

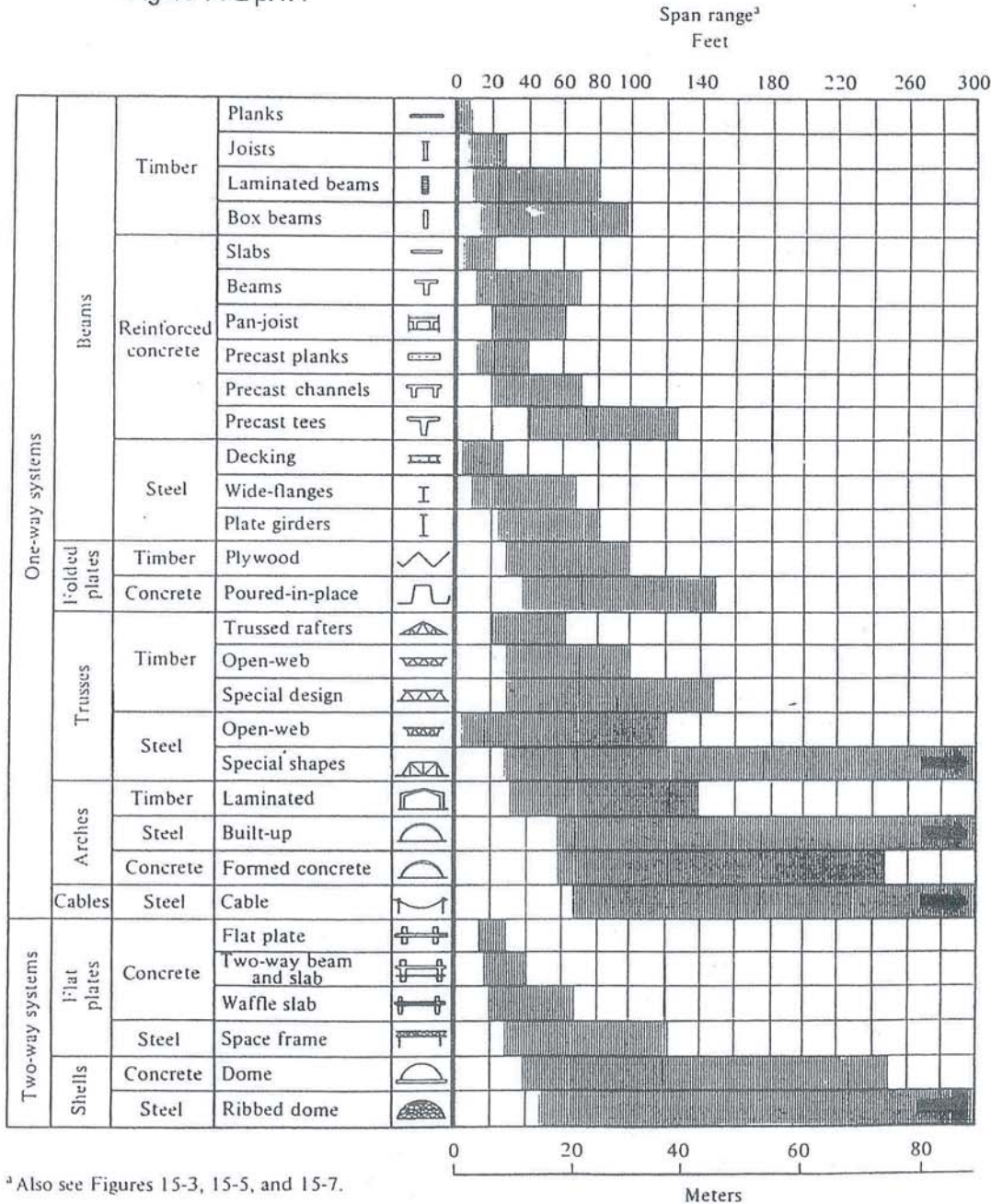
THE DESIGNERS' GUESS

As student designers of building structures you are often placed in a situation of considerable uncertainty. Even with an arbitrarily constrained design brief, students generally do not have a sufficiently full and diverse knowledge base to make meaningful decisions relevant to the details of a proposed structures. For example on what basis should one decide on what is the most appropriate spanning members for the approximate spans? What is the practical and economical span/depth ratios? There are of course a variety of "rules of thumbs" which are suggested as guides for action. However students need to adopt an inquisitive attitude towards such rules and try to understand the implied assumptions. With changing technology, innovative use of materials and the total environment under which building operations take place, even time honoured assumptions can be challenged.

Bearing this in mind there are however some very useful guide rules which can greatly assist your decision making to ensure that such process is not completely based on wild guesses. Two such guide charts are shown here:

1. APPROXIMATE SPAN RANGES OF STRUCTURAL SYSTEM ELEMENTS

-Schodek, Daniel L. (1980) **STRUCTURES**, Prentice-Hall, Englewood Cliff, N.J.
Figure 14-2 p.477



^a Also see Figures 15-3, 15-5, and 15-7.

FIGURE 14-2 Approximate span ranges of different systems.