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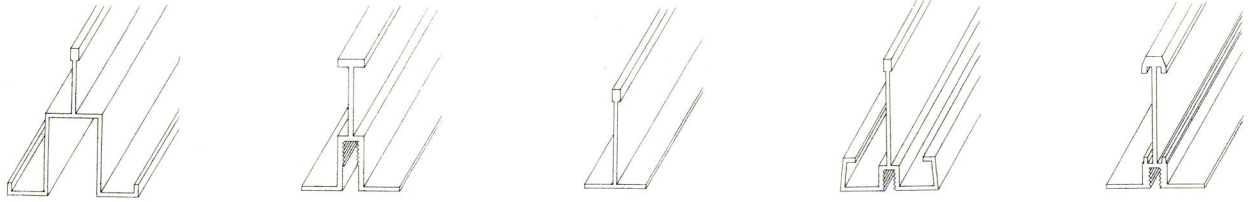
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MODULAR CEILING SYSTEMS



THE ABOVE SECTIONS ARE REPRESENTATIVE OF TYPICAL CUSTOM MODULAR SYSTEMS

Now! . . .

A MANUFACTURER SPECIALIZING IN CUSTOM ENGINEERED
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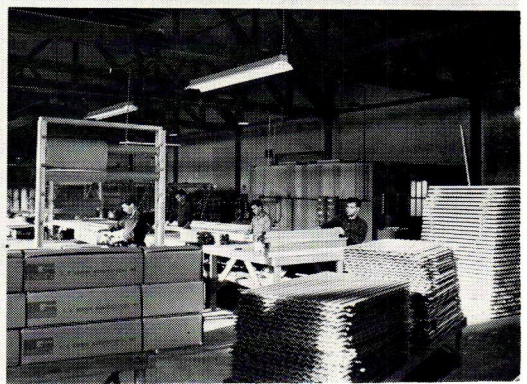
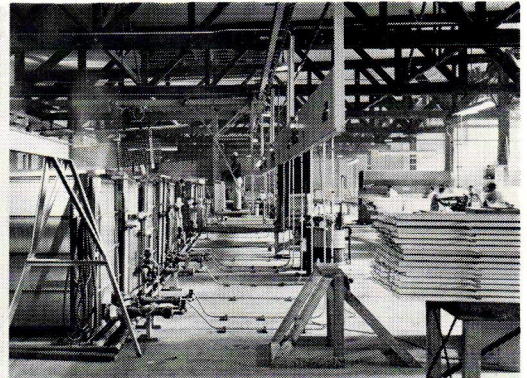
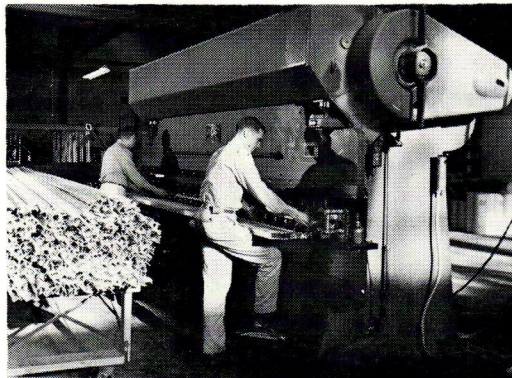
COMPLETE ANODIZING
COMPLETE FABRICATING

ALL MEMBERS AVAILABLE
IN VARIETY OF FINISHES

Satin Anodized
Aluminum

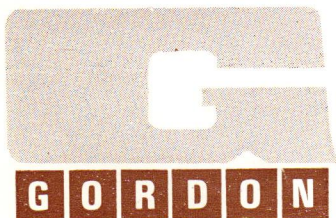
Color Anodized

Tough Vinyl
Coated in
Semi-gloss White
or Flat Black



Standard Grid System Stocked for Immediate Shipment
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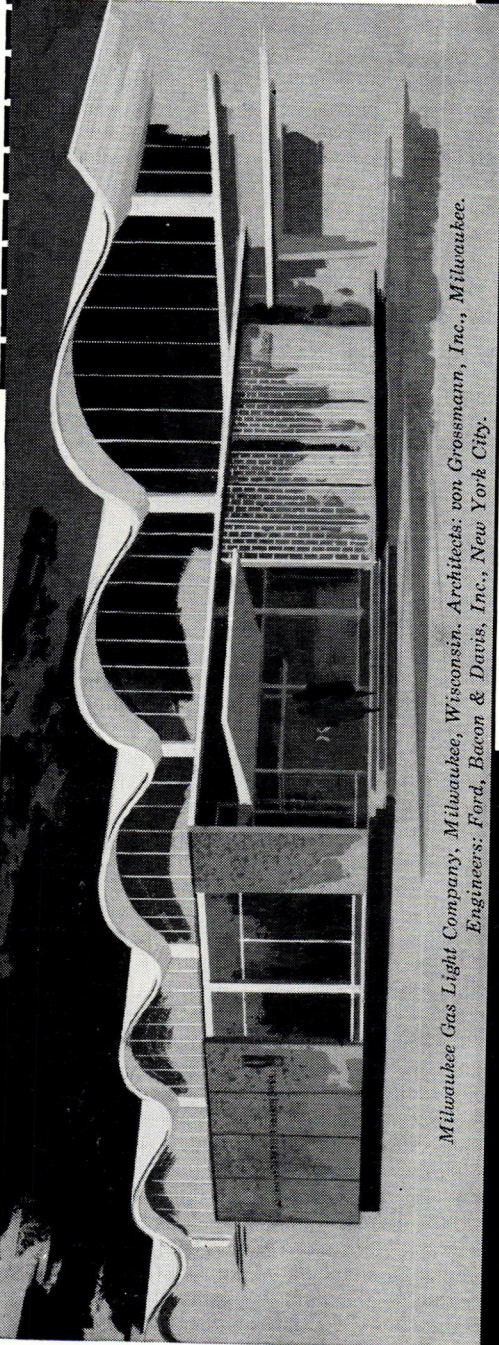
Slack Industrial Park • Post Office Box 6051 Shreveport, Louisiana • Telephone 868-0524 (318)

NO. 10 long barrel shells

a.i.a. file: 4-a

Prepared as a service to architects by Portland Cement Association

Clip along dotted line



Milwaukee Gas Light Company, Milwaukee, Wisconsin. Architects: von Grossmann, Inc., Milwaukee. Engineers: Ford, Bacon & Davis, Inc., New York City.



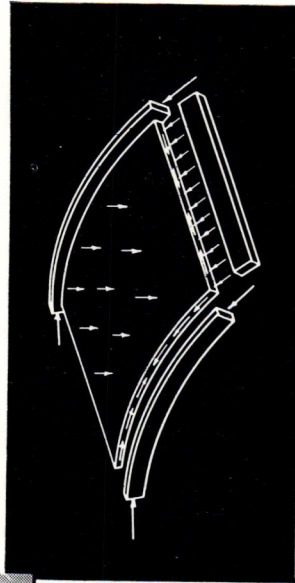
BARREL SHELLS / SPAN DATA ⁽¹⁾

SPAN	BAY WIDTH	a	R	t	reinforcing (2)
80'	30'	8'	25'	3"	3.5
100'	30'	10'	30'	3"	4.0
120'	35'	12'	30'	3"	4.5
140'	40'	14'	35'	3"	5.0
160'	45'	16'	35'	3 1/2"	6.5

(1) for long-span multiple barrels, the usual span-to-depth ratio varies from 1:10 to 1:15
 (2) pounds per square foot of projected area

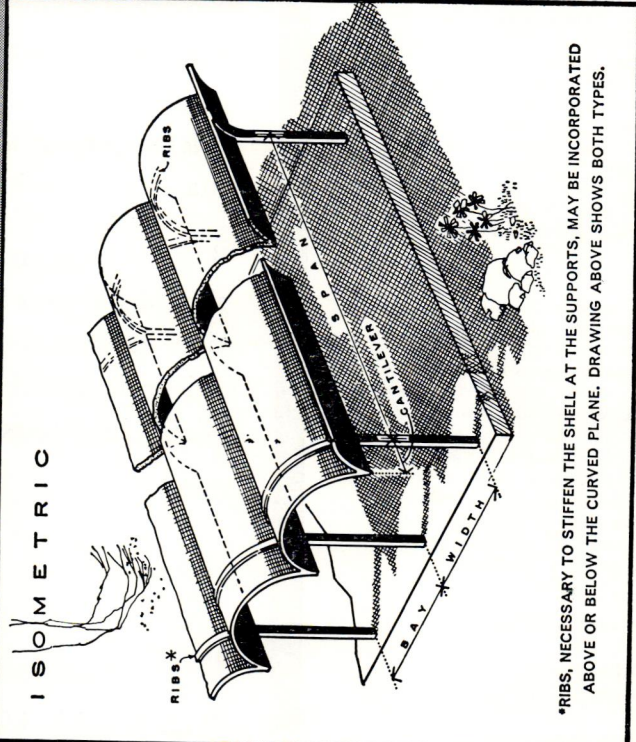
Intriguing designs and long spans are readily achieved with concrete barrel shells. Long barrel shells are those which have a small chord compared to span. (Short barrels have large chords compared to span.)

To achieve full shell action (a membrane free of bending moments), support is required along the two curved edges as well as along the straight edges, as shown in the diagram below. In practice, however, the straight edges are never fully restrained so that



some small bending moments in the shell must be considered in the design.

The stiffeners along the curved edges usually consist of arch-type ribs or diaphragms spanning between the supporting columns. Cantilevers are easily achieved; thus the visible shell edge can be as thin as the basic shell. Write for further free information. (U.S. and Canada only.)



PORTLAND CEMENT ASSOCIATION

A national organization to improve and extend the uses of concrete

611 Gravier Street, New Orleans, Louisiana 70130