Description: This is a Single Substation, designed so that teams can practice collecting game pieces from a Human Player.

FILES INCLUDED
In this compressed folder, you will find all of the drawings, CAD Files and STEP Files for this design.

Drawings: For your convenience, all drawing files have been exported to PDF Format. Each major field assembly will have both assembly drawings and component drawings.

CAD Files: All SOLIDWORKS files required to build or modify the assembly.

STEP files: STEP files of the assembly are included for the convenience of non-SOLIDWORKS users.

SHOPPING LIST

**Plywood and Lumber (Example Cut List is at end of Readme):**
- 2” x 4” x 8’ Lumber – 6 Pieces
- 4’ x 8’ x 1/8” Thick Hardboard – Less than 1/2 of a Sheet
- 4’ x 8’ x 1/4” Thick Plywood – Less than 1/4 of a Sheet
- 4’ x 8’ x 3/4” Thick Plywood – Less than 1/4 of a Sheet

**Hardware:**
- ¼-20 hex head bolt 2.5” long – 2 pieces
- ¼-20 hex head bolt 3.5” long – 18 pieces
- ¼-20 nylock – 20 pieces

OR
- #8 Wood Screws x 1.5” long – Approximately 10 Pieces
- #8 Wood Screws x 3” long – Approximately 60 Pieces

**NOTE ON HARDWARE:** All nuts and bolts can be replaced with approximately 70 #8 wood screws. The design uses nuts and bolts to allow itself to be broken down into a much smaller footprint for packing. If this is not a concern for your team, wood screws will make for a sturdier assembly.

**Other:**
- 1/4” polycarbonate – 23” x 23” (optional)
Notes about materials:

- Plywood and Hardboard Sheets – quality of plywood is up to the user. Plywood of lower qualities may contain voids and may warp more than high quality plywood. All dimensions listed are “nominal”. For example, ⅝” plywood is typically 15/32”.
- Lumber - quality of lumber is up to the user. Please keep in mind that lumber of lower qualities may warp more than high quality lumber. All dimensions below are the “mill cut” dimensions. For example, 2” x 4” lumber is really 1½” x 3½”.

Example Cut List (All units are Inches):

2x4 Lumber:
1/8” Hardboard:

¾” Plywood:
TE-23107 is of quantity 1 and dimensionally 24.5” x 32.625”.

¾” Plywood:
TE-23113 is of quantity 1 and dimensionally 24.75” x 20”.

¼” Polycarbonate:
TE-23118 is of quantity 1 and dimensionally 23” x 23” (optional)