



**[ NEW JERSEY FFA**  
**CAREER AND LEADERSHIP DEVELOPMENT EVENTS**

# Safe Tractor Operations Event 2023

## Purpose

*The purpose of the New Jersey FFA Safe Tractor Operations Event is to provide an opportunity for students to exhibit safe tractor and equipment operation practices as well as showcase skills in tractor driving, equipment use and general knowledge, and to encourage experiential learning through use of practical skills and applied knowledge, and provide recognition for those who have demonstrated skills and competencies as a result of instruction in tractor equipment and safety.*

## Objectives

- To instill leadership and motivate learning in the classroom through development of student skills in cooperative learning, observation, analysis and communication.
- To develop and exercise competitive spirit.
- To create a foundation for career choices by building an awareness of opportunities within tractor and equipment safety.
- To advance knowledge in tractor and equipment use, maintenance and safety.
- To provide the opportunity to demonstrate proper use of tractors and equipment.

## Event Rules

**\*See the CDE rules section in the overall event handbook for additional rules.\***

- Two individuals per school/chapter may be entered as an official participant, unless otherwise outlined by the state FFA advisor and/or state FFA specialist.
- The contest will consist of five parts, each of which will be scored separately.
- Participants shall wear proper attire – boots, work clothes, long pants, and a shirt with sleeves (not cut-off). Gloves can be worn if desired.
- Tractors and equipment will be provided for the event. All participants will use the same tractor and piece of equipment for each event.
- Situations occurring that are not covered in the rules will be decided by the judges.
- The participant with the lowest total deductions will be the winner.
- All participants must submit a signed waiver at least one-week prior to the event. Waivers will not be accepted on site.

## Event Format

This event will be broken down into five parts: a written exam, a two-wheeled manure spreader event, a four-wheel trailer event, tractor loader event, and a skid-steer event.

### WRITTEN EXAM – PART I

1. The written exam will include fifty (50) questions involving but not limited to skill, safe operation and operator maintenance of tractors, skid-loaders and other equipment.
2. These questions will include true-false, completion and/or multiple-choice questions.

### OPERATING SKILLS EVENTS

The next four events will test the skill and ability of the participant to operate skid-steers, tractors and other equipment safely.

Part II – Two Wheel Manure Spreader Event

Part III – 4-Wheel Wagon Event

Part IV – Tractor Loader Event

Part V – Skid-Steer Event

1. Each participant will start off with a visual inspection of skid-steer, tractors and equipment. Judges will expect a verbal response.
2. The participant will follow the course outlined by the judge (see attached illustrations).
3. Time starts on a signal from the judges and stops when the participant returns to original point.
4. The participant will be allowed a maximum of ten (10) minutes for each event. Less time used equals less deductions. The participant will be notified at eight (8) minutes that two (2) minutes are left. If the participant does not finish the event in ten (10) minutes, the judge will stop the participant and an additional 500-point deduction will be added to their score.
5. Excessive tractor brake steering will disqualify the participant from the event.
6. Participants may be disqualified if they are observed not following safety standards, which may endanger themselves, the judges, or the public.
7. See attached scorecards for deductions.
8. The Tractor Loader event will involve loading two buckets of mulch and dumping.
9. The Ski-Steer event will use pallet forks to move loaded pallets around a course. One pallet will have four five-gallon buckets of sand, while the other has a five-gallon bucket of water.
10. Pinning of the four-wheel wagon will be done by the operator.

**\*Participants will be stopped by the judge waving a red flag if it is felt that the participant is not in full control of the skid-loader or tractor, and safety of the operator and judges are jeopardized. Participants will receive an additional 500 point deduction.**

## Awards

Awards will be presented following the event to individuals based upon their rankings in the event. A state sponsored banner will be awarded to the first place individual. Medals (gold, silver, and bronze) will be awarded to the top three individuals in the overall event. H.O. Sampson Certificates (1<sup>st</sup> – 5<sup>th</sup>) will be awarded to the top five individuals in the hands-on practicum areas only. Awards are sponsored by the New Jersey FFA Foundation, New Jersey FFA Association, and/or the National FFA Organization.

The first place individual will represent New Jersey at the Eastern States Exposition (Big E) in September.

### Individual

- Overall Medals
  - Medals – Top three individuals in overall event
- H.O. Sampson Certificates (hands-on sections ONLY)
  - Certificate – Top five individuals
- 1<sup>st</sup> Place individual – Banner Sponsored by the New Jersey FFA Association

## References

*This list of references is not intended to be all inclusive.*

Other sources may be utilized, and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation:

- Safe Operations of Agricultural Equipment – Student Manual: Hobar Publications

## Common Core & State Core Curriculum Content Standards

Through Food, Agriculture and Natural Resources Education, FFA helps students meet the Common Core Standards and State Core Curriculum Content Standards. The Safe Tractor Operations Event helps students meet 21<sup>st</sup> Century Life and Careers – Career & Technical Education skills. Examples of how the Safe Tractor Operations Event is meeting these standards are:

**Students will: operate and maintain AFNR mechanical equipment and power systems.**

- Pathway: Power, Structural & Technical Systems (AG-PST) [9.3.12.AG-PST.2]



# Two Wheeled Manure Spreader Score Sheet

NAME \_\_\_\_\_

CHAPTER \_\_\_\_\_

	# of times	Value per time	Total
<b>TRACTOR SAFETY RESPONSE (verbal response to judges)</b>			
<i>after walk-around and starting tractor</i>			
Check Fuel and oil gauge		x10	
Check Breaks – depress brake pedal with engine running, tractor in gear		x10	
Check Tires – by sight only		x10	
Check Hazards – dirt, grease, tools, improper attachments, etc.		x10	
Check Safety Belts		x10	
Check ROPS		x25	
<b>STARTING</b>			
Transmission not in Neutral/Park		x25	
Brakes not set		x25	
Clutch not disengaged		x15	
<b>OBSTACLE COURSE</b>			
For each time tractor or manure spreader touches obstacles or lines		x50	
For each time tractor or manure spreader knocks down obstacles or crosses lines		x100	
For each unnecessary change of direction (forward or backward)		x50	
Going out the wrong gate		x200	
<b>BACKING MANURE SPREADER INTO THE ALLEY</b>			
Number of inches over three (3) inches from the back of the stall		x10	
Number of inches off center in the front		x10	
Number of inches off center in the rear		x10	
For each time tractor or manure spreader touches obstacles or lines		x50	
For each time tractor or manure spreader knocks down obstacles or crosses lines		x100	
For each unnecessary change of direction (forward or backward)		x50	
<b>JUDGES OBSERVE AT ALL TIMES DURING ABOVE OPERATIONS</b>			
Improper mount/dismount		x50	
Failure to use seatbelt		x25	
Failure to set brakes when getting off/or put in Park		x50	
Sliding or spinning tires, brake steering		x100	
Rough clutch engagement		x25	
Clashing of gears when shifting		x25	
Excessive engine speed		x25	
Excessive tractor speed		x50	
Standing while tractor is moving		x100	
Moving tractor with brakes on		x25	
Failure to put in gear or park when getting off with engine stopped		x50	
Riding the clutch		x25	
Any unsafe conduct while on or around tractor		x25	
Fouling equipment (touching equipment with tractor wheel)		x50	
Rubbing hard		x75	

Subtotal of deductions	
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If the participant does not finish within the ten-minute time period, they will be given an additional 500-point deduction.

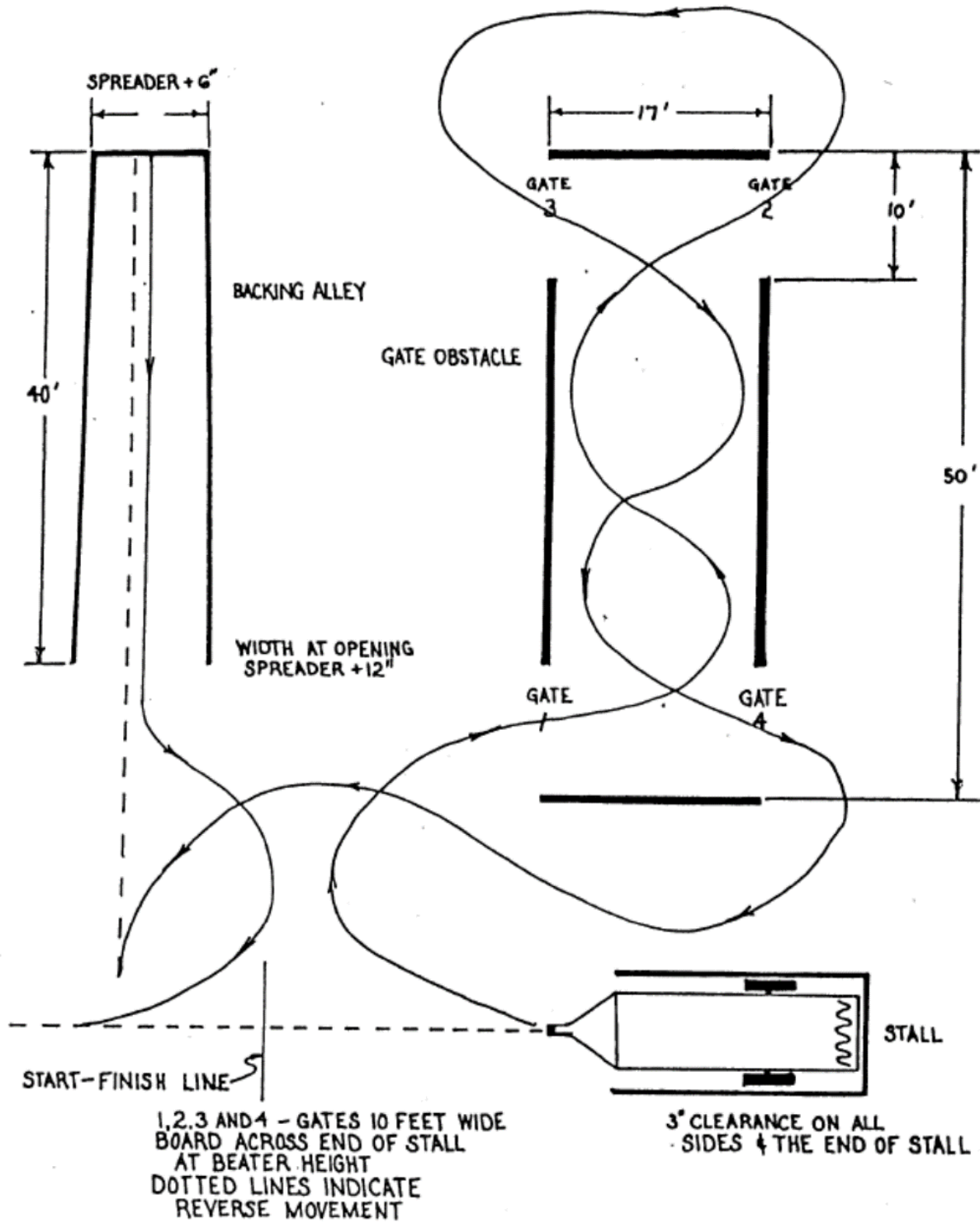
TIME: \_\_\_\_\_ DEDUCTIONS: \_\_\_\_\_ + SUBTOTAL OF DEDUCTIONS: \_\_\_\_\_ = TOTAL: \_\_\_\_\_

Judges Initials: \_\_\_\_\_



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# Two Wheeled Manure Spreader Course Layout





# Four Wheel Trailer Score Sheet

NAME \_\_\_\_\_

CHAPTER \_\_\_\_\_

	# of times	Value per time	Total
<b>TRACTOR SAFETY RESPONSE (verbal response to judges)</b> <i>after walk-around and starting tractor</i>			
Check Fuel and oil gauge		x10	
Check Breaks – depress brake pedal with engine running, tractor in gear		x10	
Check Tires – by sight only		x10	
Check Hazards – dirt, grease, tools, improper attachments, etc.		x10	
Check Safety Belts		x10	
Check ROPS		x25	
<b>STARTING</b>			
Transmission not in Neutral/Park		x25	
Brakes not set		x25	
Clutch not disengaged		x15	
<b>HITCHING TRACTOR TO FOUR WHEEL WAGON</b>			
Failure to put transmission in neutral or park		x50	
Failure to set brakes		x50	
For each inch over one (1) the wagon is moved		x25	
<b>TRAILER HANDLING</b>			
For touching line or obstacle		x50	
For crossing or knocking down obstacles		x100	
For each unnecessary change of direction (forward or backward)		x50	
For fouling equipment (touching trailer tongue w/ tractor tire), sliding trailer wheels sideways		x50	
<b>TRAILER PLACEMENT IN SHED</b>			
For each inch off center at the front of the trailer		x10	
For each inch off center at the rear of the trailer		x10	
For each inch off from rear of stall over three (3) inches		x10	
Failing to put trailer in shed/barn		x300	
<b>PARKING TRACTOR AT FINISH LINE</b>			
Failure to set breaks		x50	
Failure to place transmission in gear or park		x50	
Failure to reduce throttle		x10	
Failure to return tractor to start/finish line		x50	
<b>JUDGES OBSERVE AT ALL TIMES DURING ABOVE OPERATIONS</b>			
Improper mount/dismount		x50	
Failure to use seatbelt		x25	
Failure to set brakes when getting off/or put in Park		x50	
Sliding or spinning tires, brake steering		x100	
Rough clutch engagement		x25	
Clashing of gears when shifting		x25	
Excessive engine speed		x25	
Excessive tractor speed		x50	
Standing while tractor is moving		x100	
Moving tractor with brakes on		x25	
Failure to put in gear or park when getting off with engine stopped		x50	
Riding the clutch		x25	
Any unsafe conduct while on or around tractor		x25	
Fouling equipment (touching equipment with tractor wheel)		x50	
Rubbing hard		x75	

Subtotal of deductions	
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If the participant does not finish within the ten-minute time period, they will be given an additional 500-point deduction.

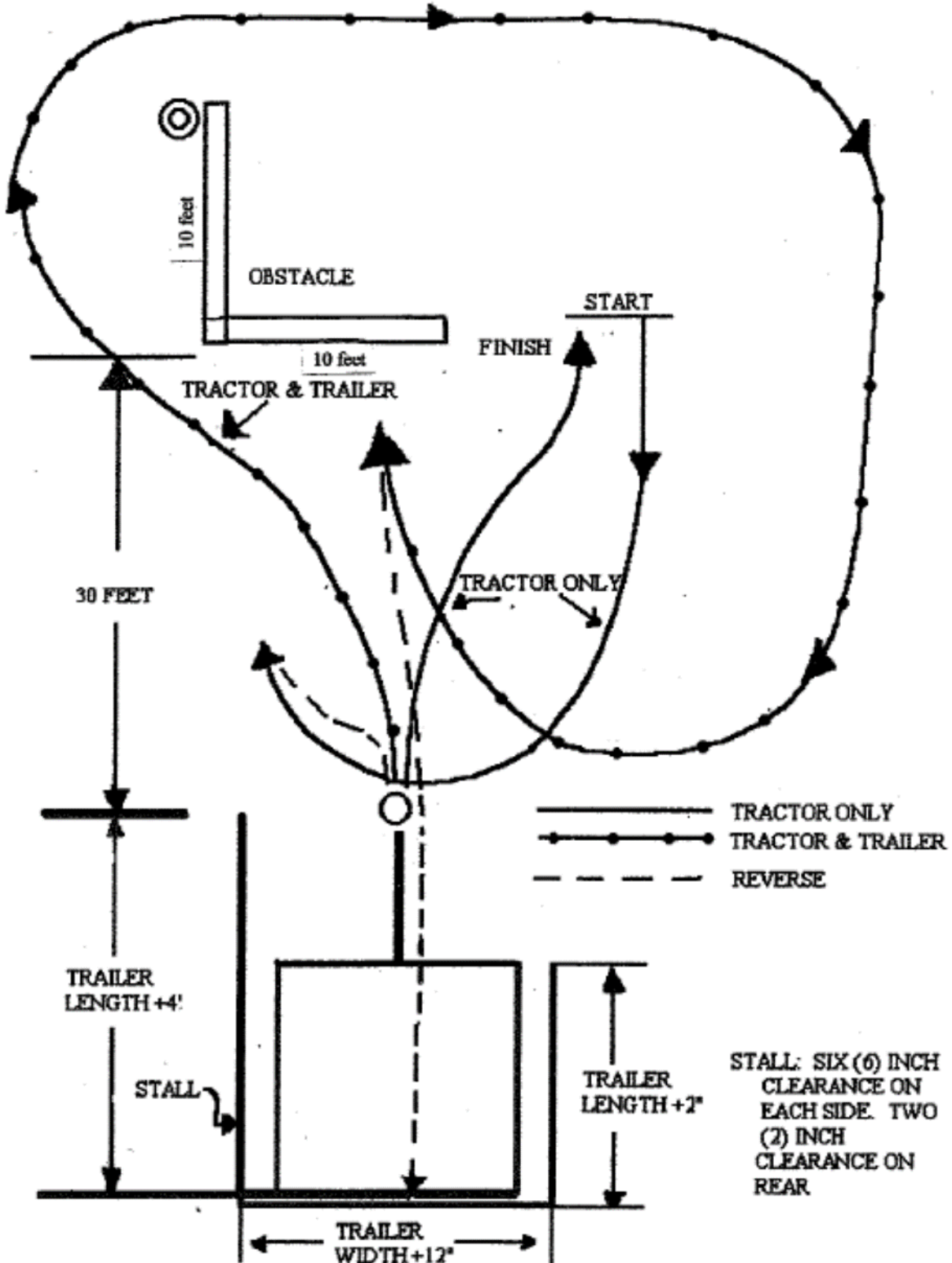
TIME: \_\_\_\_\_ DEDUCTIONS: \_\_\_\_\_ + SUBTOTAL OF DEDUCTIONS: \_\_\_\_\_ = TOTAL: \_\_\_\_\_

Judges Initials: \_\_\_\_\_



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# Four Wheel Trailer Course Layout







# Tractor Loading Score

NAME \_\_\_\_\_

CHAPTER \_\_\_\_\_

	# of times	Value per time	Total
<b>TRACTOR SAFETY RESPONSE (verbal response to judges)</b> <i>after walk-around and starting tractor</i>			
Check Fuel and oil gauge		x10	
Check Breaks – depress brake pedal with engine running, tractor in gear		x10	
Check Tires – by sight only		x10	
Check Hazards – dirt, grease, tools, improper attachments, etc.		x10	
Check Safety Belts		x10	
Check ROPS		x25	
<b>STARTING</b>			
Transmission not in Neutral/Park		x25	
Brakes not set		x25	
Clutch not disengaged		x15	
<b>LOADING</b>			
For touching line or obstacle (with tractor or loader)		x50	
For crossing or knocking down obstacles		x100	
For each unnecessary change of direction (forward or backward)		x50	
Traveling with loader too high		x50	
Excessive speed going into pile		x50	
Moving load barrier		x50	
Improper use of bucket while loading		x50	
Not a full bucket of material		x25	
Failure to follow course directions		x50	
<b>DUMPING LOAD</b>			
Carrying load at unsafe height		x100	
Unsafe speed approaching dumping area		x50	
Hitting or damaging dumping barrier		x100	
Bucket not completely empty		x25	
<b>PARKING TRACTOR AT FINISH LINE</b>			
Failure to set breaks/reduce throttle		x50	
Failure to place transmission in gear or park		x50	
Bucket not completely down		x50	
Failure to use hand/foot holes mounting and dismounting		x50	
Failure to have bucket behind the finish line		x10	
<b>JUDGES OBSERVE AT ALL TIMES DURING ABOVE OPERATIONS</b>			
Improper mount/dismount		x50	
Failure to use seatbelt		x25	
Failure to set brakes when getting off/or put in Park		x50	
Sliding or spinning tires, brake steering		x100	
Rough clutch engagement		x25	
Clashing of gears when shifting		x25	
Excessive engine speed		x25	
Excessive tractor speed		x50	
Standing while tractor is moving		x100	
Moving tractor with brakes on		x25	
Failure to put in gear or park when getting off with engine stopped		x50	
Riding the clutch		x25	
Any unsafe conduct while on or around tractor		x25	
Fouling equipment (touching equipment with tractor wheel)		x50	
Rubbing hard		x75	
Subtotal of deductions			

If the participant does not finish within the ten-minute time period, they will be given an additional 500-point deduction.

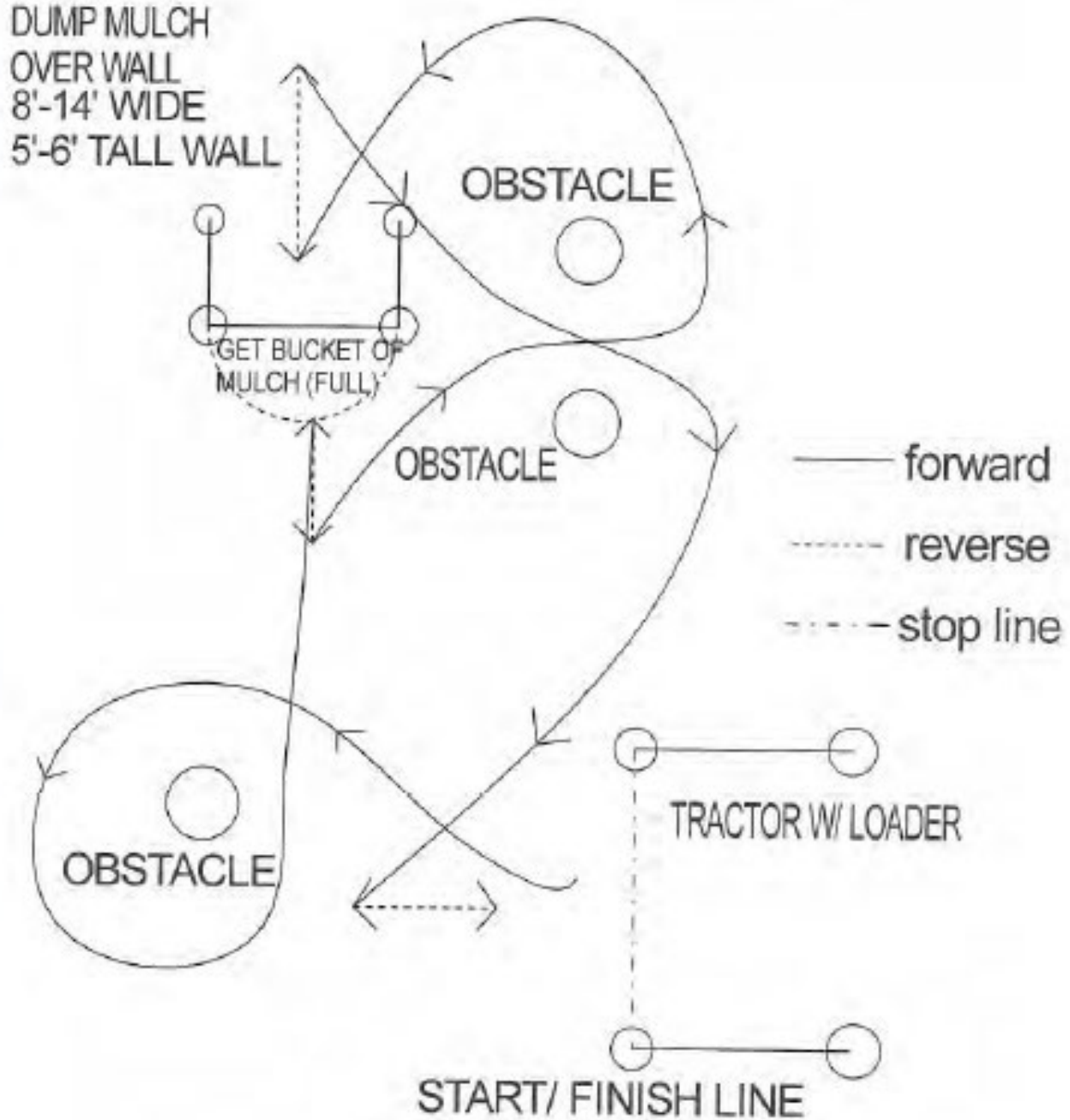
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Judges Initials: \_\_\_\_\_



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# Tractor Loading Course





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# Skid-Steer Score Sheet

NAME \_\_\_\_\_

CHAPTER \_\_\_\_\_

Action	# of times	Value per time	Total
<b>TRACTOR SAFETY RESPONSE (verbal response to judges) after walk-around and starting tractor</b>			
Check Fuel and oil gauge		x10	
Check Breaks – depress brake pedal with engine running, tractor in gear		x10	
Check Tires – by sight only		x10	
Check Hazards – dirt, grease, tools, improper attachments, etc.		x10	
Check Safety Belts		x10	
Check ROPS		x25	
<b>STARTING</b>			
Improper mount/dismount		x50	
Seat belts or safety harness not on		x50	
Throttle set too high		x25	
Starts course with the parking break on		x50	

\*Participants will be stopped by the judge waving a red flag if it is felt that the participant is not in full control of the skid-steer and safety of the operator and judge(s) are jeopardized. Participants will receive an additional 500 point deduction.

<b>LOADING</b>			
For touching line or obstacle (with skid-steer or forks)		x50	
For crossing or knocking down obstacles		x100	
For each unnecessary change of direction (forward or backward)		x50	
Traveling with forks too high		x50	
Excessive speed going into pallets		x50	
Moving pallets (more than four inches)		x50	
Improper use of forks while loading		x50	
<b>NAVIGATING COURSE</b>			
Excessive water loss from bucket (more than 3 inches)		X50	
Tipping bucket of water off pallet *Operator must return to bucket station to get new, full bucket		X300	
Carrying load at unsafe height		X50	
Pallet #1 not squarely on pallet #2		X25	
Excessive speed over obstacle		X50	
Excessive bucking on turns and going over obstacle		X50	
Pallets not squarely on platform		X25	
Unsafe speed approaching platform		X50	
<b>PARKING SKID-STEER AT FINISH LINE</b>			
Failure to reduce throttle		x10	
Forks not completely down		x50	
Failure to shut off skid-steer (set parking brake when exiting the machine)		X100	
<b>JUDGES OBSERVE AT ALL TIMES DURING ABOVE OPERATIONS</b>			
Failure to operate skid-steer safely		x100	
Excessive skid-steer speed		x50	

Subtotal of deductions

If the participant does not finish within the ten-minute time period, they will be given an additional 500-point deduction.

TIME: \_\_\_\_\_ DEDUCTIONS: \_\_\_\_\_ + SUBTOTAL OF DEDUCTIONS: \_\_\_\_\_ = TOTAL: \_\_\_\_\_  
Judges Initials: \_\_\_\_\_



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# Skid-Steer Course Layout

