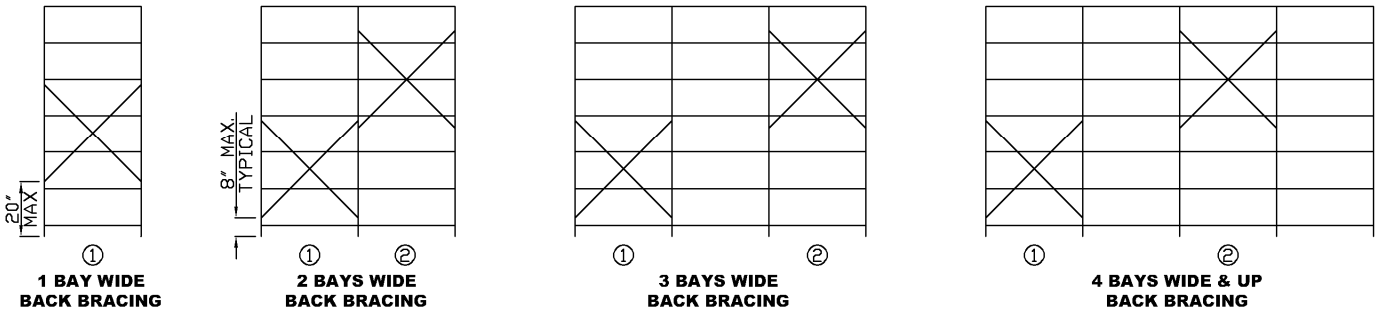
Bracing

The third element in your design is determining the bracing pattern.
If open type units are used, follow the guidelines illustrated in table 4 on the following pages.
In the case of closed units, upright side sheets will be welded to posts on a maximum of 12" centers or field-bolted uprights may be used.
For maximum bolt centers on backs and uprights, see Table 5.
A shelving design is not complete until all three elements of a shelving structure – posts, shelves, bracing, and bracing pattern – have been properly selected.

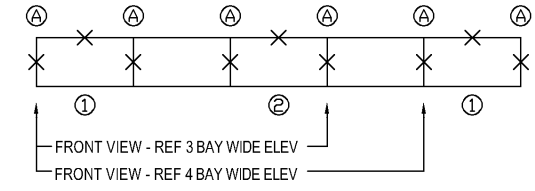
> **NOTE: Seismic (earthquake) or wind loading** – These types of loading conditions may make it necessary to provide special anchoring, heavier posts, and/or additional bracing. Bracing members of greater cross sectional area may also be needed.
> **Contact the Product Engineering Department at Republic for assistance when you know or suspect that this type of loading must be considered.**

TABLE 4 - CLIP SHELVING BRACING PATTERNS – SEISMIC ZONE 0

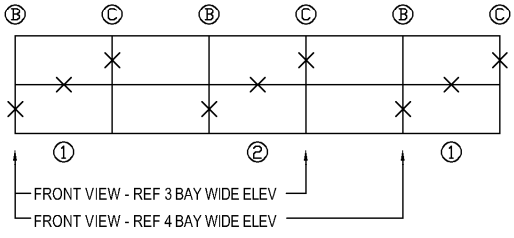
Heights to 8'-1"



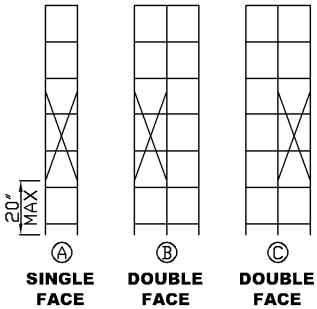
STANDARD BACK BRACING PATTERNS
TYPICAL FOR UNITS 8'-1" AND UNDER
NOTE: REPEAT PATTERN FOR MORE THAN FOUR BAYS AS FOLLOWS-
BAY '5' SAME AS BAY '1', BAY '6' NO BRACING, BAY '7' SAME AS BAY '2', ETC.



STANDARD SINGLE ROW BRACING PATTERN
REF 'STANDARD BACK BRACE' FOR '1' & '2' BRACING LOCATIONS
REF 'STANDARD SIDE BRACE' FOR 'A' & 'B' BRACING LOCATIONS



STANDARD DOUBLE ROW BRACING PATTERN
REF 'STANDARD BACK BRACE' FOR '1' & '2' BRACING LOCATIONS
REF 'STANDARD SIDE BRACE' FOR 'A' & 'B' BRACING LOCATIONS

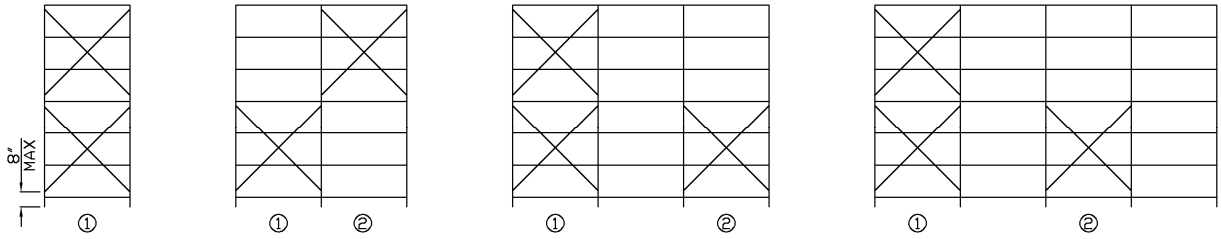


STANDARD SIDE BRACING PATTERNS
TYPICAL AT EVERY UPRIGHT
FOR UNITS 8'-1" AND UNDER

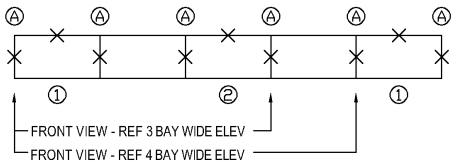
Bracing - *continued*

TABLE 4 - CLIP SHELVING BRACING PATTERNS – SEISMIC ZONE 0 - *CONTINUED*

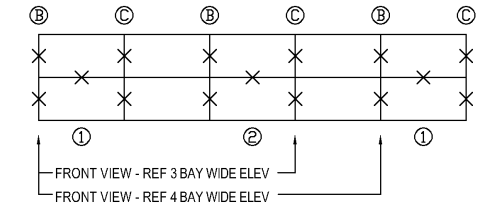
Heights 8'-2-1/2" TO 10'-1"



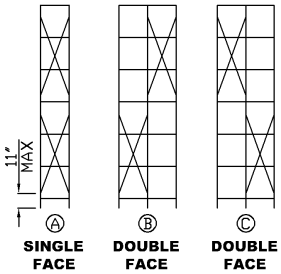
STANDARD BACK BRACING PATTERNS
TYPICAL FOR UNITS 8'-2 ½" TO 10'-1"
NOTE: REPEAT PATTERN FOR MORE THAN FOUR BAYS AS FOLLOWS-
BAY '5' SAME AS BAY '1', BAY '6' NO BRACING, BAY '7' SAME AS BAY '2', ETC.



STANDARD SINGLE ROW BRACING PATTERN
REF 'STANDARD BACK BRACE' FOR '1' & '2' BRACING LOCATIONS
REF 'STANDARD SIDE BRACE' FOR 'A' & 'B' BRACING LOCATIONS

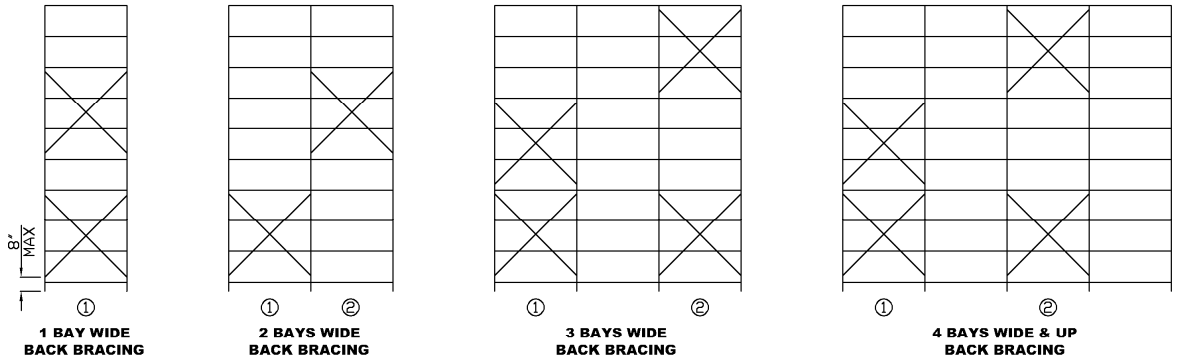


STANDARD DOUBLE ROW BRACING PATTERN
REF 'STANDARD BACK BRACE' FOR '1' & '2' BRACING LOCATIONS
REF 'STANDARD SIDE BRACE' FOR 'A' & 'B' BRACING LOCATIONS

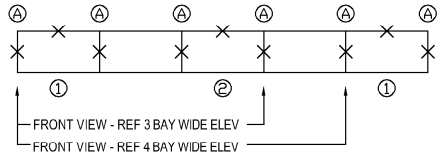


STANDARD SIDE BRACING PATTERNS
TYPICAL AT EVERY UPRIGHT
FOR UNITS 8'-2½" TO 10'-1"

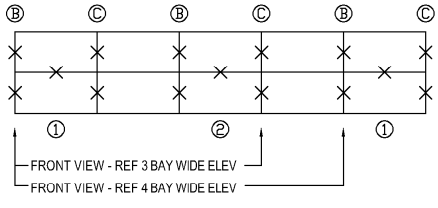
Heights 10'-2-1/2" TO 13'-1"



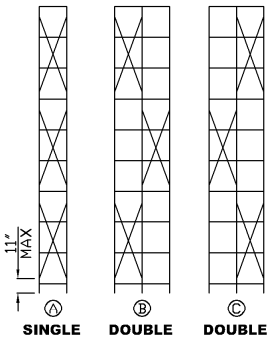
STANDARD BACK BRACING PATTERNS
TYPICAL FOR UNITS 10'-2 ½" TO 13'-1"
NOTE: REPEAT PATTERN FOR MORE THAN FOUR BAYS AS FOLLOWS-
BAY '5' SAME AS BAY '1', BAY '6' NO BRACING, BAY '7' SAME AS BAY '2', ETC.



STANDARD SINGLE ROW BRACING PATTERN
REF 'STANDARD BACK BRACE' FOR '1' & '2' BRACING LOCATIONS
REF 'STANDARD SIDE BRACE' FOR 'A' & 'B' BRACING LOCATIONS



STANDARD DOUBLE ROW BRACING PATTERN
REF 'STANDARD BACK BRACE' FOR '1' & '2' BRACING LOCATIONS
REF 'STANDARD SIDE BRACE' FOR 'A' & 'B' BRACING LOCATIONS



STANDARD SIDE BRACING PATTERNS
TYPICAL AT EVERY UPRIGHT
FOR UNITS 10'-2½" TO 13'-1"

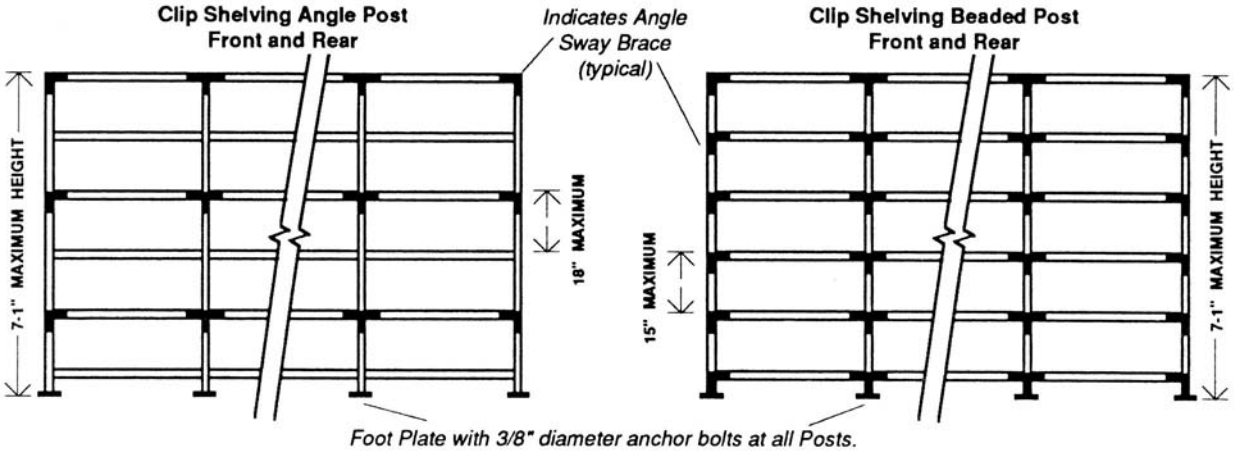
Bracing - *continued*

TABLE 5 – BOLT SPACING FOR BACKS AND UPRIGHTS

Height of Closed Back	Total Number of Bolts and Nuts	Maximum Bolt Spacing
To 3'-11 1/2"	4	46-1/2"
4'-1" to 5'-11 1/2"	6	36"
6'-1" to 7'-11 1/2"	8	31-1/2"
8'-1" to 9'-11 1/2"	10	30"
10'-1" to 12'-11 1/2"	12	31-1/2"
Closed Uprights (Upright Side Sheet plus Posts)		
Two Nuts and Bolts per foot of height.		

TABLE 6 – ANGLE SWAY BRACES

Angle Sway Braces are used where two-way entry to shelving is desired and Sway Braces or Backs cannot be used.



- ANGLE SWAY BRACES CANNOT BE USED WITH SERIES 2000 SHELVES.
- Use four (4) Angle Sway Braces per shelf as indicated above (both ends, both faces).
- DO NOT use Angle Sway Braces if shelf load exceeds 350 pounds on any shelf.
- When using Angle Posts, DO NOT exceed 18" shelf spacing.
- When using Beaded Posts, DO NOT exceed 15" shelf spacing.
- DO NOT use Angle Sway Braced Double Entry Units exceeding 7'1" in height.