

Recycle Rush Rules

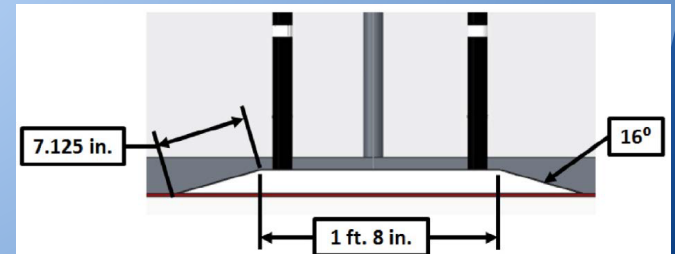
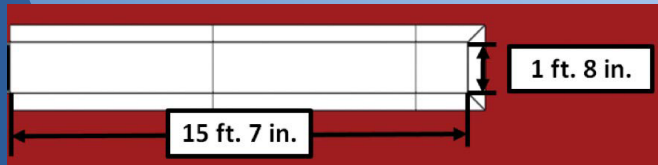
Team 4203 - RoboKronos
Presentation by Boru Jerry Li

The Arena

Section 2

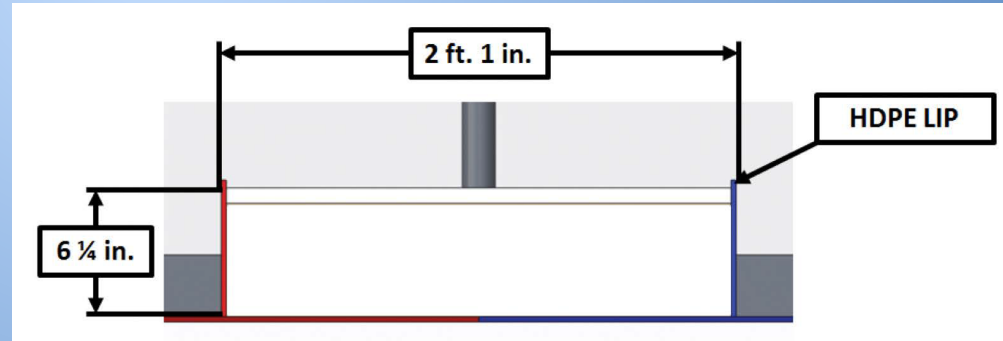
2.1.3 Field - Scoring Platform

- Scoring Platform
20" wide; 2" tall; 15' 7" long
- Backstop adjacent to scoring platform
6' 6"



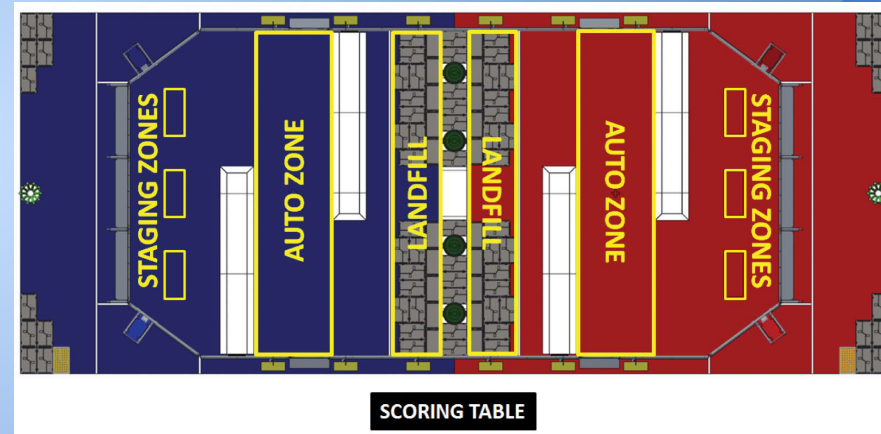
2.1.4 Field - Step

- Wooden Platform in middle of field
6.25" tall; 2' 1" wide
- .5" tall lip



2.1.5 Field - Zones

- Auto Zone
6' 6" wide area
- Landfill Zone
4' 3" wide
- Staging Zone
4' long; 21" wide



2.1.6 Field - Landmark

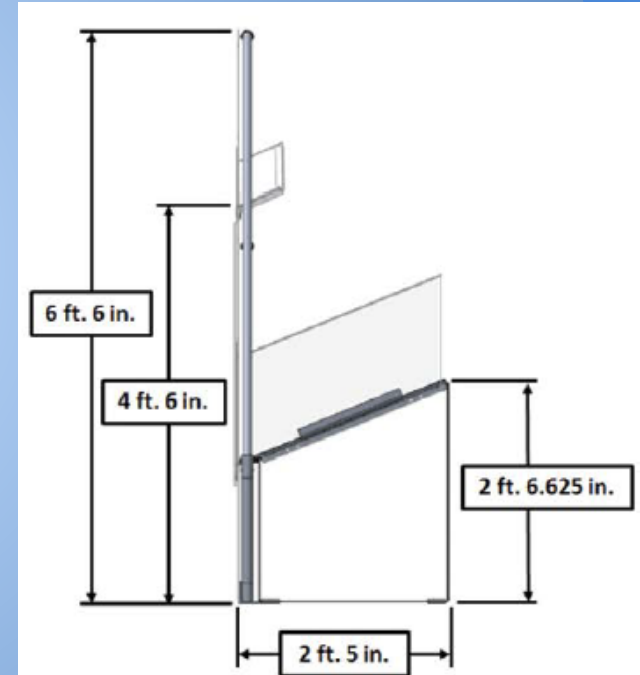
- 4 in x 4 in “+”

Marked by 2” gaffers tape of respective alliance color

- Reference point

2.2 Field - Player Station

- Tote Chute
2' 6.625" high player side
~19" high robot side
- Litter Chute
4' 6" high robot side



2.3 Game Elements - Totes

Yellow & Gray

26.9" x 16.9" x 12.1"

7.8 lbs

128 Gray Totes total

68 Gray Totes Field (20 upside down)**

60 Gray Totes behind Alliance Stations

6 Yellow Totes on Field

2.3 Game Elements - Containers

8.65 lbs

10 on Field - 3 on each alliance side, 4
on step

Handles facing player stations

2.3 Game Elements - Litter

Solid core pool noodle

4' 10" Length

2.6" Diameter

Unsuitable for gameplay: length
shortened / > 1.5" x 3" removal

The Game

Section 3

3.1.2.1 Scoring - Autonomous

Tote Set - 3 Yellow totes FULLY in Auto zone

Container Set - 3 recycling containers FULLY in Auto zone

3.1.2 Scoring - Autonomous Cont.

Stacked Tote Set - if ALL 3 yellow totes:

- Stacked on top of one another in single column
- Only bottom-most tote in Auto Zone
- Entire structure is fully in Auto Zone
- No Robot Contact

3.1.2 Scoring - Autonomous Cont.

Robot Set - Robots in Auto Zone

- FULLY contained by Auto Zone
- Robots that are playing**

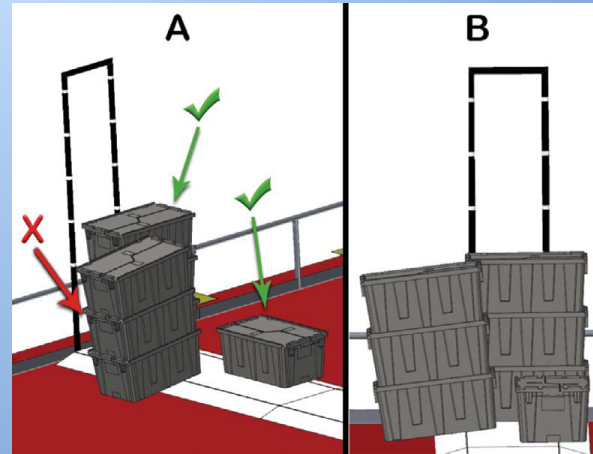
3.1.2.4 Scoring - Autonomous*

Action	Value
Robot Set	4
Tote Set	6
Container Set	8
Stacked Tote Set	20

3.1.2 Scoring - Teleop

Gray Totes:

- Fully supported on platform
- FREE from robotic contact - make clear **



3.1.2 Scoring - Teleop

Recycling Containers:

- FULLY Supported by SCORED gray totes
- Scored by lowest level **
- FREE from robotic contact

3.1.2 Scoring - Teleop

Litter (Method One):

- in or on SCORED recycling container
- Max of 1 Litter PER container

3.1.2 Scoring - Teleop

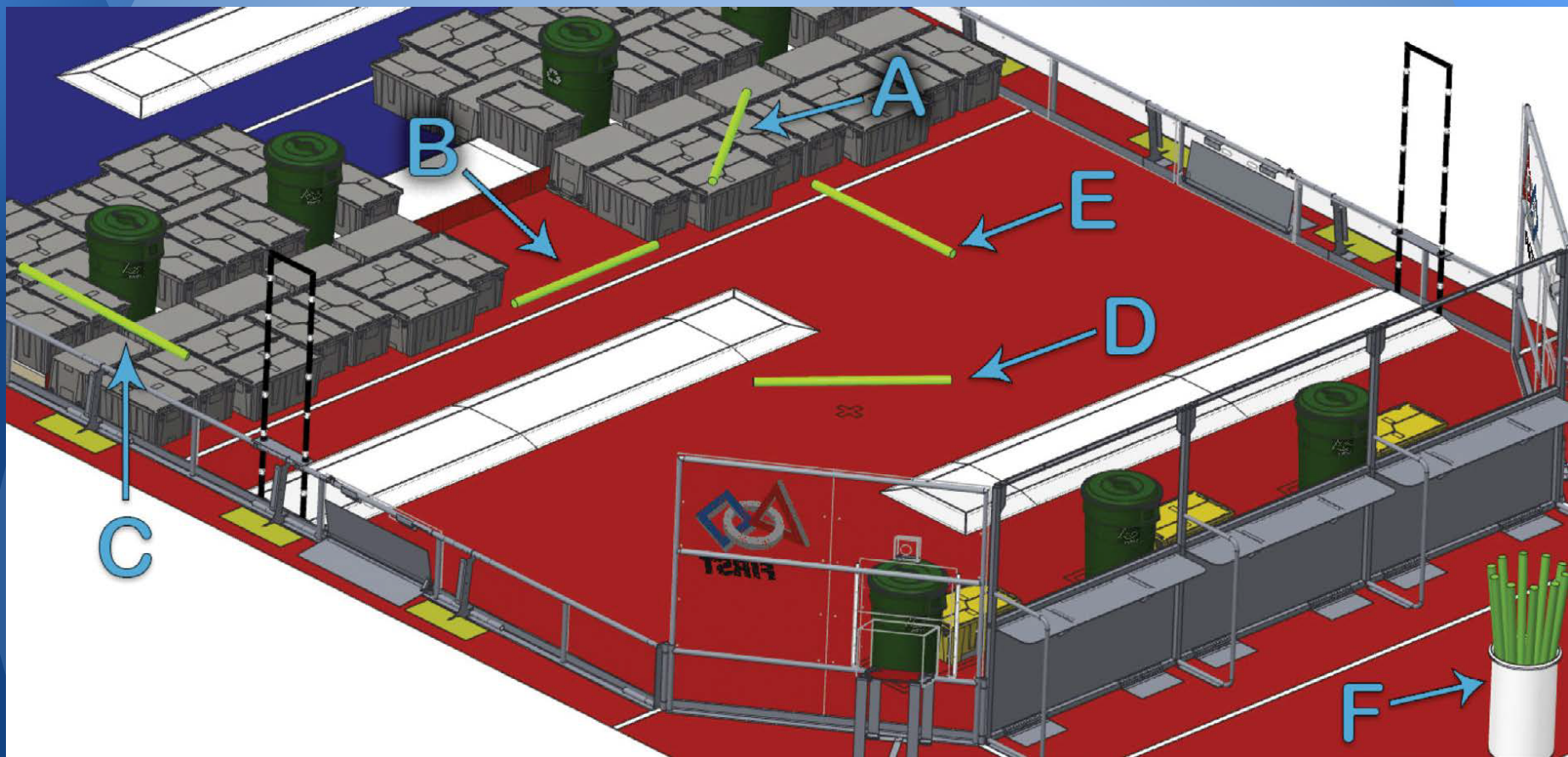
Litter (Method Two):

- In landfill
- must be FULLY within Landfill Zone
- Can be on totes

3.1.2 Scoring - Teleop

Litter (Method Three):

- Unprocessed Litter - UNWANTED
- FULLY contained by opposite side of field NOT scored in Landfill or Recycling



3.1.2.2 Scoring - Teleop

Co-opertition Set

- 4+ Yellow totes fully supported by step

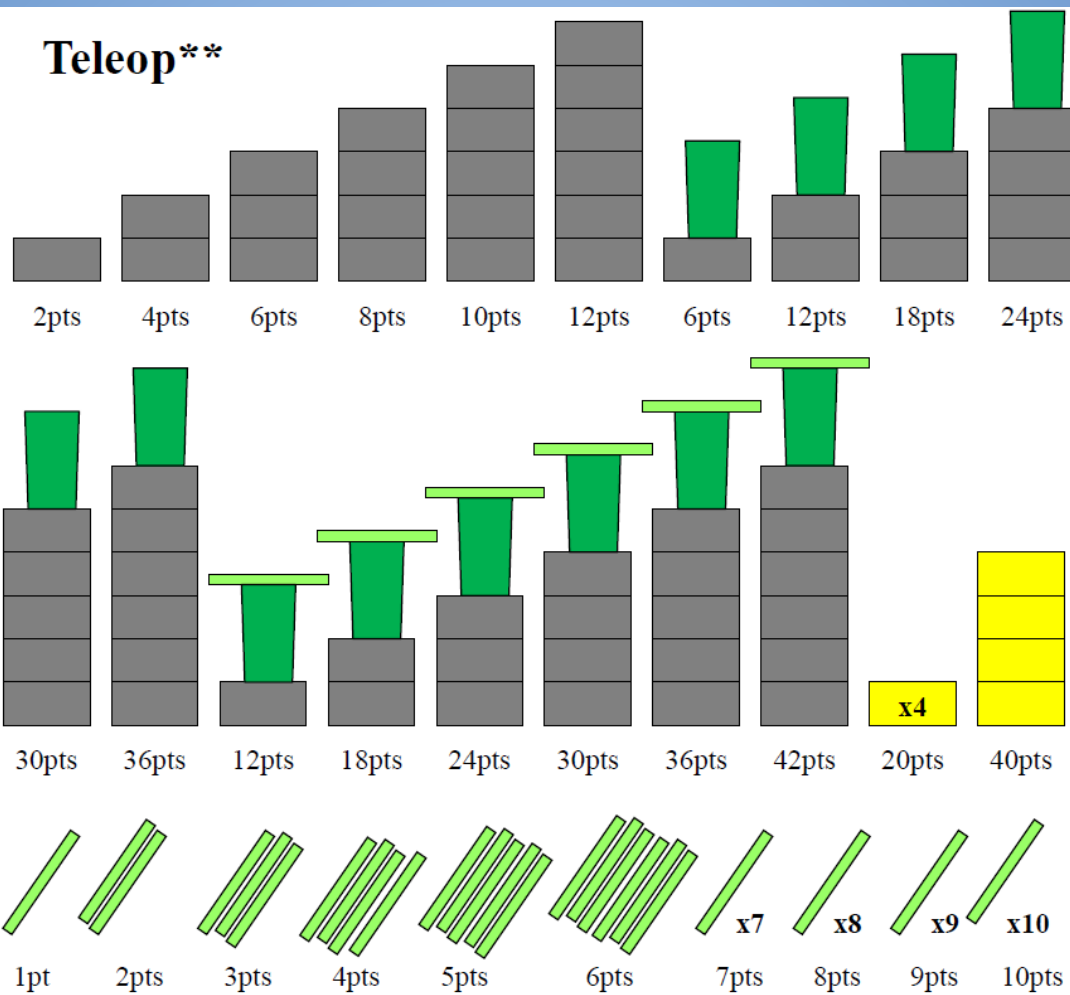
Co-opertition Stack

- Stacked on top of each other
- FULLY supported by step
- Free from robotic contact for 3 secs
- Instantaneous scoring / Only one

3.1.2.4 Scoring - Teleop*

Action	Value
Scored Gray Tote	2 / tote
Scored Recycling Container	4 / level
Litter in/on scored container	6 / container
Litter scored in Landfill	1 / litter
Unprocessed Litter	4 / litter (To other team)
Co-opertition Set	20 / alliance
Co-opertition Stack	40 / alliance

Teleop**



3.1.3 Penalty - Fouls

- Minimum points per team is 0
- Foul is -6 points from alliance score

3.1.4 Match Logistics

- Ejected game elements will remain out of play for remainder of match
- Damaged elements are replaced at next field reset
- Opt to remove yellow tote + place behind alliance station
- No field elements pre-loaded

3.2 Game Rules

G9 - Teams may bring hand tools to configure robot

G18 - Robots may NOT contact anything beyond step; if robot becomes stuck while extending beyond step, robot will NOT receive MULTIPLE fouls

3.2 Game Rules Cont.

G33 - Litter may be introduced during Teleop in the following ways:

- Through Litter Chute
- over alliance wall PRIOR to last 20 secs

The Robot

Section 4

4.2 General Robot Design

- Team Number **MUST** be visible; numerals at **LEAST** 3.5" high and .5" stroke width; Impact Font, size 362pt works
- Max height during competition: 78"
- Transport Config: 28" x 42" x 78"
- 120 lb limit; **INCLUDING** Bumpers
- Game elements quickly removed

The Tournament

Section 5

5.3.4 Qualification Seeding

1st Order	Qualification Avg**
2nd Order	Cumulative sum of Co-opertition pts
3rd Order	Cumulative sum of Auton pts
4th Order	Cumulative sum of scored container pts
5th Order	Cumulative sum of scored tote pts
6th Order	Sumulative sum of sum of litter pts
7th Order	Random

5.5.4 Yellow + Red Cards

- 2nd Yellow cards convert to RED card
- Yellow Cards carry through into subsequent matches
- Red card means Disqualification
- Yellow Cards cleared at conclusion of qualification matches

5.5.4 Yellow + Red Cards Cont.

- Red card in Playoff means ENTIRE alliance receives red card (0 pts)
- Red card in finals is a loss

5.4.3 Playoff Advancement

- Average of match points in each level of playoffs, truncated to 2 decimals
- QF: Alliances with 4 highest avg scores after 2 matches advance
- SF: Alliances with 2 highest avg scores after 3 matches advance

5.4.3 Playoff sorting

1st Order	Playoff Avg
2nd Order	Cumulative sum of Auton pts
3rd Order	Cumulative sum of container pts
4th Order	Cumulative sum of tote pts
5th Order	Cumulative sum of litter pts

Good Fun, Have luck!