Students please affix one of the self adhesive labels from your sheet of identification labels to this page. Make sure the edges of the label are within the boundaries of this box and that the affixed label does not obscure any other parts of this page. If you do not have a self adhesive identification label complete the following information. **Your Name:** _____ ***Write your name as it appears on your name badge.*** **Your Participant Code:** ***Write your participant code as it appears on your name badge.***	**Students: Please do not write or mark within this box.** **Skill Activity Score:** **Judge's Initials: _____**

2023 NATIONAL FFA AGRICULTURAL TECHNOLOGY AND MECHANICAL SYSTEMS CAREER DEVELOPMENT EVENT STRUCTURAL SYSTEMS

Please read and follow directions carefully! Use your time wisely!

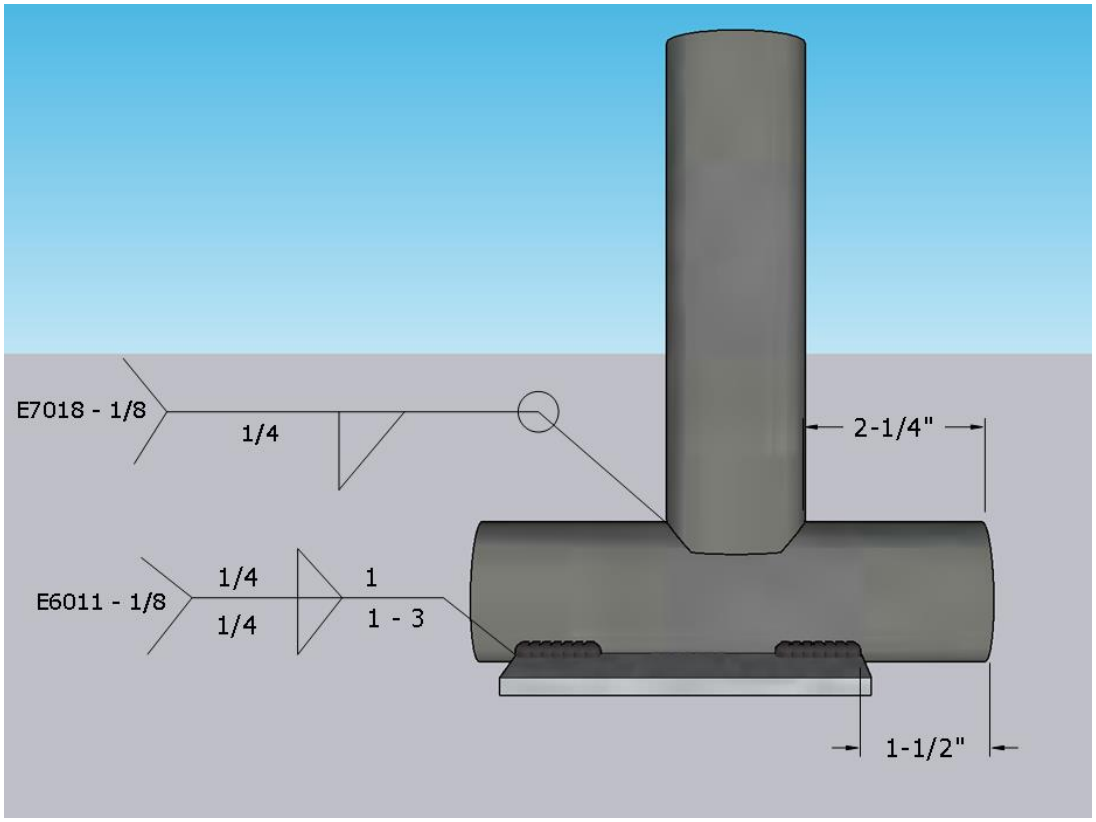
GENERAL INFORMATION / DIRECTIONS:
Assume you are fabricating a piece of agricultural equipment. During fabrication, you must weld pipe to pipe (saddle joint), weld pipe to plate, and layout for two mounting holes. Your mounting plate must lay flat when placed on a flat surface. When welding, you will use SMAW. This exercise represents this requisite skill.

PROCEDURES:

1. Safety: Safety glasses must always be worn because you are working in a welding area. Contestants must wear a serviceable welding helmet with a shade ten (minimum) protective lens, gauntlet-style gloves, leather shoes/boots, and a welding shirt or jacket.
2. Follow the provided plans to assemble, weld, and lay out the required components using the shielded metal arc welding (SMAW) process. You will complete one fillet weld, a series of stitch welds, and layout two ½" mounting holes. Center the holes (x and y axis) on the mounting plate with a center-to-center distance of 2-1/2".
3. Properly mark your completed assembly and turn it into a contest official with this sheet.

Activity Score Sheet

Graded Items	Points	Score
1. **Correct assembly** (5)**, safety** (3) **and clean-up** (2)	10	
2. **Pipe to Pipe Saddle**—weld is complete with complete penetration; free of discontinuities, slag, porosity, or splatter and surface free of arc strikes.	5	
3. **Pipe to Plate Mounting Bracket**—good tie-in fusion, no undercutting or overlapping, weld metal tied to toe, free of undercut or overfill, correct size according to drawing, free of discontinuities, slag, porosity, or splatter and the surface is free of arc strikes.	5	
4. **Pressure test**—The completed component is free of leaks when pressurized to 10 psi.	5	
5. **Layout**—The layout marks are clearly center punched and in the correct location according to the instructions.	5	
TOTAL POINTS: (Double check point total and enter at top.)	30	


E7018 - 1/8
1/4
2-1/4"
E6011 - 1/8
1/4
1/4
1
1 - 3
1-1/2"