

Composite steel deck installation guide



1. Floor Deck Installation

Installation process



1 Open steel deck sheet bundles



2 Place temporary support if required



3 Place on steel or concrete beam



4 Clinch male and female lip



5 Fix steel edge form wherever required



6 Fix W steel deck profiles to steel or concrete beam



7 Place reinforcement



8 Place concrete

Yumi steel composite floor deck panels and accessories shall be installed by qualified and experienced workers. Floor deck and accessories shall be placed in accordance with approved erection drawings. Maintaining rib alignment across the structure is very important to achieve continuous concrete ribs across abutting sheet ends. A snap chalk line shall be used at reasonable intervals to assure proper alignment and accurate coverage of deck panels.

Position the first sheet as noted on the erection drawings with the upstanding leg the leading or open edge. When one row is placed, begin another, making alignment adjustments as necessary. Do not use unfastened deck as a working platform or storage area.

All sheets are furnished with square ends and full width. Partial width sheets as well as skew cuts shall be field

cut by the deck erector to fit field conditions. All accessories, i.e. pour stops, side closures and

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end closures are

manufactured in standard stock lengths. Cutting and fitting of accessories when furnished is by the deck erector. Openings not shown on the erection drawings such as those required for stack, conduits, plumbing, vents, etc. shall

be cut (and reinforced if necessary) by the trades requiring the openings.

Integral hanger tabs are rolled in when required. The maximum loading per tab is 45kgs. The deck erector must flatten out all tabs that interfere with proper bearing of deck on supporting steel. Hanger tabs are spaced nominally 305/313mm on center each way. Hanger tabs occur in a repetitive pattern that cannot be maintained across deck joints and cannot be located at predetermined locations. It is imperative that the load carried by the tabs is designed in such a way that the design load is not exceeded on any one tab.

2. Construction safety

W steel deck is available in long lengths, so large areas can be quickly and easily covered to form a safe working platform during construction. One level of formwork gives immediate protection from the weather, and safety to people working on the floor below. The minimal propping requirements provide a relatively open area to the floor below. It is common sense to work safely, protecting yourself and work mates from accidents on the site. Safety includes the practices you use, as well as personal protection of eyes and skin from sunburn, and hearing from noise. For personal safety, and to protect the surface finish of W steel deck, wear clean dry gloves. Don't slide sheets over rough surfaces or over each other. Always carry tools, don't drag them.

Occupational health and safety laws enforce safe working conditions in most locations. Local laws may require you to have fall protection which includes safety mesh, personal harnesses and perimeter guard rails where they are appropriate. We recommend that you adhere strictly to all laws that apply in your country/city.

3. Accessories

Floor deck sheets and accessories shall be attached as soon as possible and all sheets and accessories shall be attached at the end of each working day. Electric arc welding is the best and most economical method for attaching composite deck sheets to structural supports. Welder shall follow close to the placement crew.

All welds are to be made from the top of the deck down through the bottom flange of the ribs. Welds shall penetrate and attach all thickness of material to the structural supports. Care shall be exercised on the selection of the electrodes to provide positive attachment and to prevent high amperage blow holes.

Deck panels are to be fastened to all supports at 305/313mm on center maximum with not less than 19mm diameter arc spot welds. At deck butt joints, both sheets are to be fastened. Deck panels with spans greater than 1524mm shall have side laps and perimeter edges (at perimeter supports) fastened at mid-span or 915/940 mm intervals - whichever is smaller.

76mm deep deck side laps are to be button punched, welded or Gator Crimp (GTR).

End closures of the deck (if required) are to be fastened by tack welding or sheet metal screws

at 915/940mm centers maximum.

Side closures of the deck (if required) are to be fastened by 25mm fillet welds at 305/313mm centers maximum.

Pour stop accessories of the deck (if required) are to be fastened by 25mm fillet welds at 305/313mm centers maximum.

4. Site storage

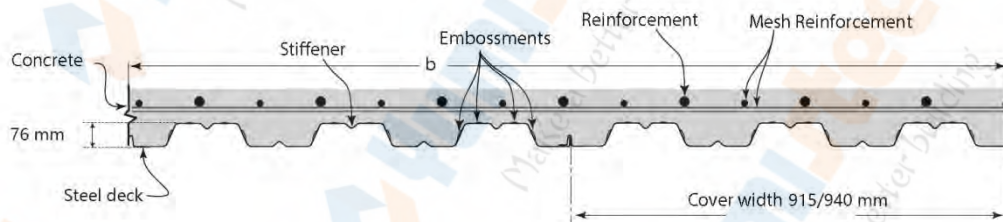
Deck not promptly erected shall be stored off the ground with one end elevated and protected from the elements with a tarpaulin or other weatherproof covering, ventilated to avoid condensation.

5. Construction Loading

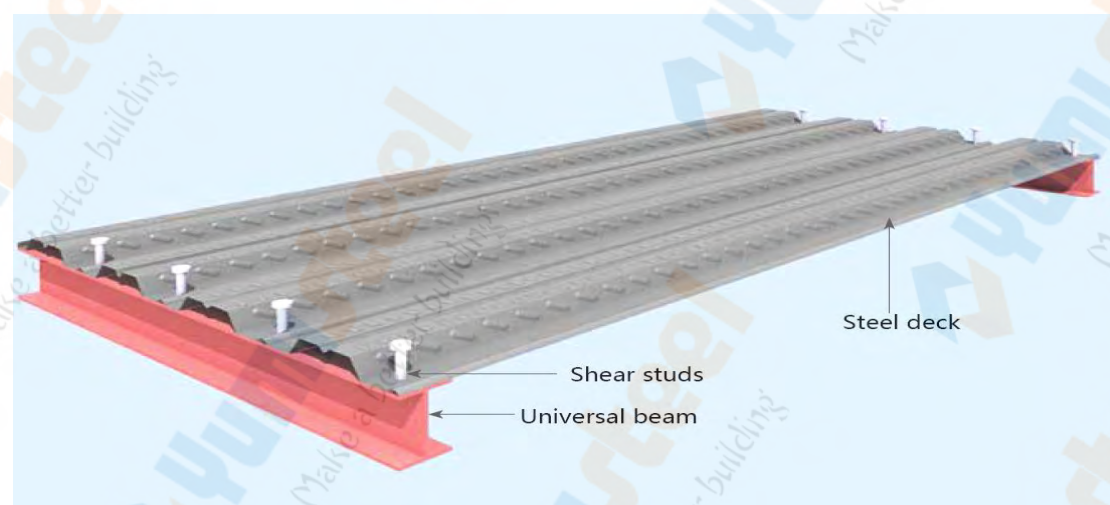
Do not use unfastened deck as a work or storage platform. Caution must be used with construction loading so that deck capacity is not exceeded and the deck is not damaged. When placing concrete, care must be exercised so that the deck will not be subject to impact that exceeds the design capacity of the deck. Concrete shall be placed from a low level in a uniform manner over the supporting structure and spread toward the center of the deck span. Do not use chloride admixtures or admixtures containing chloride salts in concrete poured on composite deck.

Such additives have proven deleterious to steel and steel finish.

6. Connection Details

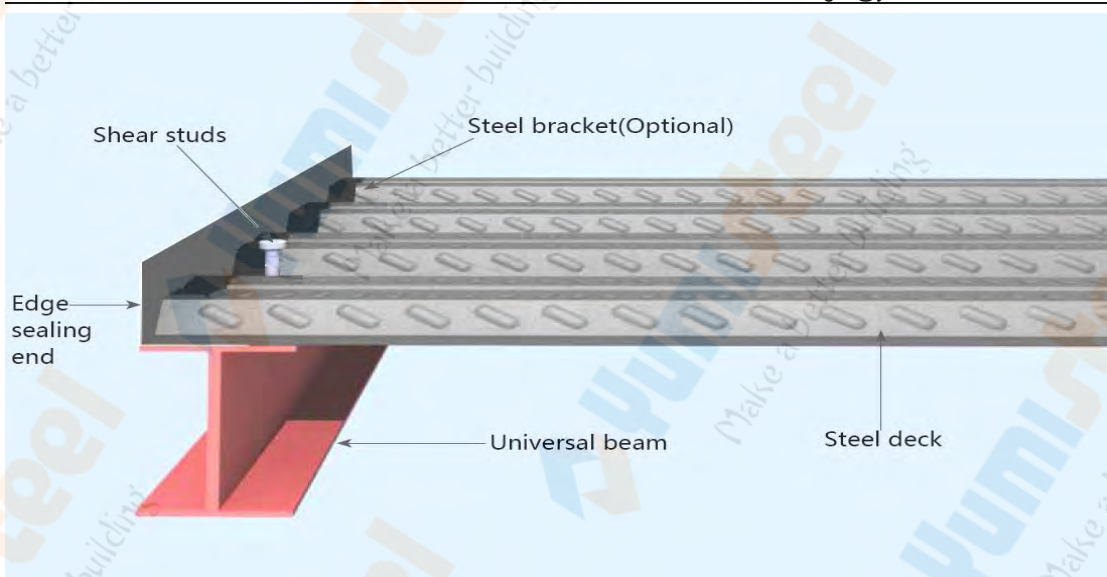


Fixing detail: The accessories are added as per design requirement

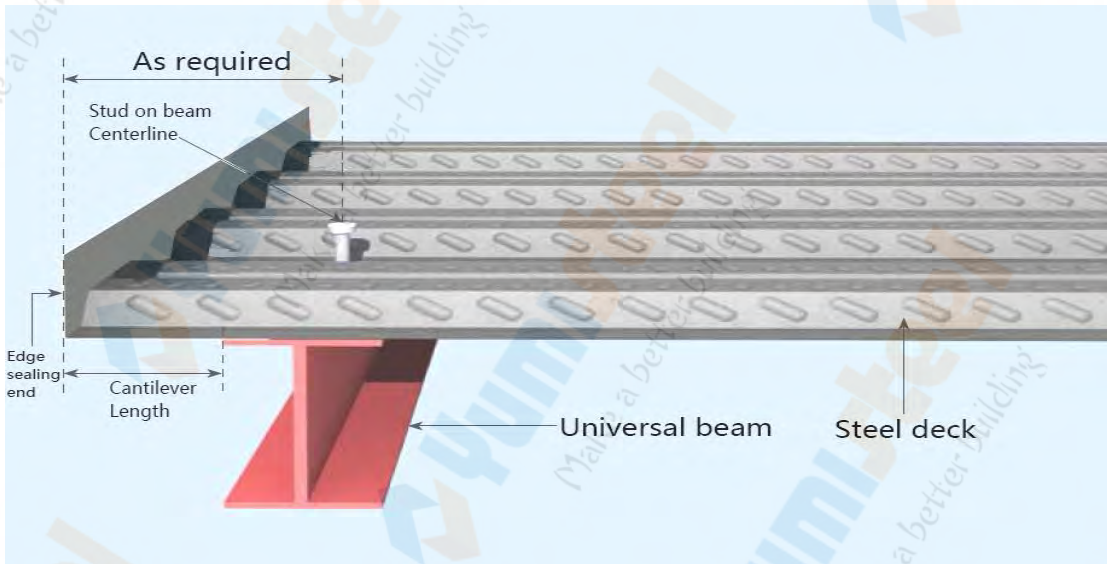


End details-Flush Type: Standard end closure detail adopted for steel frame structure

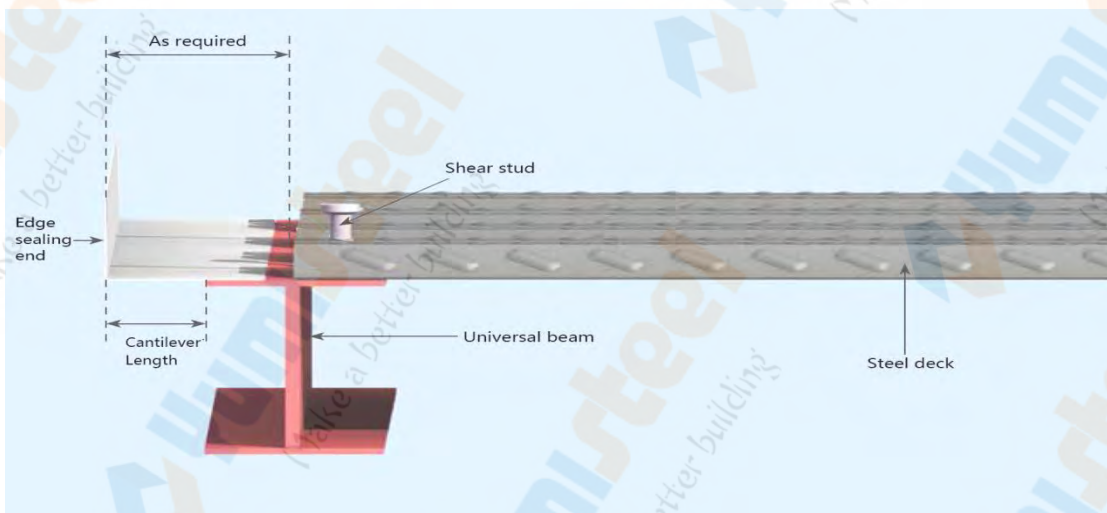
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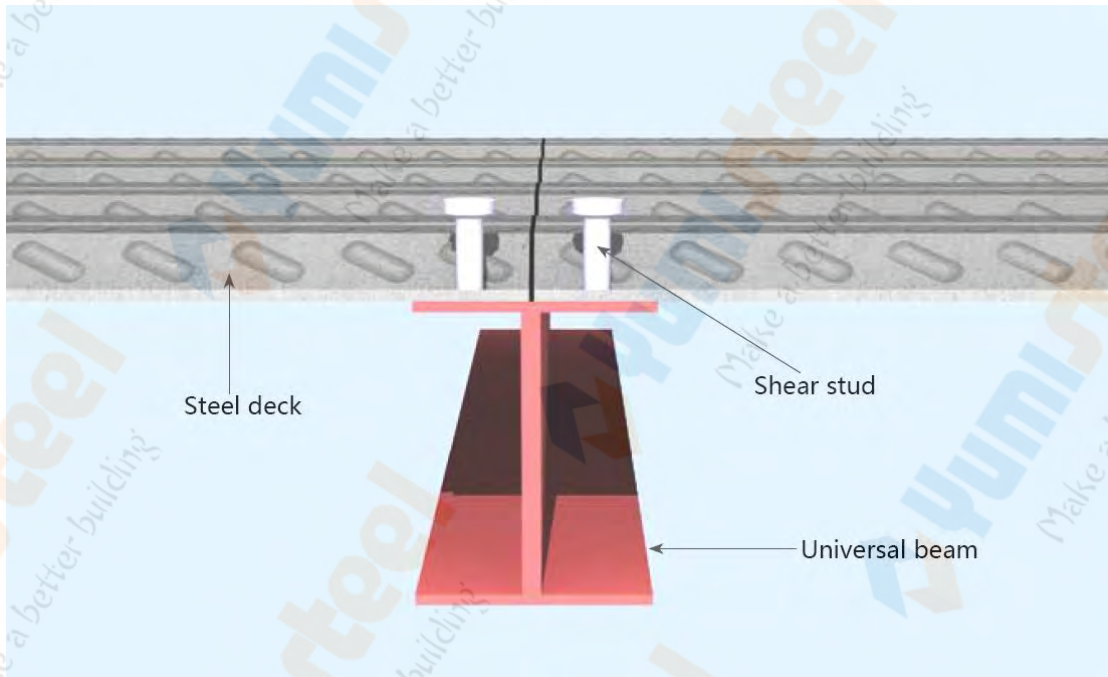
End details - Option 1: Details adopted for cantilever end projections



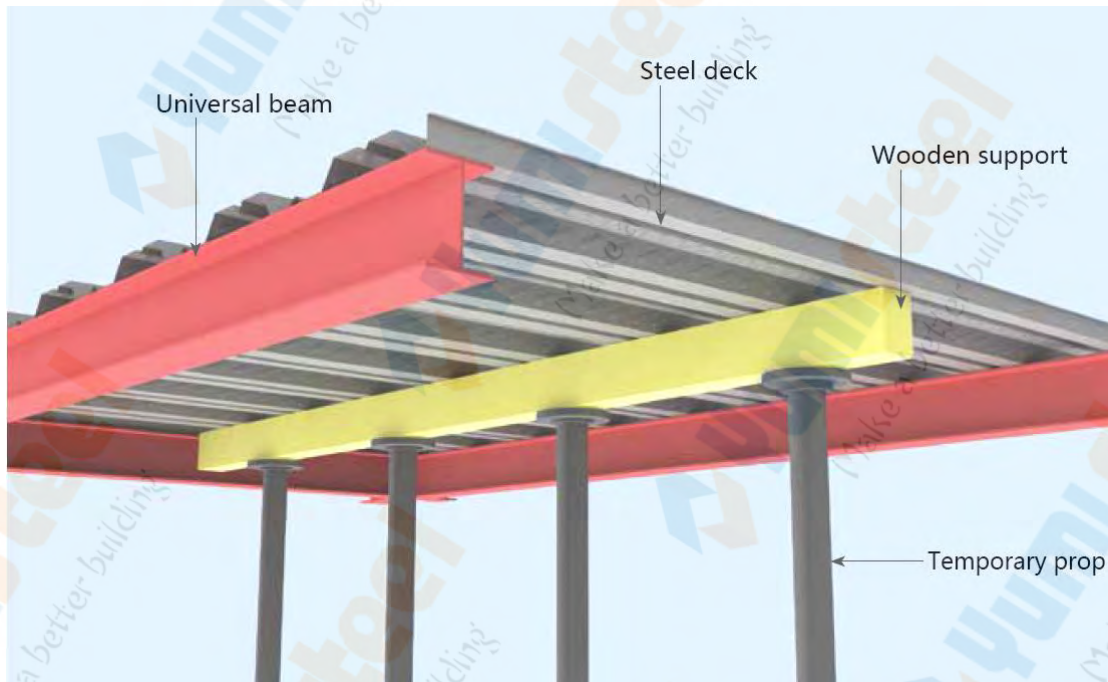
End details-Option 2: Alternate details for structures where projections are necessary



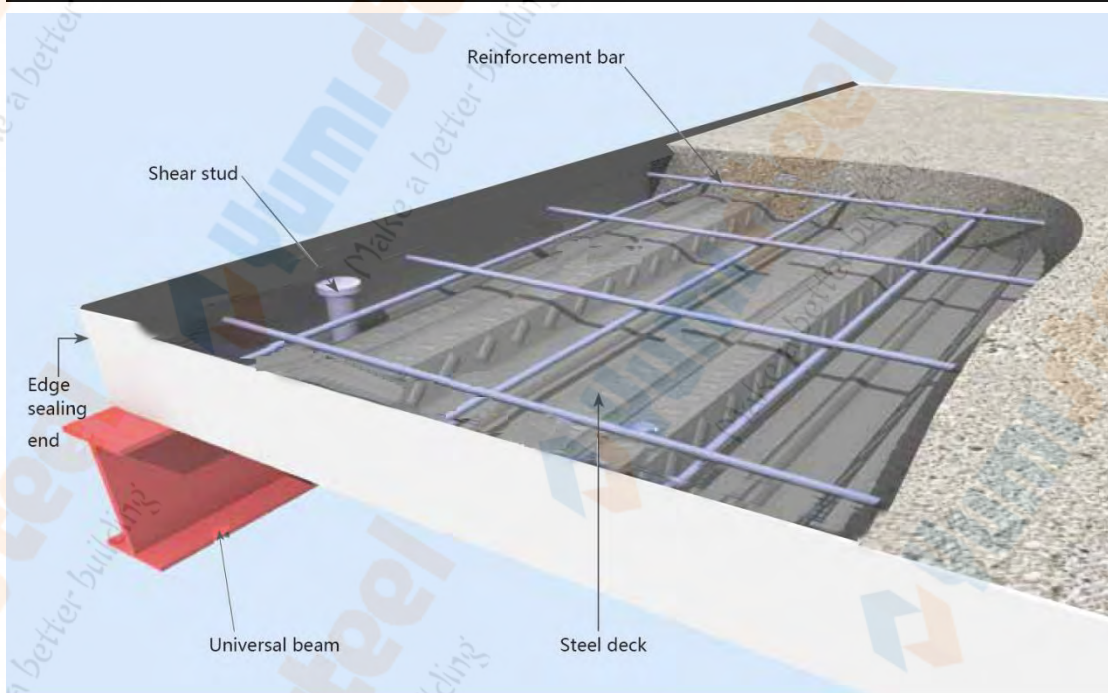
Butt joint details: Standard joint detail for continuous casting of slab(Temporary)



Temporary support details (If required)

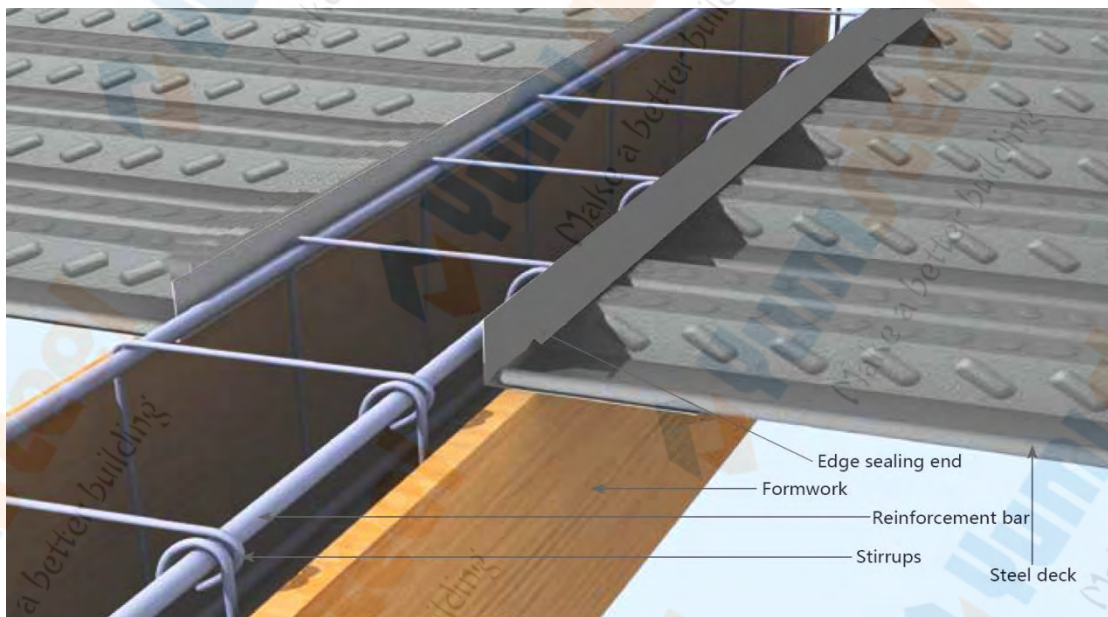


Corner details: The ends are closed to make sure the concrete slurry takes the required shape quickly



7. Concrete Connection Details

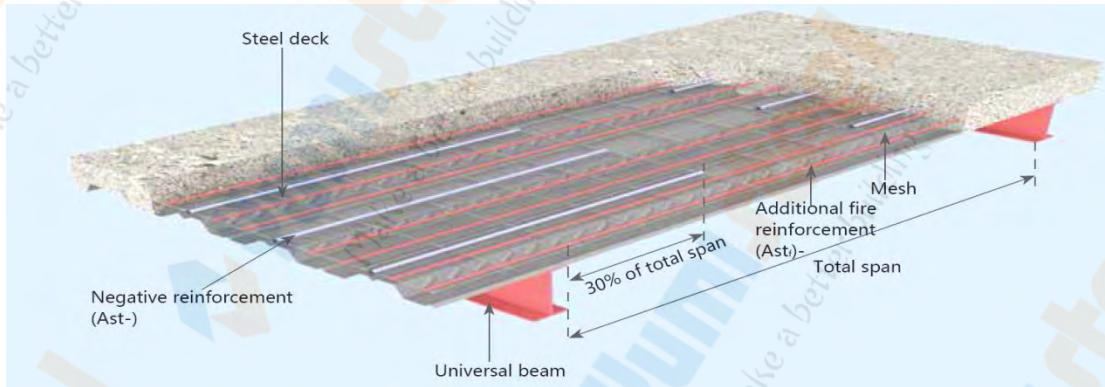
Concrete fixing details: The casting of beam & slab is done simultaneously. This saves time and brings economy.



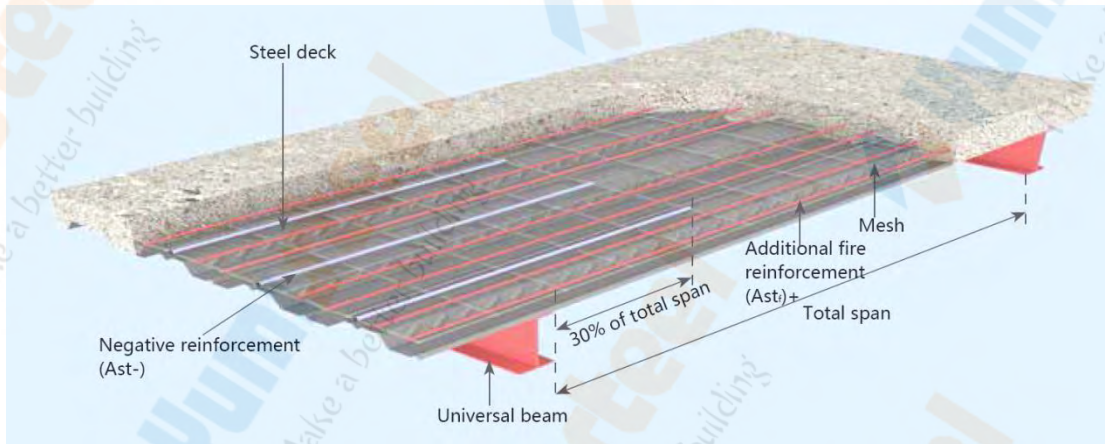
Above connection details for guidance purposes only.

8. Fire Details

Option 01:



Option 02:



Above connection details for guidance purposes only.