

New Jersey FFA Safe Tractor Operations Event

I. 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 through the agricultural education curriculum 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 and equipment use and safety.

II. Objectives

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

III. State Core Curriculum Content Standards (CCCS)

Through Agriculture, Food 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 21st Century Life and Careers – Career & Technical Education skills (9.3). Examples of how the Safe Tractor Operations Event is meeting these standards are:

Pathway: Power, Structural & Technical Systems (AG-PST)

9.3.12.AG-PST.2 – Operate and maintain AFNR mechanical equipment and power systems.

IV. Event Rules

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

- A. Two individuals per school/chapter may be entered as an official contestant.
- B. The contest will consist of five parts, each of which will be scored separately.
- C. Contestants shall wear proper attire – boots, work clothes, long pants, and a shirt with sleeves (not cut-off). Gloves can be worn, if desired.
- D. Tractors and equipment will be provided for each event. All contestants will use the same tractor and piece of equipment for each event.
- E. Situations occurring that are not covered in the rules will be decided by the judges.
- F. The contestant with the lowest total deductions will be the winner.
- G. All contestants MUST submit a signed waiver at least one-week prior to the event. Waivers will NOT be accepted on site.

V. Event Format

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

A. Written Test – Part I

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

B. Operating Skills Events

The next four events will test the skill and ability of the contestant to operate skid-loaders, tractors and 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 contestant will start off with a visual inspection of skid-loader, tractors and equipment. Judges will expect a verbal response.
2. The contestant will follow the course outlined by the judge (see attached illustrations).
3. Time starts on a signal from the judge and stops when the contestant returns to original point.
4. The contestant will be allowed a maximum of ten minutes for each event. Less time used equals less deductions. The contestant will be notified at eight minutes that two minutes are left. If the contestant does not finish the event in ten minutes, the judge will stop the contestant and an additional 500-point deduction will be added to their score.
5. Excessive tractor brake steering will disqualify the contestant from the event.
6. Contestants may be disqualified if they are observed not following safety standards, which may endanger themselves, the judges or the public.
7. See scorecard for deductions.
8. The Tractor Loader event will involve loading two buckets of mulch and dumping.
9. The Skid-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 4 wheel wagon will be done by the operator.

NOTE* CONTESTANTS WILL BE STOPPED BY THE JUDGE WAIVING A RED FLAG IF IT IS FELT THAT THE CONTESTANT IS NOT IN FULL CONTROL OF THE SKID-LOADER OR TRACTOR AND SAFETY OF THE OPERATOR AND JUDGES ARE JEOPARDIZED! CONTESTANTS WILL RECEIVE AN ADDITIONAL 500 POINT DEDUCTION!**

VI. 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, bronze) will be awarded to the top three individuals in the overall event. H.O. Sampson Certificates (1st – 5th) will be awarded to the top five individuals in the hands-on practicum areas only. Awards are sponsored by the New Jersey FFA Foundation, Inc., the New Jersey State FFA Association, and/or the National FFA Organization. The first place individual will represent New Jersey at the Big E in September.

X. 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 Operation of Agricultural Equipment - Student Manual: Hobar Publications

SCORE SHEET – Two Wheeled Manure Spreader Event

Name: _____

Chapter: _____

TRACTOR SAFETY RESPONSE (verbal response to judges)

DEDUCTIONS

After walk-around and starting tractor

Check fuel and oil gauge	_____X	10
Check brakes – depress brake pedal with engine running, tractor in gear	_____X	10
Check tires – by sight only	_____X	10
Check hazards – dirt, grease, tools, improper attachments, etc.	_____X	10
Check safety belts	_____X	10
Check ROPS	_____X	25

STARTING

Transmission not in Neutral/Park	_____X	25
Brakes not set	_____X	25
Clutch not disengaged	_____X	15

OBSTACLE COURSE

For each time tractor or manure spreader touches obstacles or lines	_____X	50
For each time tractor or manure spreader knocks down obstacles or crosses lines	_____X	100
For each unnecessary change of direction (forward or backward)	_____X	50
Going out the wrong gate	_____X	200

BACKING MANURE SPREADER INTO THE ALLEY

Number of inches over three (3) inches from the back of the stall	_____X	10
Number of inches off center in the front	_____X	10
Number of inches off center in the rear	_____X	10
For each time tractor or manure spreader touches obstacles or lines	_____X	50
For each time tractor or manure spreader knocks town obstacles or crosses lines	_____X	100
For each unnecessary change of direction (forward or backward)	_____X	50

JUDGES OBSERVE AT ALL TIMES DURING ABOVE OPERATIONS

Improper mount/dismount	_____X	50
Failure to use seat belt	_____X	25
Failure to set brakes when getting off/or put in Park	_____X	50
Sliding or spinning tires, brake steering	_____X	100
Rough clutch engagement	_____X	25
Clashing of gears when shifting	_____X	25
Excessive engine speed	_____X	25
Excessive tractor speed	_____X	50
Standing while tractor is moving	_____X	100
Moving tractor with brakes on	_____X	25
Failure to put in gear or park when getting off with engine stopped	_____X	50
Riding the clutch	_____X	25
Any unsafe conduct while on or around tractor	_____X	25
Fouling equipment (touching spreader w/tractor wheel)	_____X	50
Rubbing hard	_____X	75

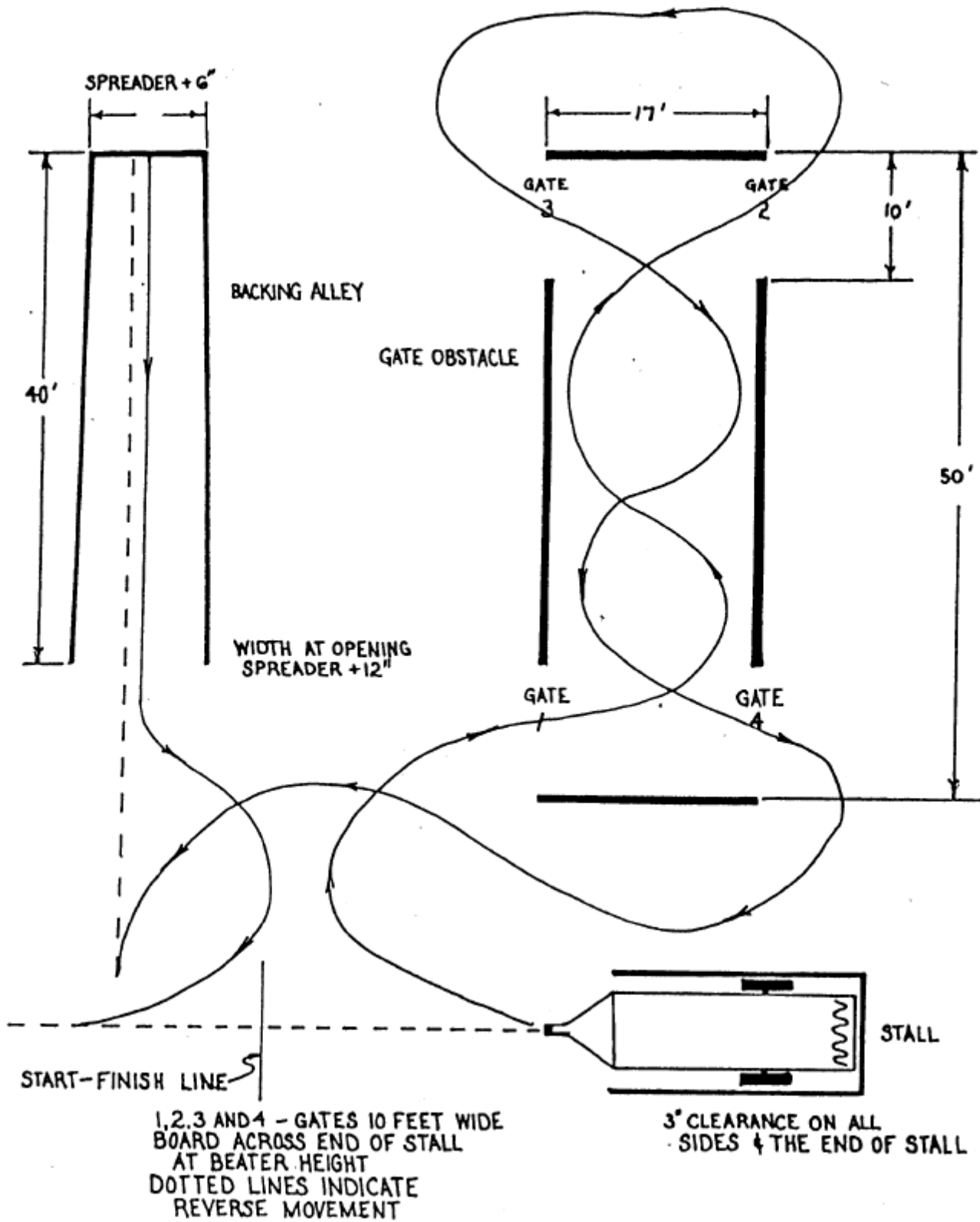
Subtotal of Deductions _____

If the contestant does not finish within the ten-minute time period, they will be given an additional 500-point deduction. Time deduction – convert minutes into seconds, add the remaining seconds. Divide the total seconds by 3. To this add the subtotal for deductions to get the final score of the contestant.

TIME _____ **DEDUCTIONS** _____ **+ SUB TOTAL** _____ **= TOTAL** _____

Scorer Initials: _____

COURSE LAYOUT - TWO WHEEL MANURE SPREADER EVENT



SCORE SHEET – Four Wheel Trailer Event

Name: _____

Chapter: _____

TRACTOR SAFETY RESPONSE (verbal response to judges)

DEDUCTIONS

After walk-around and starting tractor

Check fuel and oil gauge	_____X	10
Check brakes – depress brake pedal with engine running, tractor in gear	_____X	10
Check tires – by sight only	_____X	10
Check hazards – dirt, grease, tools, improper attachments, etc.	_____X	10
Check safety belts	_____X	10
Check ROPS	_____X	25

STARTING

Transmission not in Neutral/Park	_____X	25
Brakes not set	_____X	25
Clutch not disengaged	_____X	15

HITCHING TRACTOR TO FOUR WHEEL WAGON

Failure to put transmission in neutral or park	_____X	50
Failure to set brakes	_____X	50
For each inch over one (1) the wag on is moved	_____X	25

TRAILER HANDLING

For touching line or obstacle	_____X	50
For crossing or knocking down obstacles	_____X	100
For each unnecessary change of direction (forward or backwards)	_____X	50
For fouling equipment (touching trailer tongue with tractor tire), sliding trailer wheels sideways	_____X	50

TRAILER PLACEMENT IN SHED

For each inch off center at the front of the trailer	_____X	10
For each inch off center at the rear of trailer	_____X	10
For each inch off from rear of stall over three (3) inches	_____X	10
Failing to put trailer in shed/barn	_____X	300

PARKING TRACTOR AT FINISH LINE

Failure to set brakes		50
Failure to place transmission in gear or park		50
Failure to reduce throttle		10
Failure to return tractor to start/finish line		50

JUDGES OBSERVE AT ALL TIMES DURING ABOVE OPERATIONS

Improper mount/dismount	_____X	50
Failure to use seat belt	_____X	25
Failure to set brakes when getting off/or put in Park	_____X	50
Sliding or spinning tires, brake steering	_____X	100
Rough clutch engagement	_____X	25
Clashing of gears when shifting	_____X	25
Excessive engine speed	_____X	25
Excessive tractor speed	_____X	50
Standing while tractor is moving	_____X	100
Moving tractor with brakes on	_____X	25
Failure to put in gear or park when getting off with engine stopped	_____X	50
Riding the clutch	_____X	25
Any unsafe conduct while on or around tractor	_____X	25
Fouling equipment (touching spreader w/tractor wheel)	_____X	50
Rubbing hard	_____X	75

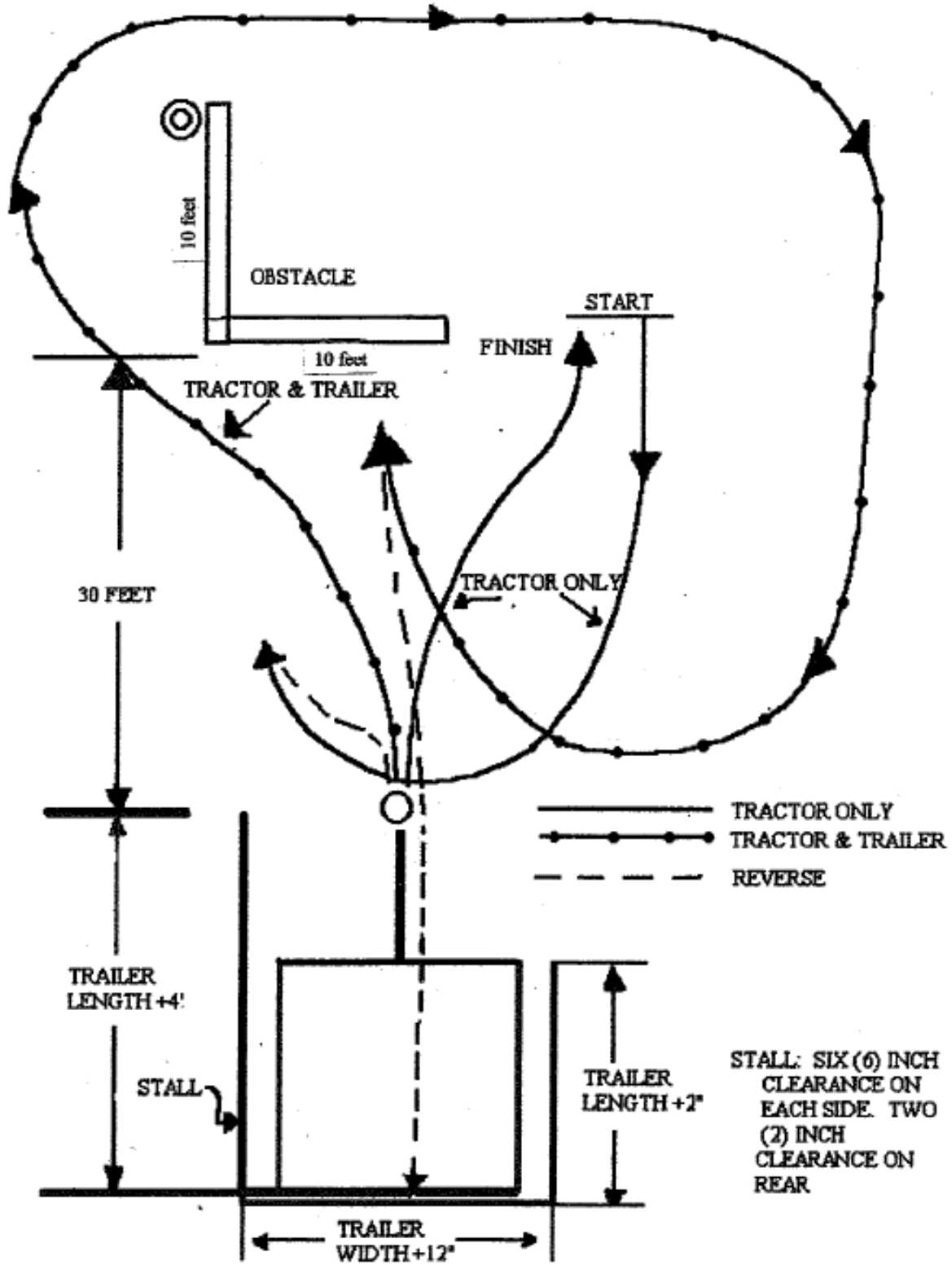
Subtotal of Deductions _____

If the contestant does not finish within the ten-minute time period, they will be given an additional 500-point deduction. Time deduction – convert minutes into seconds, add the remaining seconds. Divide the total seconds by 3. To this add the subtotal for deductions to get the final score of the contestant.

TIME _____ **DEDUCTIONS** _____ + **SUB TOTAL** _____ = **TOTAL** _____

Scorer Initials: _____

COURSE LAYOUT - FOUR WHEEL TRAILER EVENT



SCORE SHEET – Tractor Loading Event

Name: _____

Chapter: _____

TRACTOR SAFETY RESPONSE (verbal response to judges)

DEDUCTIONS

After walk-around and starting tractor

Check fuel and oil gauge	_____X	10
Check brakes – depress brake pedal with engine running, tractor in gear	_____X	10
Check tires – by sight only	_____X	10
Check hazards – dirt, grease, tools, improper attachments, etc.	_____X	10
Check safety belts	_____X	10
Check ROPS	_____X	25

STARTING

Transmission not in Neutral/Park	_____X	25
Brakes not set	_____X	25
Clutch not disengaged	_____X	15

LOADING

For touching line or obstacle (with tractor or loader)	_____X	50
For crossing or knocking down obstacles	_____X	100
For each unnecessary change of direction (forward or backwards)	_____X	50
Traveling with loader too high	_____X	50
Excessive speed going into pile	_____X	50
Moving load barrier	_____X	50
Improper use of bucket while loading	_____X	50
Not a full bucket of material	_____X	25
Failure to follow course directions	_____X	50

DUMPING LOAD

Carrying load at unsafe height	_____X	100
Unsafe speed approaching dumping area	_____X	50
Hitting or damaging dumping barrier	_____X	100
Bucket not completely empty	_____X	25

PARKING TRACTOR AT FINISH LINE

Failure to set brakes/reduce throttle	_____X	50
Failure to place transmission in gear or park	_____X	50
Bucket not completely down	_____X	50
Failure to use hand/foot holes mounting and dismounting	_____X	50
Failure to have bucket behind the finish line	_____X	10

JUDGES OBSERVE AT ALL TIMES DURING ABOVE OPERATIONS

Improper mount/dismount	_____X	50
Failure to use seat belt	_____X	25
Failure to set brakes when getting off/or put in Park	_____X	50
Sliding or spinning tires, brake steering	_____X	100
Rough clutch engagement	_____X	25
Clashing of gears when shifting	_____X	25
Excessive engine speed	_____X	25
Excessive tractor speed	_____X	50
Standing while tractor is moving	_____X	100
Moving tractor with brakes on	_____X	25
Riding the clutch	_____X	25
Any unsafe conduct while on or around tractor	_____X	25

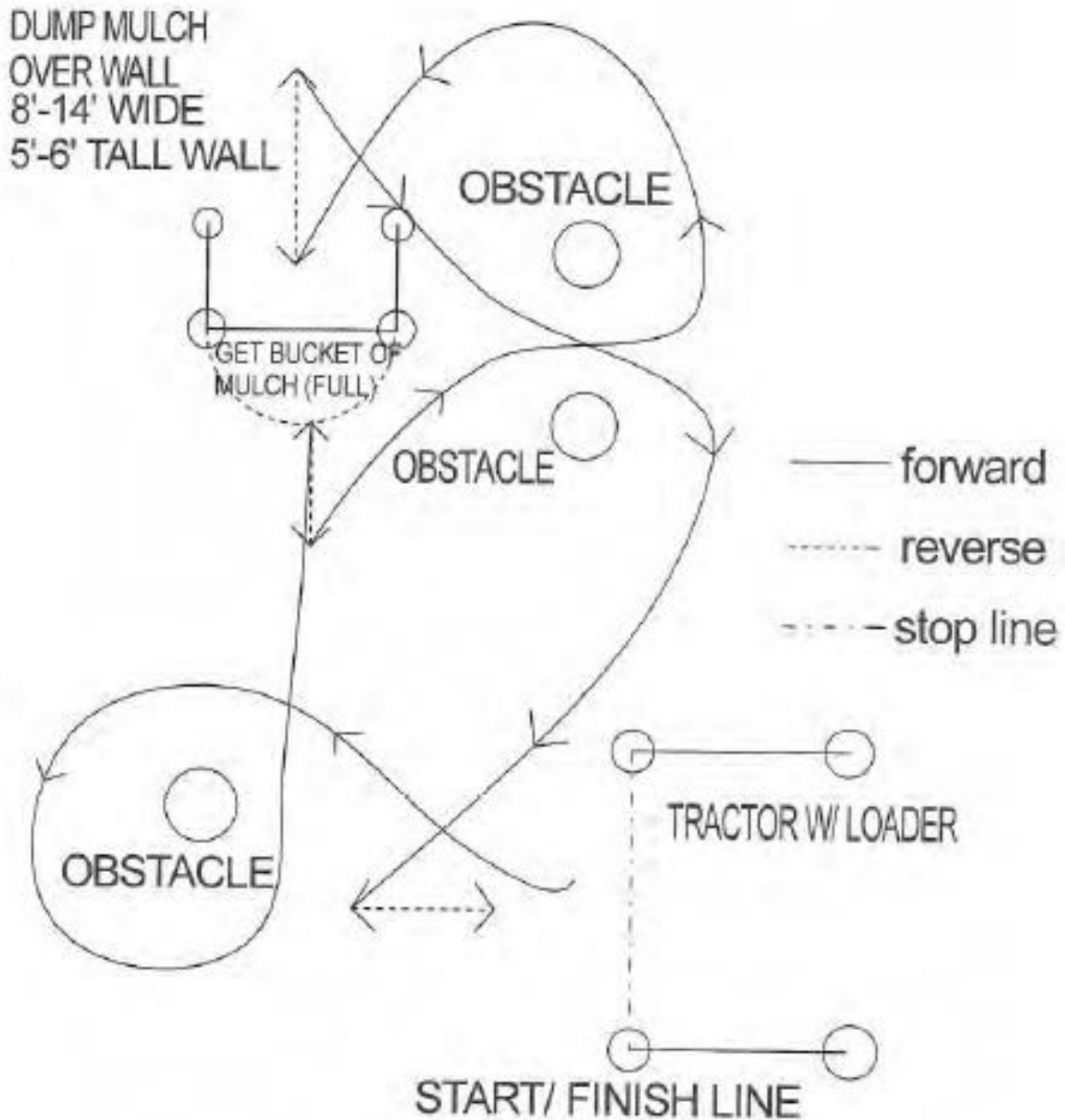
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TIME _____ **DEDUCTIONS** _____ + **SUB TOTAL** _____ = **TOTAL** _____

Scorer Initials: _____

TRACTOR LOADING



SCORE SHEET – Skid-Steer Event

Name: _____

Chapter: _____

TRACTOR SAFETY RESPONSE (verbal response to judges)

After walk-around and starting tractor

Check fuel and oil gauge	_____X	10
Check foot pedals and steering handles	_____X	10
Check tires – by sight only	_____X	10
Check hazards – dirt, grease, tools, improper attachments, etc.	_____X	10
Check for seat belts/harness	_____X	10

DEDUCTIONS

STARTING

Improper mount/dismount	_____X	50
Seat belts or safety harness not on	_____X	50
Throttle set too high	_____X	25
Starts course with the parking brake on	_____X	50

NOTE*CONTESTANTS WILL BE STOPPED BY THE JUDGE WAVING A RED FLAG IF IT IS FELT THAT THE CONTESTANT IS NOT IN FULL CONTROL OF THE SKID-LOADER AND SAFETY OF THE OPERATOR AND JUDGE ARE JEOPARDIZED! CONTESTANTS WILL RECEIVE AN ADDITIONAL 500 POINT DEDUCTION!**

LOADING

For touching line or obstacle (with skid-steer or forks)	_____X	50
For crossing or knocking down obstacles	_____X	100
For each unnecessary change of direction (forward and backwards)	_____X	50
Traveling with forks too high	_____X	50
Excessive speed going into pallets	_____X	50
Moving pallets (more than four inches)	_____X	50
Improper use of forks while loading	_____X	50

NAVIGATING COURSE

Excessive water loss from bucket (more than three inches)	_____X	50
Tipping bucket of water off pallet	_____X	300
***Operator must return to bucket station to get new full bucket!		
Carrying load at unsafe height	_____X	50
Pallet #1 not squarely on pallet #2	_____X	25
Excessive speed over obstacle	_____X	50
Excessive bucking on turns and going over obstacle	_____X	50
Pallets not squarely on platform	_____X	25
Unsafe speed approaching platform	_____X	50

PARKING SKID-LOADER AT FINISH LINE

Failure to reduce throttle	_____X	10
Forks not completely down	_____X	50
Failure to shut off Skid Loader (set parking brake when exiting machine)	_____X	100

JUDGES OBSERVE AT ALL TIMES DURING ABOVE OPERATIONS

Failure to operate skid-loader safely	_____X	100
Excessive skid-steer speed	_____X	50

Subtotal of Deductions _____

If the contestant does not finish within the ten-minute time period, they will be given an additional 500-point deduction. Time deduction – convert minutes into seconds, add the remaining seconds. Divide the total seconds by 3. To this add the subtotal for deductions to get the final score of the contestant.

TIME _____ **DEDUCTIONS** _____ **+ SUB TOTAL** _____ **= TOTAL** _____

Scorer Initials: _____

