

DESIGN | ENGINEERING | CONSTRUCTION

# WATER SHAPES

Exploring the Art & Science of Water

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## FEATURING



## Splendor Beneath the Seas

Renowned sculptor, Jason deCaires Taylor believes that for art to truly inspire change, it must be more than simply thought-provoking, but must also reach further and provide wide-ranging benefits on multiple levels. To clear that high bar, Taylor has decidedly aimed low -- beneath the waves.

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### DETAIL NOTES

1.  $f_c'$  = MINIMUM 4,000 PSI (27.5 KPA).
2.  $F_y$  PER TABLE BELOW.  $F_s = 0.5 * F_y$ , 24000 PSI MAX.
3. CLASS B SPLICES [ACI318 12.15.1]
4. INCREASE LAP 20% FOR EPOXY-COATED BARS.
5. INCREASE LAP 30% FOR LIGHTWEIGHT CONCRETE.

### MIN REINFORCING LAP LENGTH

BAR SIZE	NOMINAL DIA	GRADE	$F_y$ , MIN YIELD STRENGTH	MIN LAP LENGTH
#3	3/8" (10 MM)	40	40,000 PSI (300 MPA)	20" (500MM)
#4	1/2" (13 MM)	40	40,000 PSI (300 MPA)	25" (625MM)
#5	5/8" (16 MM)	60	60,000 PSI (420 MPA)	32" (800MM)
#6	3/4" (19 MM)	60	60,000 PSI (420 MPA)	38" (950MM)

[ASTM A615 (A615M)]

[ACI318 12.15.1]

**S032**

**SHOTCRETE NON-CONTACT LAP SPLICES**

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## Detail S032: Overlapping Steel

Avoiding 'shadowing' in the shotcrete-placement process is crucial to the structural integrity of pool shells, notes Dave Peterson. Here, in the first installment of his Beneath the Surface series of construction detail, he shares a detail that dodges the void creation that can lead to structural compromises.

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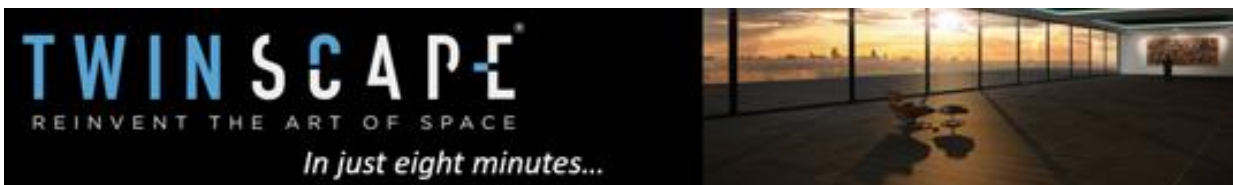




## A Plastic Pollution Solution

There's an enormous garbage patch floating in the middle of the Pacific Ocean. Comprised mostly of floating plastic trash and known as the "Great Pacific Garbage Patch," it's twice the size of Texas and getting bigger. Plastic pollution has become a gigantic problem requiring big thinking combined with commonsense. One town in Australia has joined the battle with a wonderfully simple pollution solution.

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