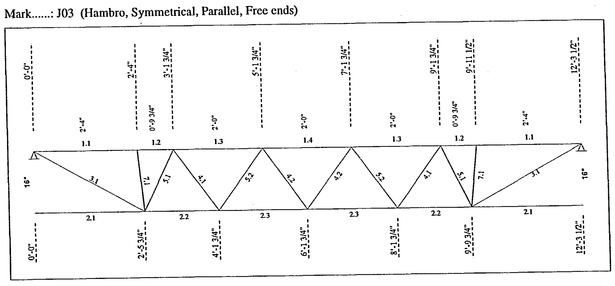
Project: WEST MIAMI SIX MODEL B

JOIST CALCULATION ACCORDING TO HAMBRO SPECIFICATIONS

Mark.....: J03 (Hambro, Symmetrical, Parallel, Free ends)



---------- LOADING CONDITIONS ----------
(THE SHOWN VALUES ARE REAL)

TOTAL LOAD ...: 430.94 lb/ft H16 LIVE LOAD ..: 164.17 lb/ft
105.00 lb/ft^2 x 4'-1 1/4" 40.00 lb/ft^2 x 4'-1 1/4"

---------- HAMBRO ----------

Total Thickness of the Slab..... = 3.00 in
Perimeter Joist..... = N
Length of the Extension of the Slab..... = 0.00 in
Concrete Density..... = 145.00 lb/ft^3
Compression Resistance (f'c)..... = 3.00 ksi
Composite Inertia..... = 183.22 in^4
Composite Maximum Capacity..... = 556.05 PLF
Non-Composite Maximum Capacity..... = 556.05 PLF
Non-Composite Loading..... = DL = 41.24 PSF LL = 20.00 PSF
Horizontal Shear at the Interface. (Formula 2003). = 77.99 lb/in (0.105)
Utilization of the Slab..... = 0.030
Presence of 'high-chair'..... = N
Type of Hambro (presence of reinforcing)..... =

---------- DEFLECTION ----------

Allowed deflection under live load ..... = 0.40 in (L/ 360)
Calculated deflection under service live load .... = 0.02 in (L/ 7155)
NB: Hambro Deflection: Beam Formula * 1.3 with Composite Inertia - .15 * Steel Inertia
Joist inertia ..... = 73.51 in^4
Required camber ..... = 0.08 in

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