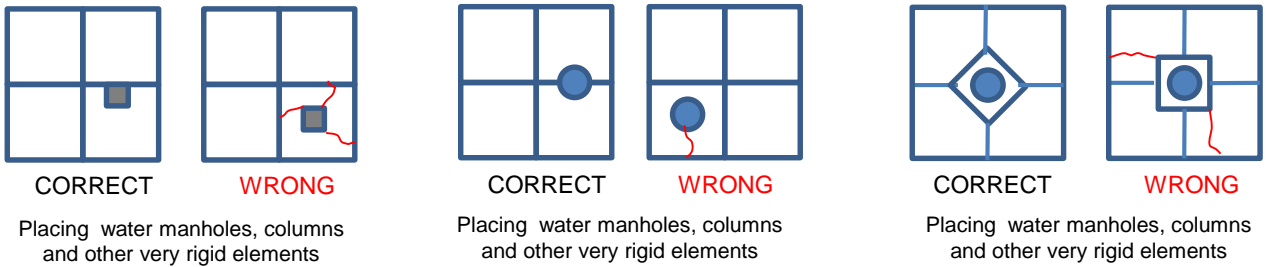
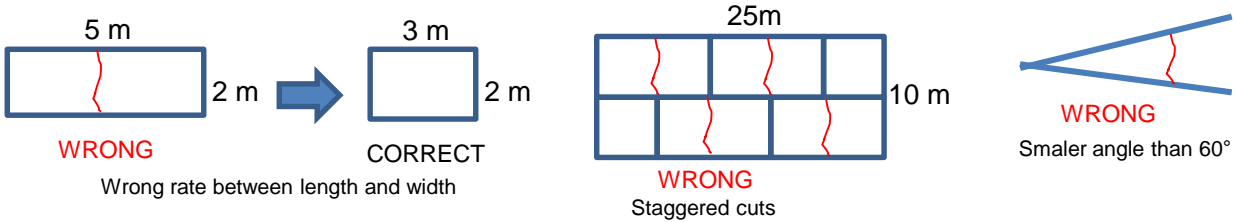


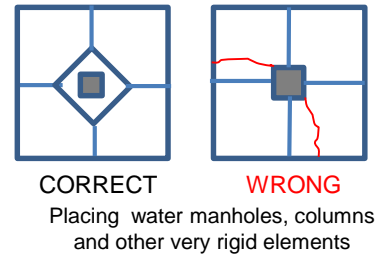
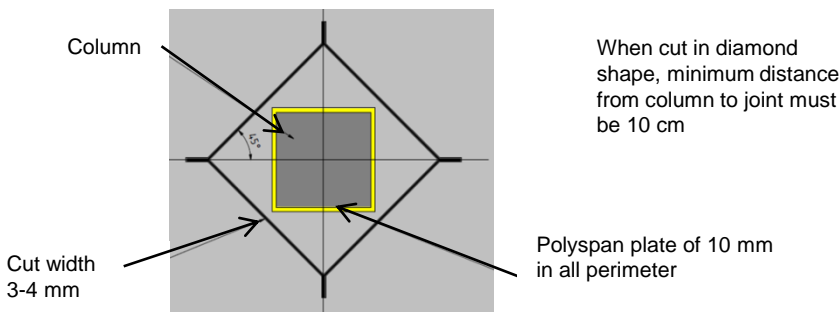
## PRACTICAL CONSIDERATIONS

Retraction (contraction) cracks can be mostly avoided by applying cut joints and some other preventive actions that we would like to suggest. Regardless you use or not fibreted concrete, the application of these practices are obligatory when building slabs in order to ensure the best quality. The fact of using fibres does not exempt from the need of applying normal procedures for making concrete slabs. The only replace traditional steel meshes.

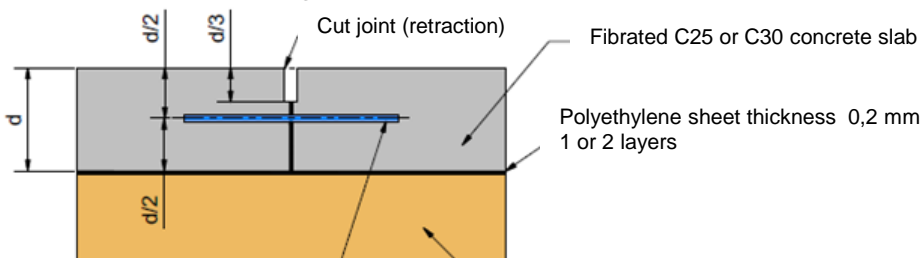
- Cover the ground with a polyethylene sheet before pouring concrete.
- Irrigate or cover the slab with plastic sheets or humidified material during first 7 days after pouring concrete. By doing so, you will maintain the temperature and humidity in order to provide a quality curing and therefore reaching the right strength. (Especially in areas with sun or wind exposure)
- As a general recommendation, please perform the cut joints during the first 24 hours after having pored concrete and respect distances between cuts and their depth.
- Avoid internal angles smaller than 60° which will have high crack risk.
- When pouring new concrete over an existing old concrete slab, clean old surface and apply a product that will make a bonding layer between them. If final application will be a car parking, build it with a minimum thickness of 8 cm. (Maximum aggregate size = 20mm). Do not exceed 15 m between working joints.
- Your should never pour concrete under 0°C or over 40°C.



Detail of cut joints for water manholes, Columns and very rigid elements:



For very heavy road traffic áreas, either you use fibres or not, it may be recomendable building cut joints with dowel joints following these recommendations:



DOWEL JOINTS		
Slab Thickness	Bar Length	Bar diameter
cm	cm	cm
12 to 18	40	2
18 to 30	50	2,5

Either smooth or plastic covered bars to allow horizontal movement , placed each 30 cm.

Gravel layer