ABU ASIA-PACIFIC ROBOT CONTEST 2027

SOLO, INDONESIA



Theme & Rules

“The Pursuit of Mustika Nusantara”

APPENDIX

Game Object Specifications and Game Field Drawings

October 2026 (V1.1)
To be read together with Rulebook V1.1
Asia-Pacific Robot Contest 2027 Solo, Indonesia
Organising Committee
http://www.aburobocon2027.id

Revision History

Version	Date	Changes
V1.1	October 2026	First issue, published together with Rulebook V1.1: specifications and drawings of the game objects (Earth Block, Sky Block, Mustika) and detailed drawings of the Game Field.

1. General

1.1 This Appendix is part of the rules of ABU Robocon 2027 and is published separately from the Rulebook (Rulebook Rule 13.6).

1.2 This Appendix may be updated independently of the Rulebook. Each update will be published on the official website with a new version number and listed in the Revision History.

1.3 If there is any difference between this Appendix and the Rulebook, the Rulebook prevails unless the Organising Committee announces otherwise.

1.4 Unless otherwise specified, the dimensions, weights and other physical specifications may have a manufacturing tolerance of $\pm 5\%$ (Rulebook Rule 13.2).

1.5 The colors and materials of the Game Field are given in Rulebook Section 14. The specification of the Mustika is given in Rulebook Section 2 and Section 14.

2. Game Objects

	Earth Block (Red / Blue)	**Sky Block**
Dimensions	350 mm × 350 mm × 350 mm (±5%)	200 mm × 200 mm × 200 mm (±5%)
Material	3-layer corrugated cardboard box	3-layer corrugated cardboard box
Color	Original color of the box: red or blue	Original colors of the box: red on one side and blue on the other (see the photos)
Approx. weight	600 g (±20%)	220 g (±20%)
Quantity	20 per team	12 (shared by both teams)

The color of the Sky Block differs slightly from the color of the Earth Block. Please refer to the actual product for the exact color. Photos and purchase information are given at the end of this Appendix.

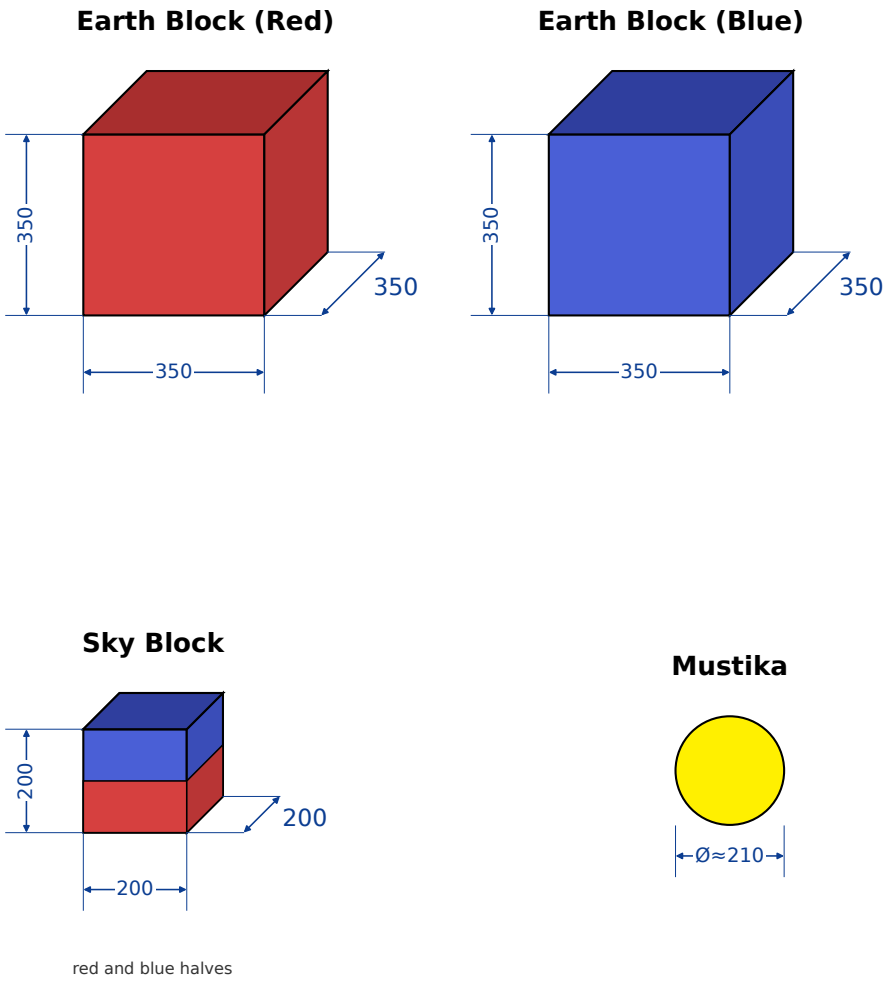


Figure 2.1 Game objects (to the same scale). Dimensions in mm.

3. Game Field Drawings

This Section gives the dimensions of each part of the Game Field. All dimensions are in millimeters (mm). In all plan views, the Red Team Area is on the left and the Blue Team Area is on the right, as in Figures 1–3 of the Rulebook. The Game Field is symmetrical about the center line; a dimension shown for one team applies to both teams unless stated otherwise. The colors are indicative only (see Rulebook Section 14).

3.1 Overall Plan

Rulebook reference: Section 2 (Game Field, Ground Area, Level 1, Level 2), Section 14.

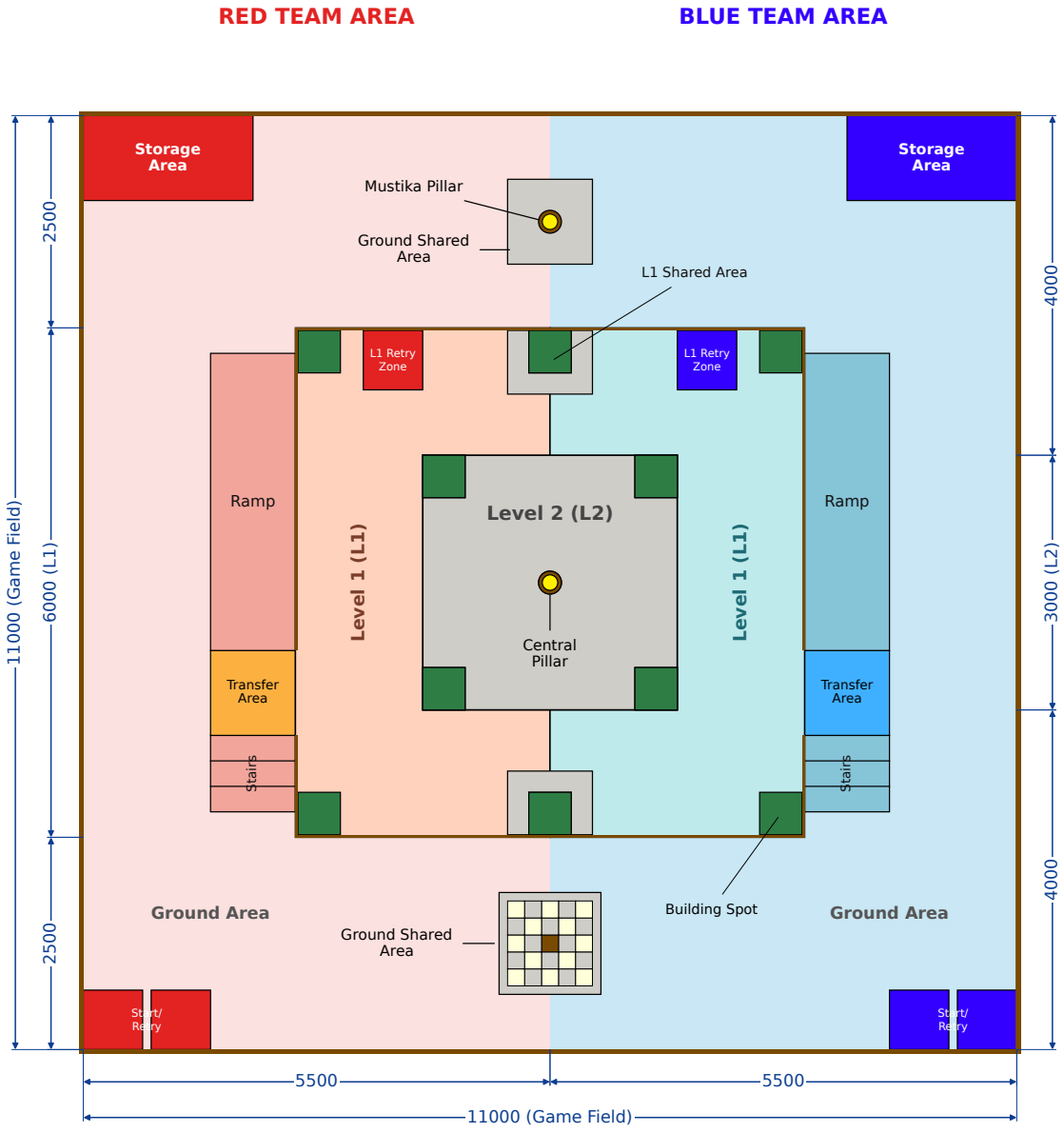
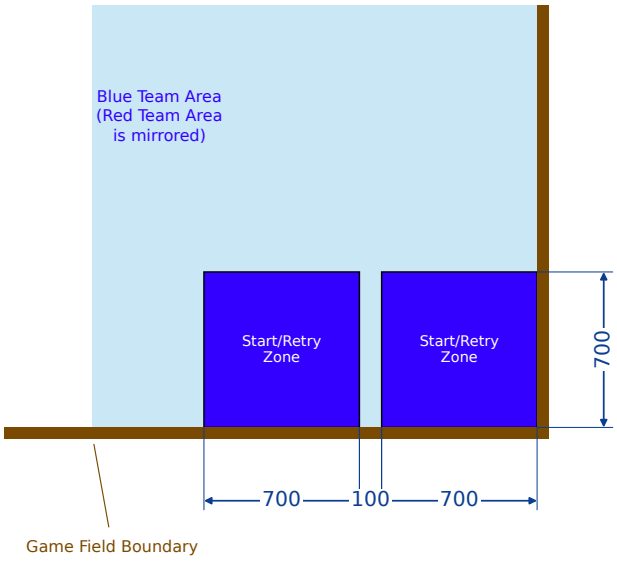


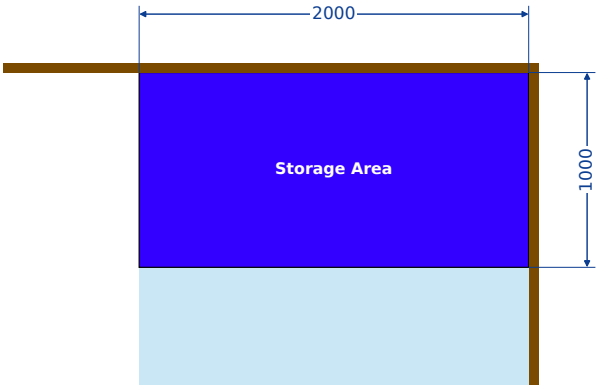
Figure 3.1 Plan view of the Game Field. Dimensions in mm.

3.2 Ground Area

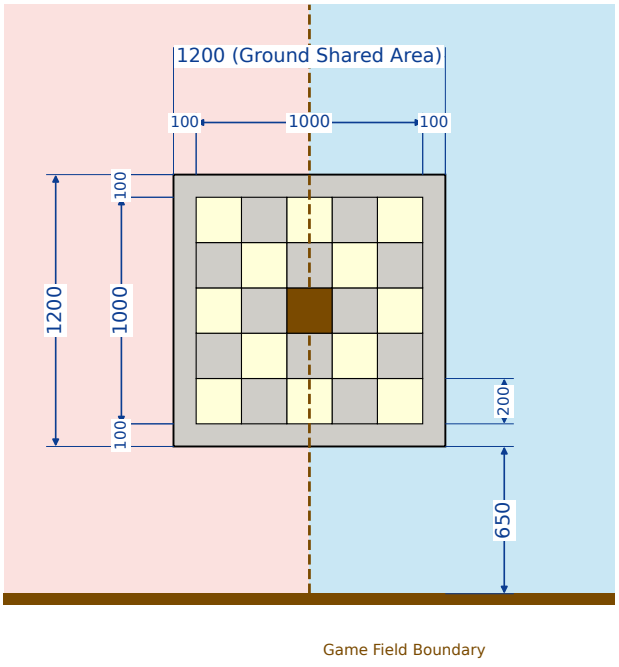
Rulebook reference: Section 2 (Start/Retry Zone, Storage Area, Ground Shared Area, Mustika Pillar).



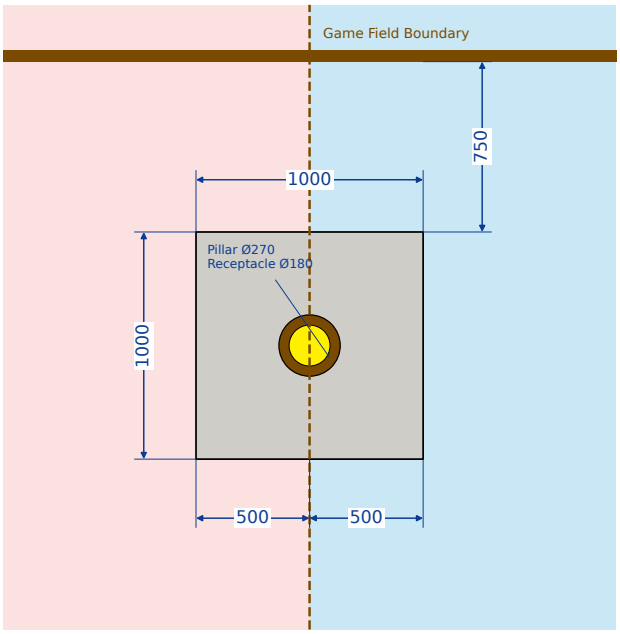
(a) Start/Retry Zones (two per team, 700 × 700 each)



(b) Storage Area (1000 × 2000)



(c) Ground Shared Area (1200 × 1200) with the Sky Block grid: 5 × 5 cells of 200 × 200. The 12 Sky Blocks are placed on the light-yellow cells; the center cell is left empty.

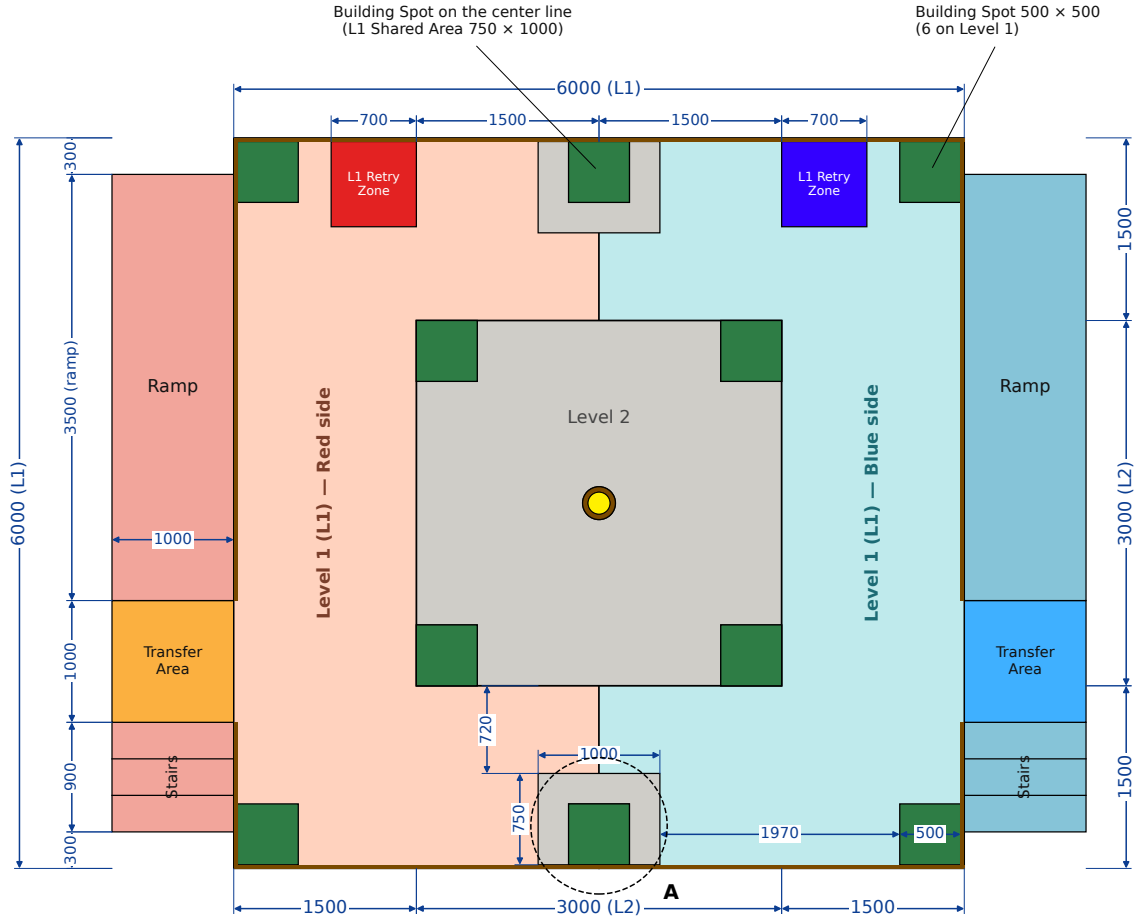


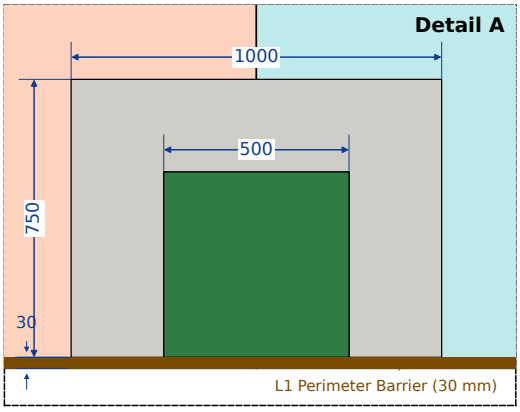
(d) Mustika Pillar and the Ground Shared Area around it (1000 × 1000), centered on the center line

Figure 3.2 Details of the Ground Area. Each detail is drawn to its own scale. Dimensions in mm, measured from the inner face of the Game Field Boundary. The Blue side is shown for (a) and (b); the Red side is the mirror image.

3.3 Level 1

Rulebook reference: Section 2 (Level 1, Transfer Area, Stairs, Ramp, Building Spot, L1 Retry Zone, L1 Shared Area).





Detail A: the dimensions of Level 1 and Level 2 (6000, 1500, 3000) are measured to the outer face of the L1 Perimeter Barrier, i.e. the edge of Level 1. Areas and spots on the Level 1 floor (750, 700, 500) start at the inner face of the 30 mm barrier.

Figure 3.3 Plan view of Level 1 with the stairs, Transfer Areas and ramps, and Detail A. Dimensions in mm. Level 1 and Level 2 (6000, 1500, 3000) are measured to the outer face of the L1 Perimeter Barrier (30 mm thick); areas and spots on the Level 1 floor start at its inner face. The layout is symmetrical; some dimensions are shown on one side only. Each Transfer Area is 1000 × 1000.

3.4 Level 2 and the Pillars

Rulebook reference: Section 2 (Level 2, Central Pillar, Mustika Pillar).

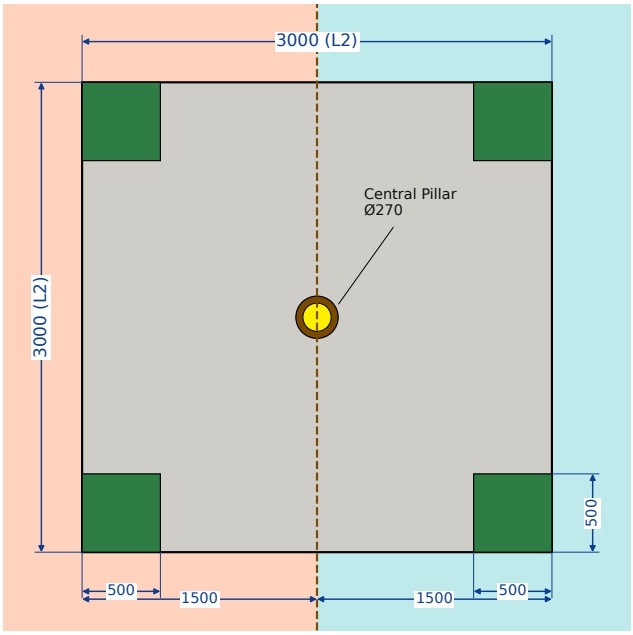


Figure 3.4 Plan view of Level 2 (3000 × 3000) with four Building Spots (500 × 500) at the corners and the Central Pillar at the center. Dimensions in mm.

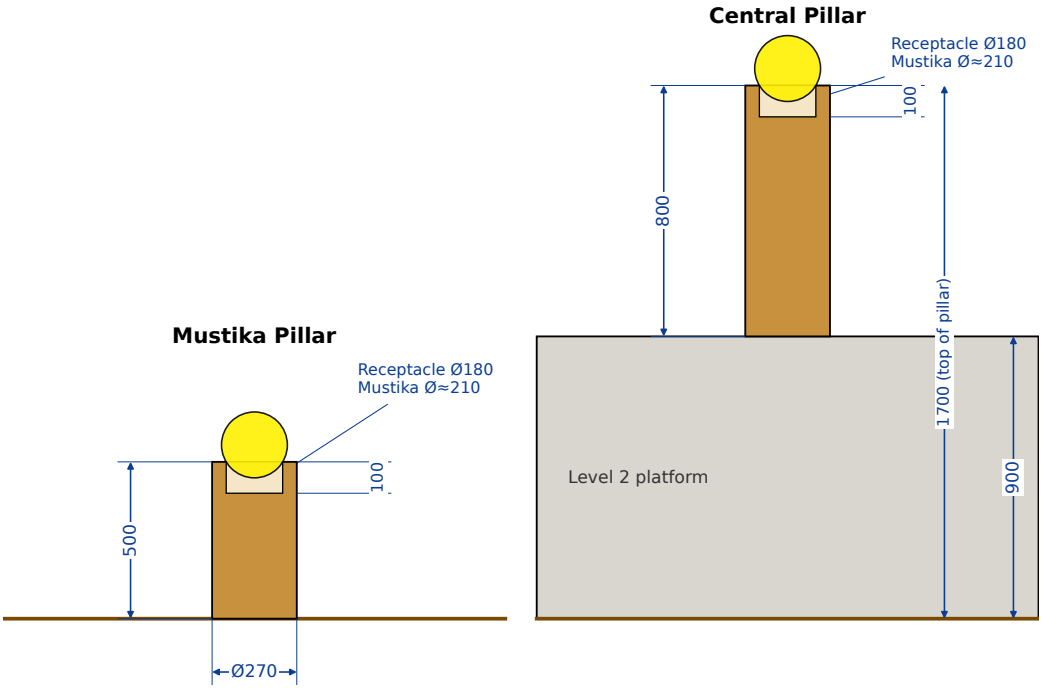


Figure 3.5 Mustika Pillar (left) and Central Pillar (right), sectioned through the axis. The Mustika is shown seated in the receptacle. Dimensions in mm.

3.5 Side Views

Rulebook reference: Section 2 (Level 1, Level 2, Stairs, Ramp).

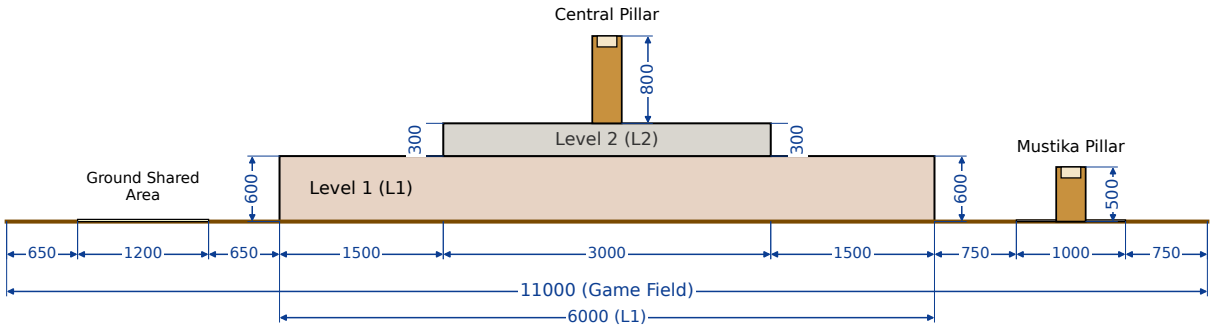


Figure 3.6 Side view along the center line. Dimensions in mm.

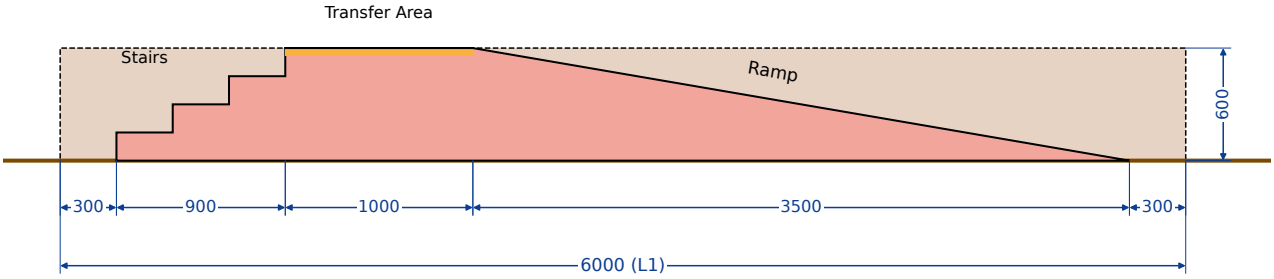


Figure 3.7 Side view of the stairs, Transfer Area and ramp (Level 1 platform shown behind). Dimensions in mm.

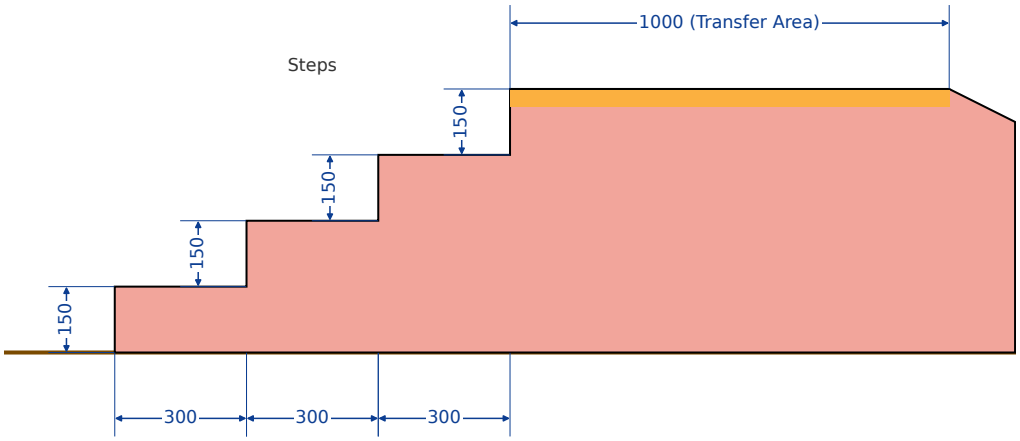


Figure 3.8 Detail of the stairs and the Transfer Area. Each step is 300 mm (length) × 1000 mm (width) × 150 mm (height). Dimensions in mm.

3.6 Fences and Barriers

Rulebook reference: Section 2 (Fence / Barrier), Section 14 (Game Field Boundary, Center Divider Fence, L1 Perimeter Barrier).

The Game Field Boundary surrounds the Game Field. The Center Divider separates the Red Team Area from the Blue Team Area; it is interrupted at the Ground Shared Area, at the Mustika Pillar area, at the L1 Shared Areas and at Level 2. The L1 Perimeter Barrier stands on the outer edge of Level 1 and is open only at the two Transfer Areas. Because the barrier is 30 mm thick and stands inside the 6000 × 6000 outline of Level 1, the floor of Level 1 is 5940 × 5940 mm; the Building Spots and the L1 Retry Zones are placed against the inner face of the barrier.

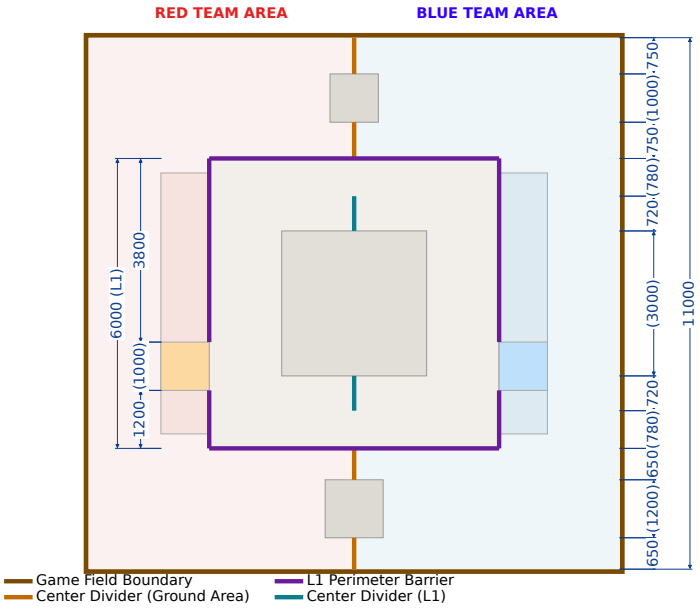


Figure 3.9 Layout of the fences and barriers. Dimensions in mm along the center line and along the sides of Level 1; values in parentheses are openings where no divider or barrier is installed.

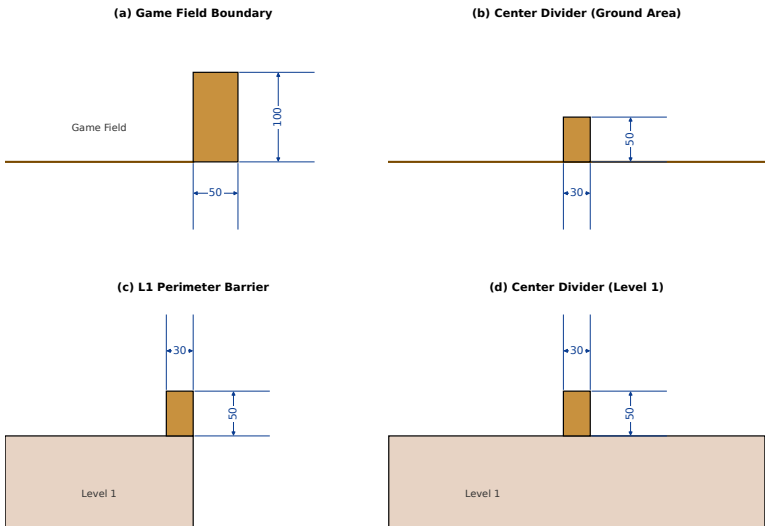


Figure 3.10 Cross-sections of the fences and barriers (to the same scale). In (c) the outside of Level 1 is on the right. Dimensions in mm.

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Earth Block Red/Blue 35cm Cube

Purchase Here:

https://item.taobao.com/item.htm?id=983355886264



Red

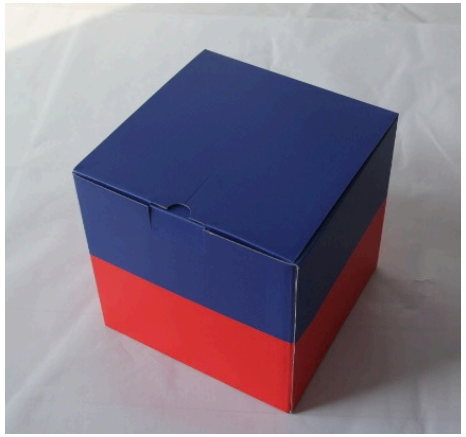


Blue

Sky Block 20cm Cube

Purchase Here:

https://item.taobao.com/item.htm?id=1077841648410





*Earth/Sky Block color : Original Block color

The color of the Sky Block differs slightly from the color of the Earth Block.

Please refer to the actual product for the exact color.