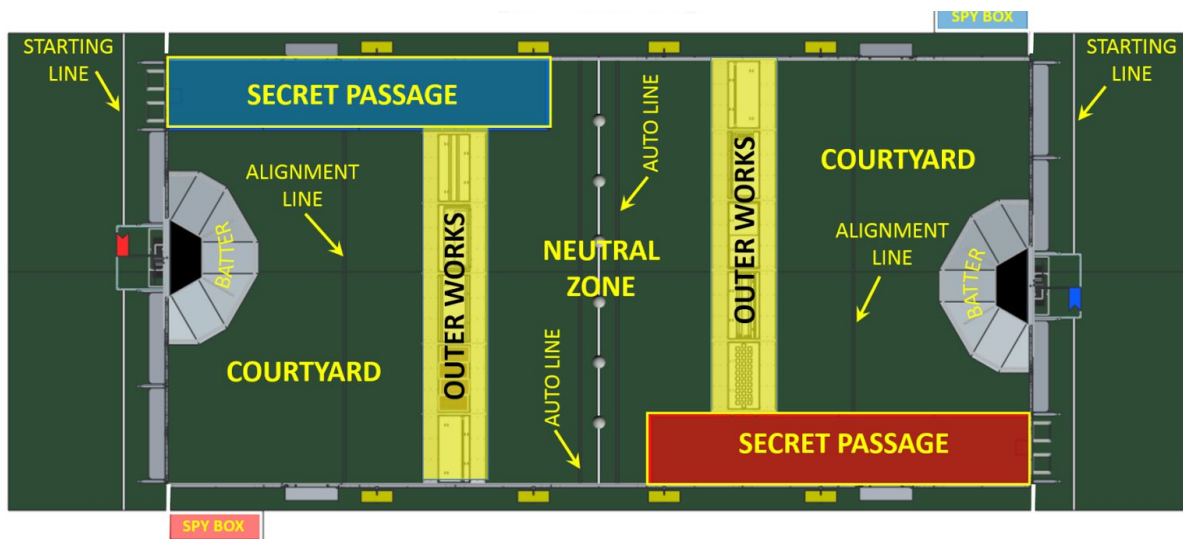
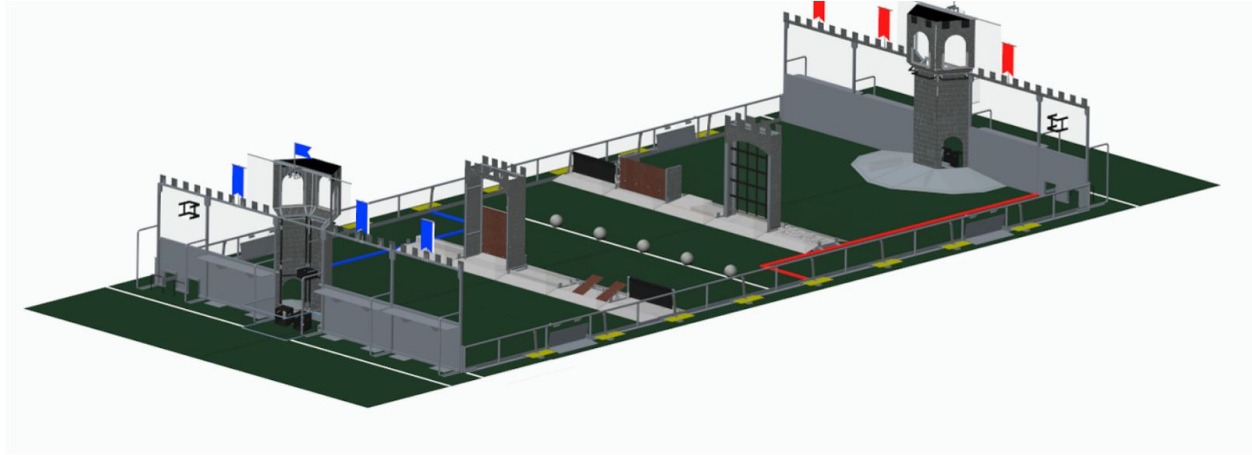


# General Game Info 2016

Field Pics:



**Overall: Teams must cross "outer works" (see above), aka the defense, and score into opposing alliances tower to damage and eventually capture the tower.**

## Match Play

### ● Match timing

- 2 min 30 secs, 15 sec auton at beginning
- 2 min and 15 secs teleop
- End game occurs during the last 20 seconds of the match

● **The defenses (see below)**

- Once the defenses are crossed twice they are damaged.
- When 4 out of 5 of the defenses are crossed the alliances outer works or defenses are considered breached.
- The low bar is a stopper that stops the balls from rolling onto other alliance side without assistance.

● **The Tower**

- The tower has 8 points.
  - Each goal reduces it by 1, and once it's 0 it is weakened.
  - Robots are considered challenging the tower if they are fully supported by it at the end of the match.
  - Robots are considered scaled if they are contacting the rung and their bumpers are above the low goal.

**Match Logistics**


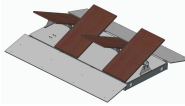
● **When a Drive Team loads their Robot**

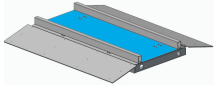
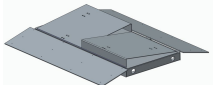

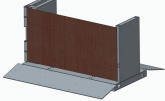
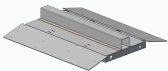
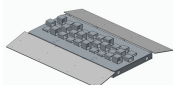
- preload of 1 ball in or on the robot
- or transfer boulder to a human player in their castle

● **When a ball leaves the field**

- over guardrail- placed back into field at point of exit by field stewards
- over castle wall- returned to courtyard at the corner of guardrail and castle by field stewards
- through the castle and holes in human player station- belong to alliance

**Match Defenses**

<p>Category A</p>	 <p>The Portcullis is an arched gateway with a door (5" gap opening at the bottom) that opens when lifted up.</p>	 <p>The Cheval de Frise is a series of four (4) independently tilting, weighted HDPE platforms. When flipped up, it is 9.625" tall (from the top of the platform).</p>
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Category B	 <p>The Moat is a deep u-shaped channel, formed by vertical rectangular steel tubes (2.5" tall)</p>	 <p>The Ramparts are two static, steel ramps, side by side, facing opposite directions. Height is 3.1" tall.</p>
Category C	 <p>The Drawbridge is an arched gateway with a door (37.25" tall) that lowers (flips) toward the NEUTRAL ZONE.</p>	 <p>The Sally Port is a door (25" tall) that can only swing clockwise toward the NEUTRAL ZONE. (opens on the right when viewed from the Neutral Zone).</p>
Category D	 <p>The Rock Wall is a steel block 4.5" tall</p>	 <p>The Rough Terrain is constructed from thirty (31) pieces of square or rectangular steel tubing varying 1", 2", to 3" height</p>
Position 1	Low bar is 1' 4" tall and 3' 10" wide; robots cannot traverse over the low bar.	

### Ranking Info

- Each team on a winning alliance receives 2 Ranking Points
- Each team on a losing alliance receives 0 Ranking points
- Each team in a tied game receives 1 Ranking point
- Each team on the alliance that Captures a Tower receives 1 Ranking Point (25 points during Playoffs)
- Each team on the alliance that Breaches the Outer Works receives 1 Ranking Point (20 points during Playoffs)

### Match Scoring

Action	AUTO	TELEOP	Qual.	Playoff
REACHING a DEFENSE	2	-	-	-
CROSSING an UNDAMAGED DEFENSE	10	5	-	-
BOULDER in Low TOWER GOAL	5	2	-	-
BOULDER in High TOWER GOAL	10	5	-	-
CHALLENGE (per ROBOT)	-	5	-	-
SCALE (per ROBOT)	-	15	-	-
BREACH	-	-	1 RP	20
CAPTURE	-	-	1 RP	25

Action	Penalty
<b>FOUL</b>	5 points credited towards the opponent's total score.
<b>TECH FOUL</b>	FOUL + STRENGTH of opponent's TOWER is increased by one (1)
<b>YELLOW CARD</b>	A warning issued by the Head REFEREE for egregious ROBOT or <i>FIRST</i> Robotics Competition Team member behavior or repeated rule violations. A subsequent YELLOW CARD within the same tournament phase will lead to a RED CARD.
<b>RED CARD</b>	A penalty assessed for egregious ROBOT or <i>FIRST</i> Robotics Competition Team member behavior, or repeated rule violations, which results in a Team being DISQUALIFIED for the MATCH.
<b>DISABLED</b>	ROBOT will be commanded to deactivate all outputs, rendering the ROBOT inoperable for the remainder of the MATCH.

#### Rules:

- G7- when placed on the field for a match, each robot must:
  - pass inspection and follow robot rules
  - not be in contact with a boulder on midline
  - be only item left on field by drive team
  - be confined to its starting configs
- G8- drive teams can't cause major delays
- G9-Drive team must be in castle behind the starting line prior to start of match with exception of spy
- G12-Prohibited actions with regards to Arena interactions
  - grabbing, grasping, attaching to, grappling, hanging, becoming entangled, and damaging
- G13- During auto, robots can't enter volume above midline
- G15- During Auto, Drive team can't touch anything in front of the Starting line
- G17- Robot cannot exceed 4ft 6in tall except during the final 20 seconds of teleop where there is no height limit
- G18-Robots can't extend more than 15in beyond frame perimeter
- G20-Robots can only enter or exit their opponents Secret Passage from/to the opponent's courtyard.
- G21-A robot contacting carpet in the opponent's Secret Passage may not contact opposing Robots
- G22- No pinning more than 5 seconds
- G23- Fallen robots have 10 seconds of grace period
- G24- No attaching, damaging, tipping, or entangling other Bots
- G25-A robot cannot
  - intentionally tip over

- coordinate a blockade of the field
- through one of the holes in the human player station
- G26- only 1 robot may contact the carpet or batter inside their courtyard
- G27- Bot may not transfer balls from neutral zone to opponents secret passage
- G28- During final 20 seconds, robots in their courtyard may not contact an opponent robot; otherwise the opponent robot is considered to have scaled the tower [15 pts].
- G33-balls may only be introduced
  - during teleop
  - by driver or human player
- G34-No more than 6 balls may be in the castle. Excess balls must be introduced to field immediately
- G38-Robots may not control more than 1 ball at any time
- G39-Robots can't launch boulders unless they touch opponent's courtyard carpet or tower
- G40-A robot may not cause a boulder to move from neutral zone into the opponent's courtyard unless:
  - the robot contacts the bolder within outer works and
  - the robot completes its crossing
- G41-During a crossing, robot may not cause more than 1 ball to move from neutral zone into opponent's courtyard
- G42-Robots may not intentionally eject balls from field other than through the goals
- G43-Defense rule: Robots on the same half of the field as their alliance tower may not interfere with opponent robots attempting to traverse outer works (regardless of direction)

#### General Robot Design:

- R3- frame perimeter
  - must not exceed 120"
  - robot cannot extend more than 15" beyond the frame perimeter
  - starting configuration must be less than 4' 6" tall
  - robot can be any height during the final 20 seconds of teleop
- R5 - robot must not exceed 120 lb (excluding bumpers and battery)
- R20 - bumpers have a max weight limit of 20 lb
- R21 - bumpers are 5" tall

- R22 - bumpers must be contained between 4" to 12" from the ground.  
It does not need to be parallel
- R29 - maximum of 6 CIM motors; no max limit on smaller motors

Please see the full game manual for complete game specifics.