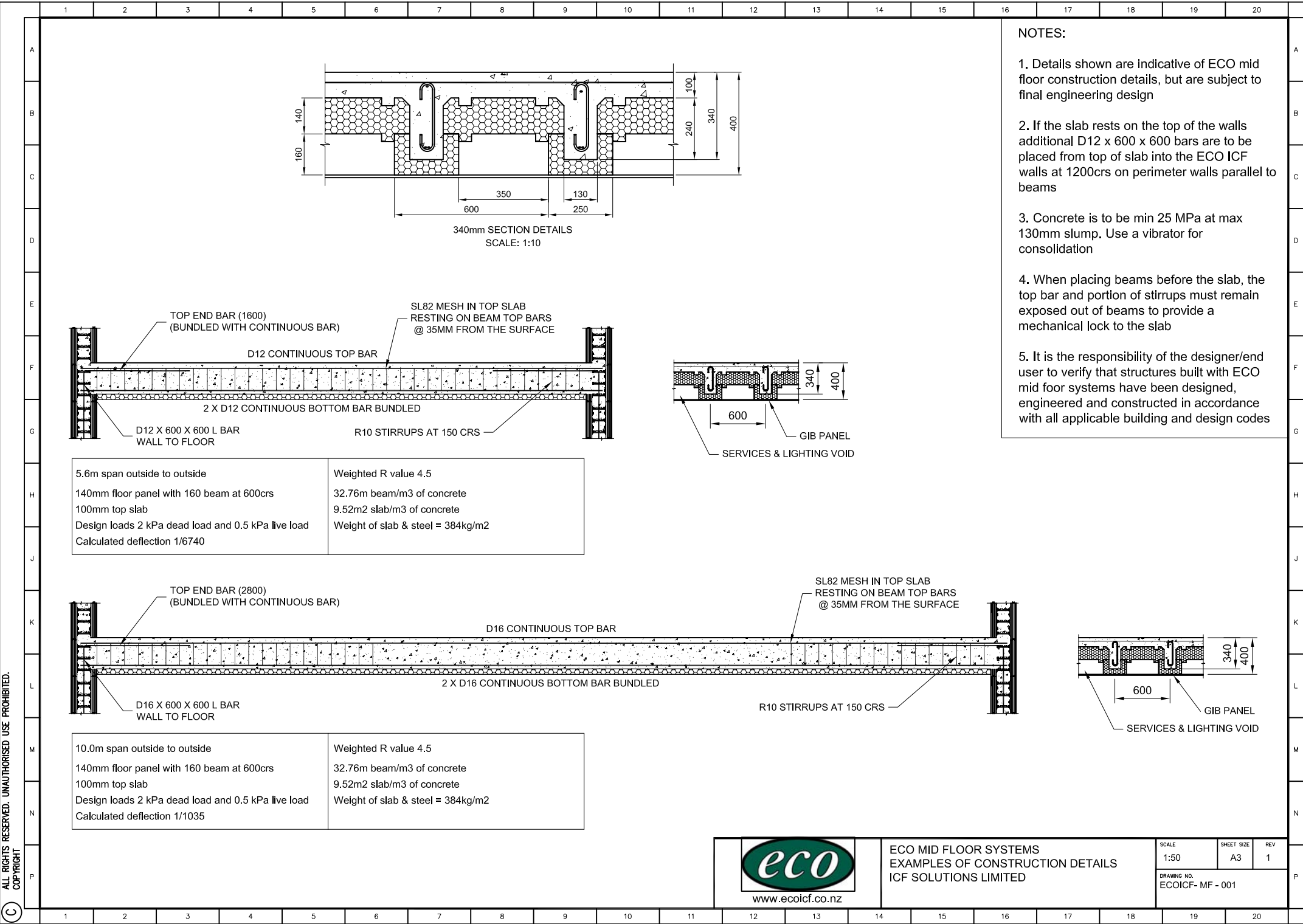




The ARKCON Mid floor systems deck provides plenty of strength to work off without fear of breaking through. The electrical, plumbing and mechanical trades will find installations easier. The form system stays in place providing the equivalent of joist spaces every 600mm between beams. The 70mm depth of EPS below the beam can be removed once the concrete has been placed to allow trades to cross perpendicular to beam direction without drops or pre-installed sleeves in beams. Plumbing and mechanical installation can be installed and attached in a single site visit. Electrical and plumbing may be attached to the

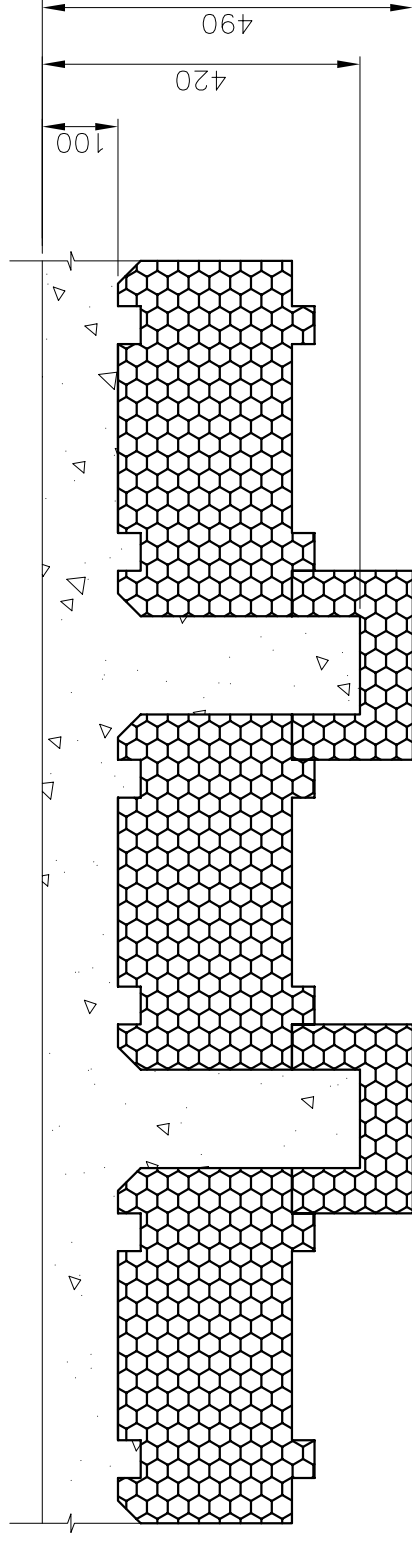
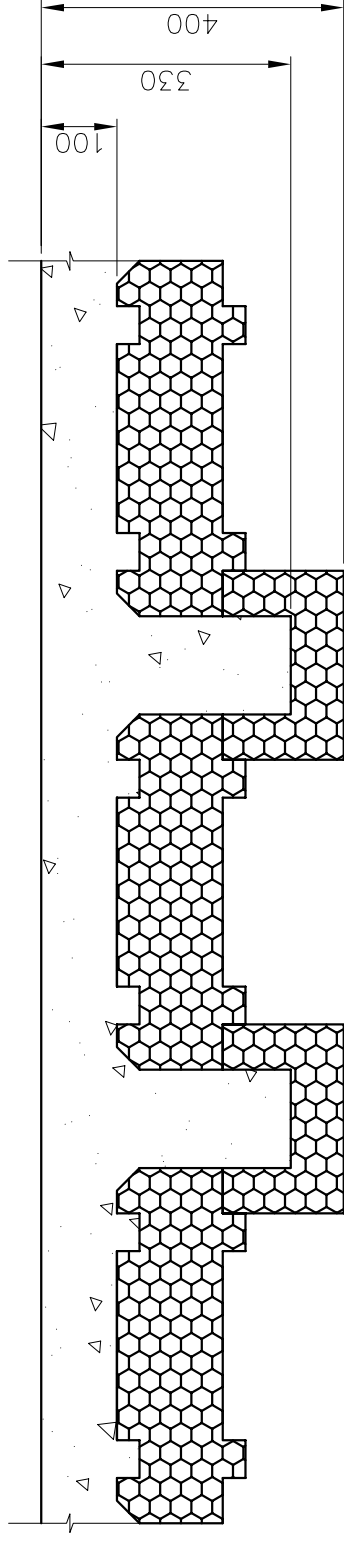
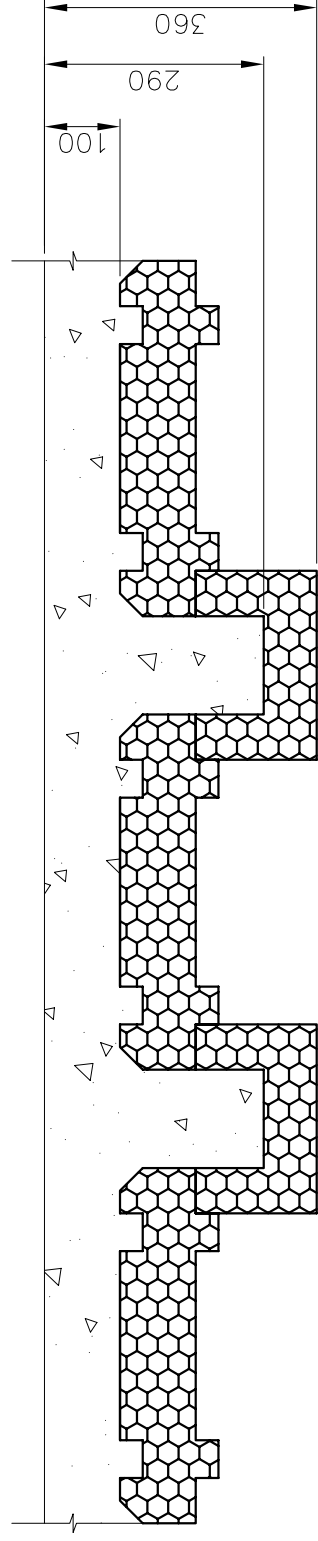
EPS deck and beams to prevent movement when the slab is placed. In some cases, the crew that places the concrete in the wall system and floor beams are not likely the same crew that will place the concrete for the slab. By placing the slab later work can continue without interruption. The concrete slab installer has control over the placement and finishing of the slabs when working in an environment closed in from weather conditions. Rain, wind, sunshine causing shadows can play havoc when placing a concrete slab. An even depth slab inside from the elements is especially desirable when decorative concrete finishes are to be used.

The EPS form also prevents the loss of water from the slab preventing the concrete from setting up too quickly. The EPS forms provide a complete sound separation and thermal break between floors. This added insulation reduces both heating and cooling requirements. No additional insulation for thermal or sound will be required. In applications where the floor system is to be fire rated simple attachment anchors are installed through the metal beam jacket vertically into the concrete beam at the time of concrete placement. This provides a mechanical connection between ceiling finished below and the slab above.

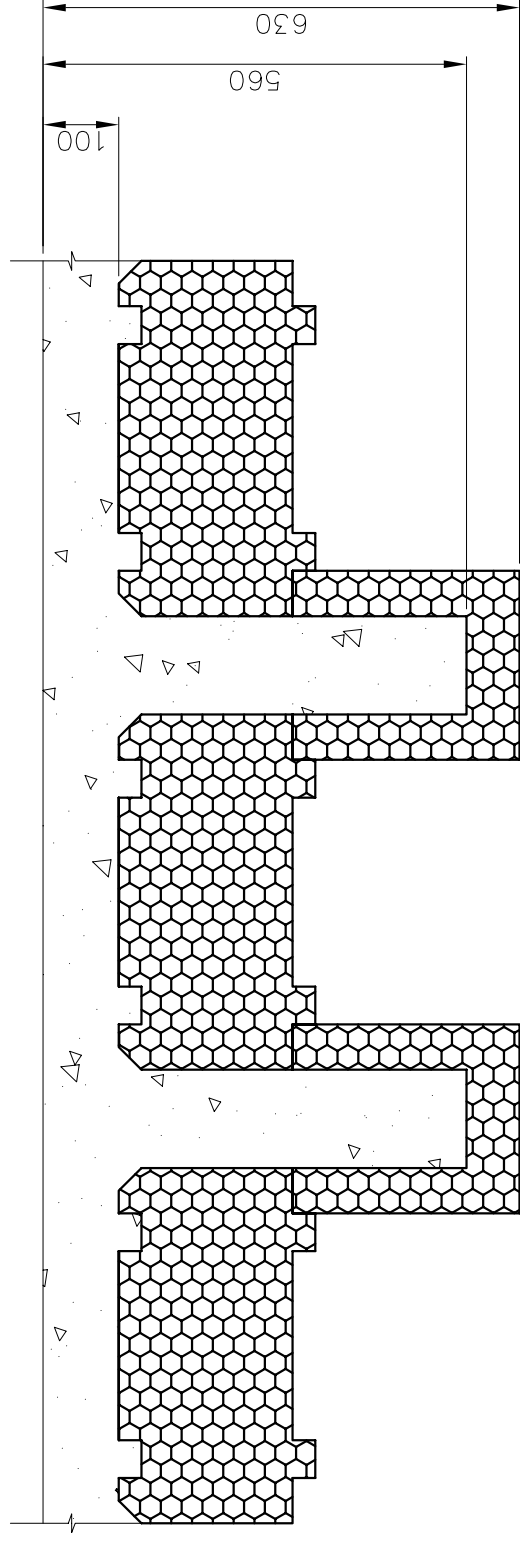


ECO MID FLOOR SYSTEMS
 EXAMPLES OF CONSTRUCTION DETAILS
 ICF SOLUTIONS LIMITED

SCALE 1:50	SHEET SIZE A3	REV 1
DRAWING NO. ECOICF- MF - 001		



SECTIONS TYPICAL FOR RESIDENTIAL CONSTRUCTION



600 CRS TYPICAL

SECTIONS TYPICAL FOR COMMERCIAL CONSTRUCTION
OTHER SECTIONS AVAILABLE ON REQUEST



www.eco-blocknz.co.nz

SHEET TITLE:

ECO MID FLOOR SYSTEM
EXAMPLES OF CONSTRUCTION DETAILS
ECO-BLOCK NZ LIMITED

FBN7-MF-002

NOTES:

1. DETAILS SHOWN ARE INDICATIVE OF MID FLOOR CONSTRUCTION DETAILS, BUT ARE SUBJECT TO FINAL ENGINEERING DESIGN
2. REINFORCING STEEL OMITTED FOR CLARITY
3. CUSTOM SECTIONS ARE POSSIBLE AS DETERMINED BY THE ENGINEER
4. IT IS THE RESPONSIBILITY OF THE DESIGNER / END USER TO VERIFY THAT STRUCTURES BUILT WITH ECO MID FLOOR SYSTEMS HAVE BEEN DESIGNED, ENGINEERED, AND CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES AND REGULATIONS

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