

Match Line A
Match Line A

Loading Block – Side View
(Reference)

Side View – Division B & C
(left sheet)



2027 Boomilever Template

Match Line A
Match Line A

Match Line B
Match Line B

3.g Bottom of Loading Block supported above Mounting Bolt Assembly centerline.



3.a Single Structure: no separate, loose or detachable parts or pieces.

3.b Structure is constructed of wood, bonded by adhesive (7.a. – 7.d.). No other materials permitted.

Side View – Division B & C
(middle sheet)



2027 Boomilever Template

Match Line B
Match Line B

3.c

Structure rests on Mounting Bolt assembly

3.0 cm +/- 0.1
(1.18 inch +/- 0.03)

Testing
Wall

10cm.

Vertical
Contact
Zones

15cm.

3.i

Division C
BONUS

20cm.

3.h

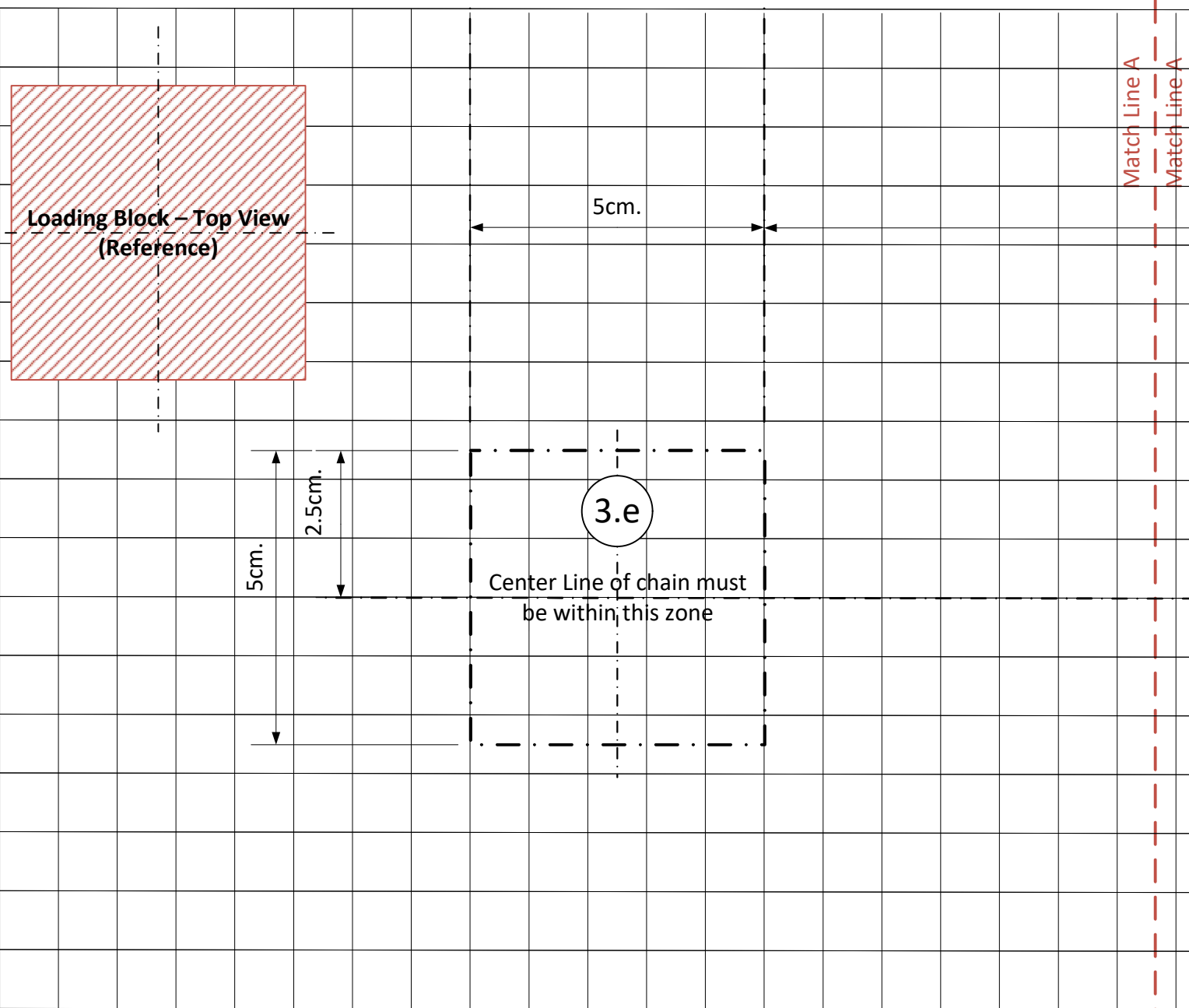
Division C
Division B
BONUS

3.i

3.h

Division B

Side View – Division B & C
(right sheet)



Boomilever Template 2027

- The 2027 Boomilever Template is provided as a reference for building a Division B and Division C Boomilever. This Template is schematic of the rules that can be used to design a Boomilever to satisfy the 2027 requirements.
- Critical areas of attention and optimization include: 1) Truss Horizontal Compression members (cross section & density); 2) Truss Diagonal support members (quantity, direction, & size); C) Truss Top/Bottom's Cross-support & Diagonal Members (quantity, direction, & size) ; 4) Contact Depth Positioning (difference between Div B & C); 5) Dimension of Tension Member (cross-section); 6) Quality of Critical Bond Joints (surface area & preparation); 7) Overall density screening of members; 8) Use of wood types other than Balsa Wood (Basswood, or other hard/dense wood).
- Other areas to consider for Optimization: a) Truss Height; b) Truss width (within restrictions); c) Truss segments (or spacing); d) Alternate approaches other than Truss design, such as a Beam vs Truss; or e) Completely different compression type Boomilever design.

Top View – Division B & C
(left sheet)



Exploring the World of Science
2027 Boomilever Template

Match Line A
Match Line AMatch Line B
Match Line B

40cm.

Center Line of
Mounting Bolt Assembly

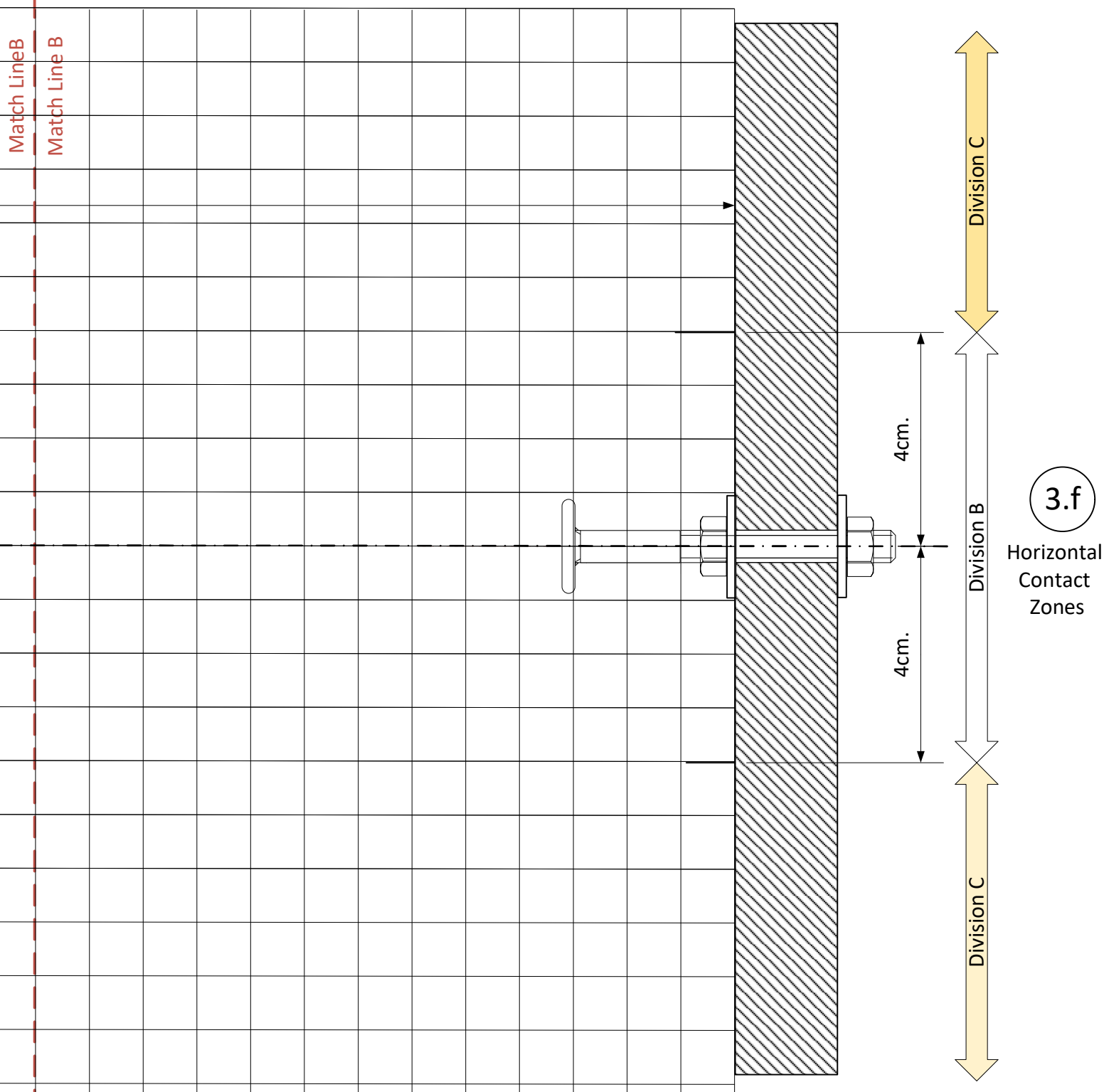
Suggested Build Process: (Use Gap Filling CA glue with 5-10sec Cure time)

- Pre-cut all members for the Truss sides using the "Side View" and "Top View" of the Template as a reference for lengths
- Bond Horizontal and vertical members to form truss sides using pin boards and pins (do not put pins thru wood). Bond desired Truss support diagonals for each side, making the opposite side identical but mirrored to the other side. Once both sides are completed, remove pins and

Top View – Division B & C
(middle sheet)



Exploring the World of Science
2027 Boomilever Template



- Using the "Top View" of the Template, stand-up and pin both sides of the Truss, with the support members on the inside, and ensure that sides are perpendicular to surface. Apply desired cross-support and/or diagonal members on the interior top portion of the Truss. Once dried, flip over and re-pin, standing the last side of the Truss for cross-member and diagonal bonding. Allow to entire Truss subassembly dry, then remove, ...
- Using a mock up Test Wall apparatus (with the Connector Bolt installed), position the Truss along a flat surface and carefully bond and clamp the long Tension members, connecting the Truss end (where Load Block is positioned), to the inside edge of Connector Bolt's small wood block. Allow to dry (1 minute or so), then remove.

Top View – Division B & C
(right sheet)



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2027 Boomilever Template