PREFACE TO PRODUCT LOAD TABLES

The following pages contain load tables for the standard products available from Coreslab Structures (ARIZ) Inc. Load capacities are in conformance with the American Concrete Institute "Building Code Requirements for Structural Concrete (ACI 318-05)". However, values given in the tables are intended for preliminary member selections, not final designs. These values assume that the safe superimposed load is composed of 60% dead load and 40% live load.

In some cases, loads in excess of those shown can be accommodated by modifying the general parameters such as concrete strength and/or reinforcing patterns.

GENERAL NOTATION

Width of Precast Section (ft)	Depth of Precast Section (in)	Description of Section
10	24	DT = Double Tee Slab IT = Inverted Tee Beam LB = ELL Beam

10DT24

MATERIAL PROPERTIES

Concrete:

Compressive Strength

Final (28-day) = 5000 psi (Precast)
= 3000 psi (Topping)

At Prestress Release = 3500 to 4000 psi when maximum load is used. Otherwise a lower strength may be sufficient.

Normal Weight = 150 pcf

Modulus of Elasticity = $W^{1.5} 33\sqrt{f'c}$

Steel:

Prestressing Strand:

Sizes: 1/2" Diameter
Ultimate Strength = 270,000 psi
Initial Tension = 70 to 75% of Ult. Strength
Modulus of Elasticity = 28,000,000 psi

Reinforcing Steel:

Bar Sizes: 4, 5 and 6 are A706, Grade 60
Bar Sizes: 7 and larger are A615, Grade 60

FLEXURAL MEMBERS

In general, maximum spans shown for the various prestressing conditions will result in an upward camber under dead load, after loss of prestress has occurred. Roof deflection, however, should always be checked. It is recommended that a positive slope always be provided for roofs. Whenever span-to-depth ratio exceeds 30 for double tees a positive roof slope is essential to preclude ponding. Also, see the 2006 Edition “International Building Code” IBC.

Topping Slab Design by Others

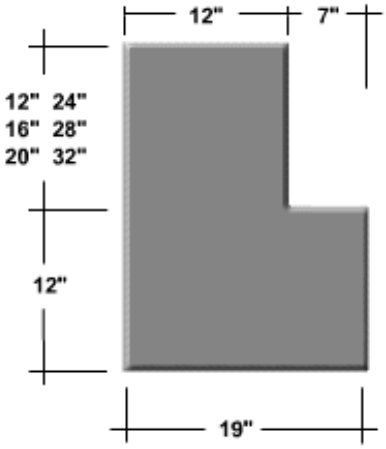
For composite members, reinforcement (i.e., welded wire fabric or reinforcing bar) is generally required for the structural design of the topping slab. The Engineer of Record should furnish this design.

DESIGN RECOMMENDATIONS	Maximum Bottom Tension Stress	Range of Maximum Precast Span-To-Depth Ratio
Double Tee Floor Slabs	$12\sqrt{f'c}$	25 to 30
Double Tee Roof Slabs	$12\sqrt{f'c}$	35 to 40
Inverted Tee or ELL Beams	$6\sqrt{f'c}$	10 to 20
Hollow Core Slabs	$6\sqrt{f'c}$	45 to 50

The required depth of a beam or slab is influenced by the ratio of live load to total load. When this ratio is high, deeper sections may be needed.

PRESTRESSED ELL BEAMS

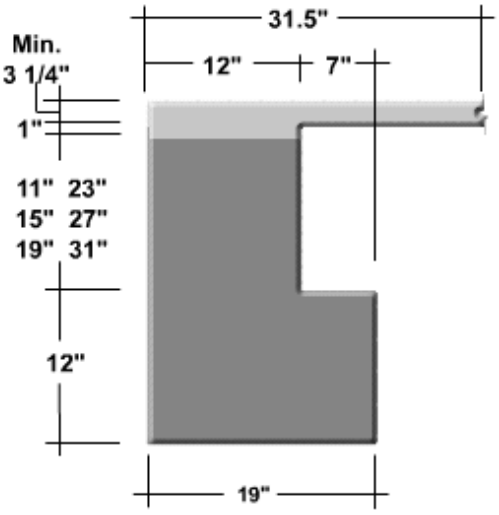
Non-Composite ELL Beam - 12 inch Ledge



Allowable Superimposed Service Load, Kips per Lineal Foot											
Span(ft)	**20**	**22**	**24**	**26**	**28**	**30**	**32**	**34**	**36**	**38**	**40**
19LB24	5.9	5.2	4.5	3.8	3.4	3.0	2.6				
19LB28	7.6	6.9	6.2	5.5	4.8	4.2	3.6	3.0	2.4		
19LB32	9.2	8.5	7.8	7.0	6.3	5.6	5.0	4.5	3.9	3.4	2.8
19LB36	11.1	10.2	9.4	8.5	7.7	6.8	6.2	5.6	5.0	4.4	3.8
19LB40	13.0	12.0	10.9	9.9	8.8	7.8	7.2	6.5	5.9	5.2	4.6
19LB44	14.9	13.8	12.6	11.5	10.3	9.2	8.5	7.7	7.0	6.3	5.6

Beam Type	Depth (in)	Weight (plf)
19LB24	24	384
19LB28	28	434
19LB32	32	484
19LB36	36	534
19LB40	40	584
19LB44	44	634

Composite ELL Beam - 12 inch Ledge



Allowable Superimposed Service Load, Kips per Lineal Foot											
Span(ft)	**20**	**22**	**24**	**26**	**28**	**30**	**32**	**34**	**36**	**38**	**40**
19LB23	5.8	5.3	4.8	4.3	3.8	3.3	2.9	2.4			
19LB27	7.5	6.9	6.2	5.6	5.0	4.5	4.1	3.6	3.2		
19LB31	8.8	8.1	7.4	6.7	6.1	5.4	4.9	4.5	4.1	3.6	3.2
19LB35	10.5	9.7	8.9	8.1	7.3	6.5	6.0	5.5	5.0	4.5	4.1
19LB39	12.3	11.3	10.4	9.5	8.5	7.6	7.0	6.5	5.9	5.3	4.8
19LB43	14.2	13.1	12.0	10.9	9.8	8.7	8.1	7.5	6.9	6.4	5.8

Beam Type	Depth (in)	Weight (plf)
19LB23	23	375
19LB27	27	425
19LB31	31	475
19LB35	35	525
19LB39	39	575
19LB43	43	625