



## **RULES AND REGULATIONS**

### **37<sup>th</sup> ANNUAL NEW HAMPSHIRE SCHOOL BUS SAFETY ROAD-E-O**

**MERRIMACK VALLEY HIGH SCHOOL, PENACOOK, NH**

**Saturday, May 18, 2019**

The following are the rules and regulations for the N.H. School Transportation Association's 37<sup>th</sup> Annual (2019) School Bus Road-e-o.

There are three phases to the competition:

- 1) A test of driver knowledge of state laws, school bus rules and Commercial Driver Licensing laws/regulations.
- 2) A test to determine alertness to vehicle "flaws" during a "pre-trip inspection" of a vehicle, and,
- 3) A test of skill maneuvering a vehicle through a series of obstacles and exercises.

Please review the rules carefully. Adjustments have been made to the driving events to better reflect the rules and experience of those competing in the International Safety Competition. When you check-in at the Road-e-o a copy of the completed course layout will be available. At 8:15 a.m. on the day of the Road-e-o, a review of the course and a walk-through of the course will be done with the entire group of contestants. After the walk-through, all contestants will sit for the written exam. After the exam contestants will move in two groups. Group One will proceed to the Pre-Trip area for that exercise; and Group Two will proceed to the driving skills course. Rules and scoring information for each driving event is included. It is your responsibility to become familiar with the material. We look forward to having you with us on May 18 in Penacook. It's fun, it's educational...and you may even win one of the many trophies, and a chance to represent New Hampshire in international competition.

Good luck...and safe driving.

Sincerely,

The NHSTA Road-e-o Committee

**(FOR CONVENTIONAL, TRANSIT-STYLE and SPECIAL NEEDS DRIVERS)**

1. Contestants are to report to the registration table in the foyer of Merrimack Valley High School, starting at 7:30 a.m., but no later than 8:00 a.m. on Saturday, May 18, 2019. Following a brief introduction in the auditorium, contestants will get a walk-through of the course. Next, contestants will head to the cafeteria to sit for the written examination. The pre-trip inspection and driving competition will begin after the exam. Upon completion of an event by all members of your assigned group, the groups will rotate to the next assigned event. A group leader will be with each group at all times and any questions should be referred to this person.
2. Contestants will be required to stay in the driver or pre-trip preparation area until called for competition. Each contestant is placed on his or her honor not to assist another contestant in any way. Contestants should not discuss the bus defects with each other, or with spectators, as this could result in total disqualification. You are asked to use the honor system and not engage in conversation regarding the competition during the full-group lunch. **(Use of smartphones, cell phones or other devices, including tablets or iPads is not permitted during competition. Group leaders and Road-e-o officials will have the authority to disqualify any contestant found to be using such devices at any time during Road-e-o competition.)**
3. The time limit for competition of the pre-trip vehicle inspection test is five minutes. Contestants should not start the engine for air or vacuum tests; you may turn on the key, but do not start engine ignition. Contestants may ask the judges to assist them by stepping on the brake while the contestant checks the lights.
4. Buses/Vehicles used for driving will be:
  - Transit-style: 40' passenger body. Automatic transmission. Air brakes. Power steering.
  - Conventional: 40' passenger body. Automatic transmission. Air brakes. Power steering.
  - Special Needs: Type A. Automatic transmission. Hydraulic brakes. Power steering.
5. In the driving portion of the Road-e-o, each contestant will be given the opportunity to drive a vehicle which reflects their entry category. When making application, contestants should specify which type vehicle they wish to drive (conventional, transit-style or special needs). A vehicle identical to the one you will drive in the competition will be in the driver's staging area for you to board and become familiar with the control panels, seats and pedal configuration. Vehicle specifications appear above, see item 4. ***Please note the rear windows of all vehicles will be covered during the driving events. At all times during the driving portion of the competition, the transmission shall be placed in first gear.***
6. Each Road-e-o contestant will be required to maintain proper driving position at all-times except when the Road-e-o Rules and Regulations require that the contestant leave the seat of the vehicle. Proper driving position is being firmly in the seat with feet firmly planted on the floor or on the controls. The contestant will not be permitted to put his head out the bus window. Seat belts must be worn and snugly fastened during the competition. There will be a total disqualification from the Road-e-o for failure to wear the seat belt. **Placement of the shoulder strap behind the driver is not permitted. For those events requiring that mirrors be checked, drivers will use physical pointing as an indication of conducting mirror checks. The overhead mirror will be flipped up.**

7. Please note that several events are timed and are so noted in the instructions. **Timed events are not intended to be a race.** You should exercise caution and exhibit professionalism as you would during any other time you are behind the wheel of a school bus.
8. Any driver who knowingly accepts signals from spectators will be automatically disqualified. All spectators will be required to stay in the spectator area. Contestants mingling with, or talking to, spectators may be disqualified.
9. In all events, the vehicle doors must be kept closed unless the rules and regulations of the Road-e-o event require that they be opened. It shall be assumed that the driver has pupil passengers on board from the start of the contest and, therefore, he/she must conduct himself/herself accordingly
10. Prior to the beginning of events on the day of the competition, a walk through of the course for all drivers will be conducted. In addition, the lead judge of each event will be available at this time only to answer questions or give verbal information. It is the contestant's responsibility to be familiar with each event from the information provided ahead of time. The order of the events in this packet are not necessarily the order on the day of the Road-e-o.
11. Winners will be announced and awards presented following the competition. Each contestant will receive a certificate as evidence of participation. Trophies will be awarded to the top-three conventional drivers, transit-style drivers and special needs drivers. A "Rookie of the Year" award will be given in each category of vehicle for the person scoring the highest in his/her first year of the event.

## **RULES OF EACH SPECIFIC ROAD-E-O EVENT**

Each of the following sections includes the title of the event, the purpose of the event, a description of the course, special instructions and the scoring and judging procedures. Please note the order of the events in these rules are not necessarily the order of the events one will take at the Road-e-o. The following events have been re-introduced to our Road-e-o competition: railroad crossing, parallel park and right turn.

### **WRITTEN EXAMINATION**

Maximum Score - 100 points

#### **PURPOSE OF EXAM**

There are many laws, rules and regulations with which a school bus driver must become thoroughly familiar and which he/she must faithfully observe. Contestants for the New Hampshire School Bus Safety Road-e-o are encouraged to study their state rules, regulations and state laws concerning the bus driver. Questions on the examination will be based upon the general knowledge and passenger endorsement section of the CDL manual, the "State of NH Saf-C1300 Administrative Rules," and the NHSTA "School Bus Handbook". PDFs of the rules and the handbook are available on the "Resources" page of nhsta.org. Any questions referring to traffic laws will comply with existing New Hampshire statutes and regulations. The purpose of this test is to determine the extent of the contestant's familiarity with these important guidelines of safe driving.

#### **TIME LIMIT**

The time limit is one hour (60 minutes).

#### **INSTRUCTIONS**

The test will be multiple choice. Please read the questions carefully and clearly circle your answer on the answer sheet.

## **PRE-TRIP SAFETY INSPECTION**

Maximum Score - 100 points

### **PURPOSE OF TEST**

A school bus driver is required by law to make a daily inspection of their bus before transporting pupils. A school bus found to be unsafe shall not be used for the transportation of pupils until such defects are corrected. Such inspection should be planned and conducted in a systematic and logical manner to assure that all defects are noted. The purpose of this test is to evaluate the contestant's efficiency of conducting this inspection.

### **INSTRUCTIONS**

This test is to judge one's ability to make an efficient and complete physical inspection of the bus including the general condition of the bus interior, all glass, seats, first aid kit, fire extinguisher, flares, mirrors, horns, all gauges and instruments, windshield wipers, all brakes, all lights, emergency exits, entrance door, all signals and flashers, fuel cap, wheels and tires, and general exterior. The engine should not be started for air and vacuum tests. The engine compartment is not to be opened.

Contestants will be given five minutes to complete the pre-trip safety inspection. At the end of five minutes, the judge will halt the test.

### **SCORING**

Each defect found will be worth 15 points. Contestant using systematic procedure will be worth 10 points.

## **PREPARATION FOR DRIVING EVENTS**

When entering your vehicle for competition, each driver should adjust seats and mirrors before starting the course. Assistance will be provided with exterior mirror adjustments. Seat belts (including shoulder strap) must be worn during the contest. Failure to do so will result in total disqualification from the Road-e-o.

### **SERPENTINE**

Maximum Score - 50 points

### **PURPOSE OF THE EVENT**

This event is designed to determine driver's ability to steer a school bus in close limits.

### **INSTRUCTIONS**

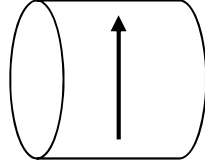
Bus must pass by the barrels alternately to the right of the first, to the left of the second, etc. Bus must be operated in continuous motion during the test except for the stop made before beginning the forward motion.

### **SCORING**

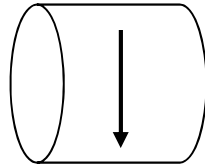
Demerits will be assessed for any of the following:

Stopping	5 demerits (max. 10)
Touching barrel	50 demerits
Opening door	50 demerits
Backing vehicle	50 demerits
Failure to follow directional arrows	50 demerits
Failure to use seat belts	(disqualified)

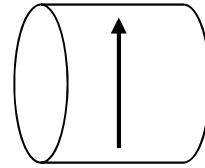
# Serpentine



**Bus length plus 6'**



**Bus length plus 6'**



- 3 55 gallon drums are needed
- 3 Arrows

The barrels are 55 gallon drums.

They can be plastic or metal.  
Make sure you have arrows on the barrels to indicate the direction for the bus travel.



## **OFFSET ALLEY**

Maximum Score – 50 points

### **PURPOSE OF EVENT**

This event is designed to evaluate a driver's ability to handle the bus under actual and simulated driving conditions. An offset alley is set up to determine the contestant's ability to driver his/her bus through lanes with a minimum of hesitation and without touching the markers or barriers. The offset may be a right or left offset as determined by the Road-e-o Chairman.

### **INSTRUCTIONS**

Two sets of parallel barriers, 10 feet long, are set up with tips the width of the bus to the nearest foot plus (2) feet apart. The right barrier marker of the first set are placed in a direct line with the left barrier marker tips of the second set (the offset barriers). The distance between the two sets of barriers (from the end of the first set to the beginning of the second set) will be the length of the bus plus three (3) feet for buses over 29 feet long.

### **SCORING**

Demerits will be charged for each instance of touching any of the marker tips:

1st instance	7 demerits
2nd instance	21 demerits
3rd instance	42 demerits
4th instance	50 demerits

For each instance of stopping the forward motion of the bus, charge eight (8) demerits.  
(not to exceed 16 demerits)

1st instance	8 demerits
2nd instance	16 demerits

Backing the bus during the event	50 demerits
Touching the barrier	50 demerits

Failure to:

Complete this event	50 demerits
Wear seat belt	(disqualified)
Keep door closed during the event	50 demerits



# OFFSET ALLEY

## Materials and assembly for top and bottom gate supports

For these support stanchions you must make 4 sets  
4 Top support and 4 bottom



4 1 1/4" PVC Joint



8 1 1/4" PVC JOINT



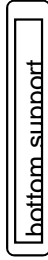
16 1 1/4" x 6" PVC PIPE



16 1"X48" PVC PIPE



16 3/8 X 3" BOLTS AND NUTS

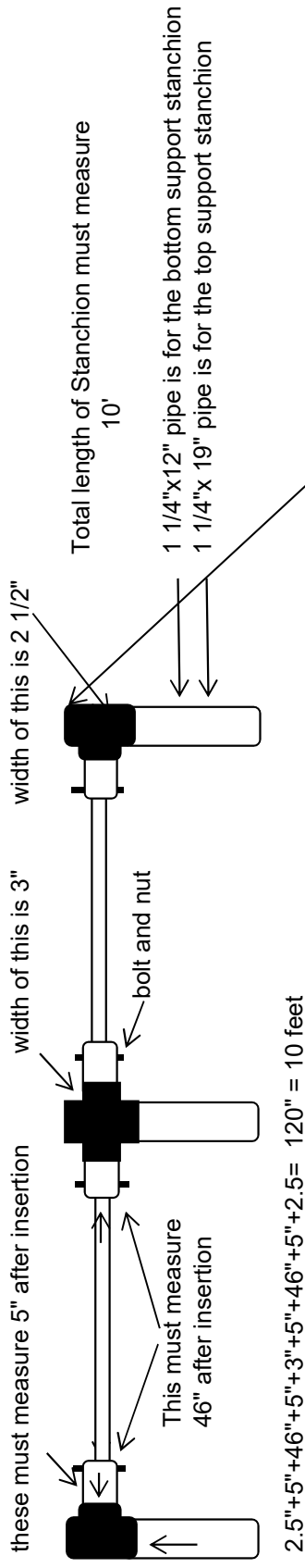


12 1 1/4" X 12" PVC PIPE



12 1 1/4" x 19" PVC PIPE

1 can each PVC glue and PVC pipe cleaner



each section to be inserted into another should insert at 1" to keep measurements correct.

**suggestion:** at the top of each end joint and the top of the middle joint, make a smooth groove for the gate to rest on this keeps the gate from constant movement. If it is touched by the bus, the gate will move

**FOR ANY STANCHIONS REQUIRING A GATE, BE SURE TO DO THIS TO EVERY JOINT THE GATE RESTS ON.**

## **STRAIGHT LINE**

Maximum Score: 50 points

### **PURPOSE OF TEST:**

To determine the driver's ability to maneuver the right wheels of school bus over a straight path of a given width.

### **INSTRUCTIONS:**

The right wheels of the bus must travel the indicated path without striking or moving the markers with any wheel. The bus must be operated in a continuous forward motion. The distance between the markers is the width of the rear duals plus three (3) inches.

### **SCORING**

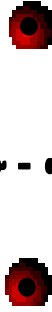
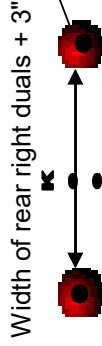
For each instance of jerky or uneven movement of bus (Maximum of 20 demerits)	2 demerits
For each instance of stopping forward motion of bus (Maximum of 20 demerits)	4 demerits
Each instance where wheel touches or knocks a marker off (Maximum of 50 points)	5 demerits
Drives either side of pair of markers (Maximum of 50 points)	10 demerits
Failure to complete the event	50 demerits
Failure to wear seat belt	disqualified
Failure to have door closed during event	50 demerits
Backing up during event	50 demerits

# Straight line

## set up

- 10 tennisballs
- 10 furniture floor cup coasters
- 10 small washers
- 10 heavy bolts to fit into the 1" slit
- 10 pieces of 12" string
- 10 2" mason screws
- 1 electric or battery operated drill

black dot represents the spot marked on the ground to drill coasters.



25' apart

- 1 With a razor or sharp knife, make a 1" slice in each tennis ball
- 2 To each heavy bolt tie one end of a piece of string.
- 3 To each small washer tie the other end. .
- 4 In each slit of the tennis ball, insert the heavy bolt.
- 5 Measure the width of the right side set of dual tires. Be sure to measure from the bulge in the tires and add 3" ( the total width usually measures 27")

6 To measure course:

You will need a total of 100' in length

7 Take a measuring tape and lay it in a straight line. mark the spot for the first ball at the beginning of the line.

mark a spot for the second ball at the 25' mark

mark the spot for the third ball at the 50' mark

Mark the spot for the fourth ball at the 75' mark

mark the spot for the fifth ball at the 100' mark

for the second line, you MUST set the parallel lines the width of the duals + 3" and add 3" more to make up the 1 1/2" hang over of each ball over the marker. If the measurement of the duals + 3" measures 27 inches, than you MUST measure 30" between spots on the ground.

8 At each spot, place the small washer in the center of the coaster and drill through both with a mason screw into the ground. Refer to picture

9 Place each ball on the furniture cup. Refer to picture

Directions for driving.

with bus in 1st gear, start off by maneuvering the front right tire between the tennis balls, with the right dual tires following behind between the balls.

## **DIMINISHING CLEARANCE**

Maximum Score: 50 points

### **PURPOSE OF TEST:**

The contestant is required to drive the bus in a straight line with diminishing clearances while driving in a smooth and continuous manner.

### **INSTRUCTIONS:**

For the purpose of conducting this event, four pairs of parallel standards are set up. Each pair of standards, however, is parallel to the next. The distance between each pair of standards is 12 feet. The width of each pair varies as follows:

First pair of standards	Width of bus plus 8 inches
Second pair of standards	Width of bus plus 6 inches
Third pair of standards	Width of bus plus 4 inches
Fourth pair of standards	Width of bus plus 2 inches

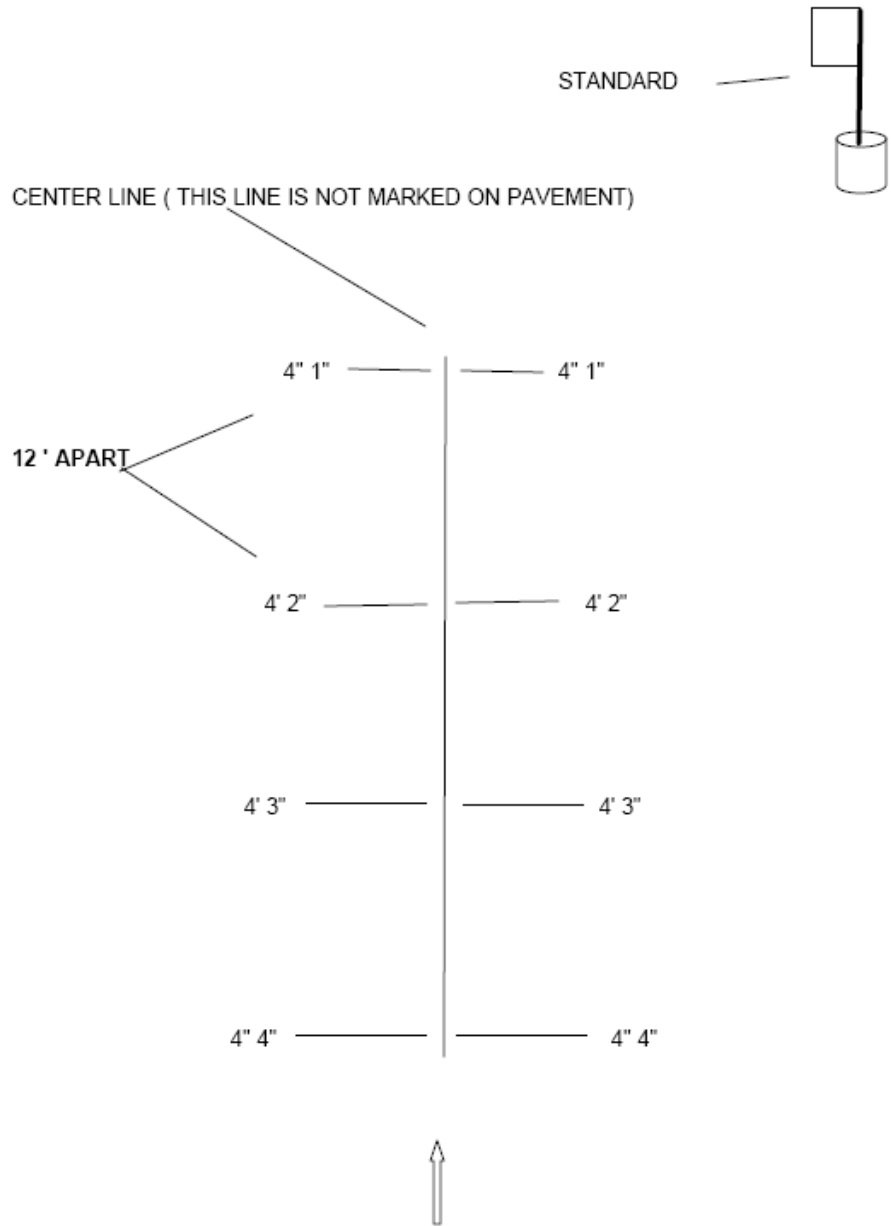
NOTE: The measurement is from marker tip to marker tip. The alley is set up to allow for the course to diminish equally on both sides.

### **SCORING:**

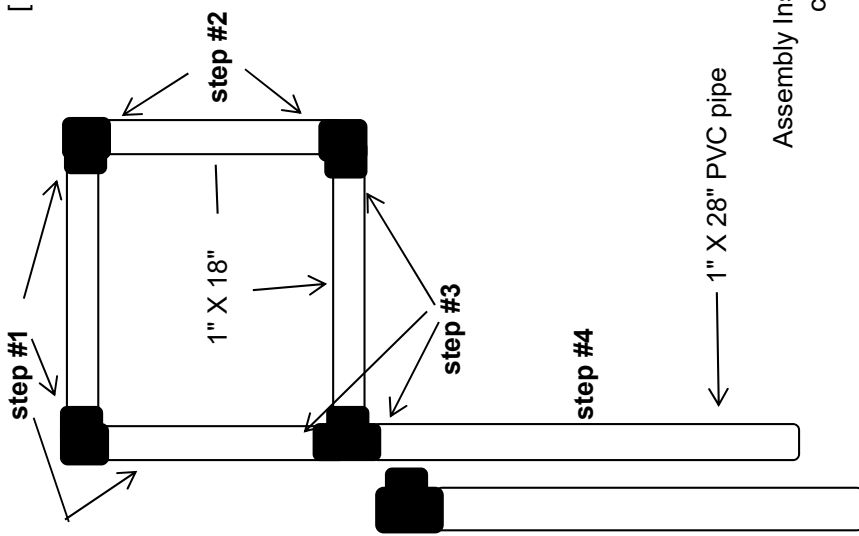
Contestants will be scored on the following:

Each instance of jerky or uneven movement (maximum of 10 demerits)	2 demerits
Each instance of stopping forward movement of bus (maximum of 20 demerits)	4 demerits
Each instance of bus touching marker tips (maximum of 50 demerits)	10 demerits
Striking standard with bus	50 demerits
Backing during event	50 demerits
Failure to complete event	50 demerits
Failure to wear seat belt	disqualified
Failure to keep door closed during event	50 demerits

# DIMINISHING CLEARANCE



# Diminishing Clearance Gate Assembly



- 24 1" elbow PVC joints
- 16 1" 3 part PVC joint

- 32 1" X 18" PVC pipe
- 8 1" x 28" PVC pipe

- 8 1 1/4" X 29" PVC pipe to insert into the support (railroad ties, or bucket)

### Assembly Instructions:

clean ends of PVC pipe with cleaner. When assembling, glue inside of joint and pipe edge

- 1 Insert the top and left side pipes into the right and bottom part of the left top joint
- 2 Insert the top pipe into the left part of the right top joint
- 3 Insert the right side pipe into the bottom part of the right top joint and the top part of the right bottom joint.
- 4 Insert the bottom pipe of the gate into the left side of the right bottom joint. Insert the left side of the 28" pipe into the bottom of the left 3 point joint
- 5 place larger pipe into support, gate sits in pipe so it is able to swing. Notch top of joint as shown in Offset alley.

For Supports see "Support"

## ELEMENTARY STUDENT LOADING

Maximum Score: 50 points

### PURPOSE OF TEST:

Loading of elementary students can be one of the most life threatening maneuvers a school bus driver performs. This test is designed to evaluate the driver's alertness to the loading of elementary passengers and to determine their ability to remember and perform several other important functions incidental to such loading. Such items include proper use of loading lights, mirrors, crossing gate and stop arm.

### INSTRUCTIONS:

For loading passengers the contestant will pull into the loading area. The contestant will utilize the yellow warning lights (100 feet) prior to entering the loading zone. The contestant will then use the red crossover lights and stop arm when stopped to load students.

During the maneuver the contestant will be judged for **mirror usage** before and after the stop, proper use of lights, smooth stopping, lane position while stopped, transmission in neutral with parking brake set before door is opened, and physical crossing signal. The contestant must stop at least 10 feet back from the student, but not more than 15 feet. *(Please note that the location of "the student" could be on the left or the right. The location will alternate throughout the competition.)* When the door opens, the judge will enter the bus and check for: parking brake applied, transmission in neutral position and seat belt usage. The contestant must tell the judge the student(s) are loaded and seated. Proper procedures for leaving the stop will be judged.

### SCORING:

Failure to perform proper mirror checks (5 points for each mirror)	25 demerits
Failure to activate yellow lights 100' prior to bus stop	50 demerits
Failure to activate red crossover lights	50 demerits
Jerky or sudden stop	10 demerits
Failure to keep door closed in motion	25 demerits
Bus stopped closer than 10' from student ( back from student)	10 demerits
Bus stopped more than 15' from student ( back from student)	10 demerits
Foot not on brake while stopped	10 demerits
Failure to place bus in neutral and set parking brake before the door is opened.	50 demerits
Failure to perform mirror checks after stop and before moving	25 demerits
Failure to wear seat belt	disqualified
Backing the bus during the event	50 demerits
Failure to complete event	50 demerits

## **CURB LINE**

Maximum Score - 50 points

### **PURPOSE OF TEST:**

To test the skills of the driver to make a loading or unloading that requires pulling into a curb parking zone that has a limited distance.

### **INSTRUCTIONS:**

The event will be set up to simulate a limited curb length between other parked vehicles. The loading area will be marked by barriers which will be spaced 2 1/2 times the length of the bus that is 29 feet or longer. For buses under 29 feet in length three (3) times the length of the bus. The contestant must pull into the curb and pull out without backing up. **This is a timed event.** The contestant will have three minutes from the time the front bumper of the bus passes the rear barrier until the bus is properly parked and the horn is sounded.

The contestant will be judged on use of right turn signal when pulling in and the left turn signal when pulling out. Proper use of mirrors will also be judged. The 5 point mirror check should be made by use of hand signals.

A measurement will be made at the loading area to determine how close the bus is parked to the curb.

For transit, the position of the tire, both front and rear in relation to the curb.

For conventional, the position of the rear tire and area of the body just behind the entrance door in relation to the curb.

The contestant must place bus in neutral, apply park brake and sound horn.

### **SCORING:**      **(This is a time event!)**

The contestant will be scored on the following items:

Failure to wear seat belt	disqualified
Failure to complete event	50 demerits
Failure to keep door closed during event	50 demerits
Failure to place bus in neutral, apply parking brake and sound horn within 3 minutes	50 demerits
Hits either back or front barrier	50 demerits
Hitting the curb with tire	50 demerits
<b>Furthest bus measurement from curb (either rear or front)</b>	
0" to 12"	0 demerits
12" to 18"	20 demerits
18" and over	50 demerits
Backing up in event	25 demerits
Failure to perform mirror check when entering event	25 demerits
Failure to perform mirror check when leaving event	25 demerits
Failure to use right turn signal	10 demerits
Failure to cancel right turn signal	10 demerits
Failure to use left turn signal	10 demerits
Failure to cancel left turn signal	10 demerits



## Curb Line materials and set up

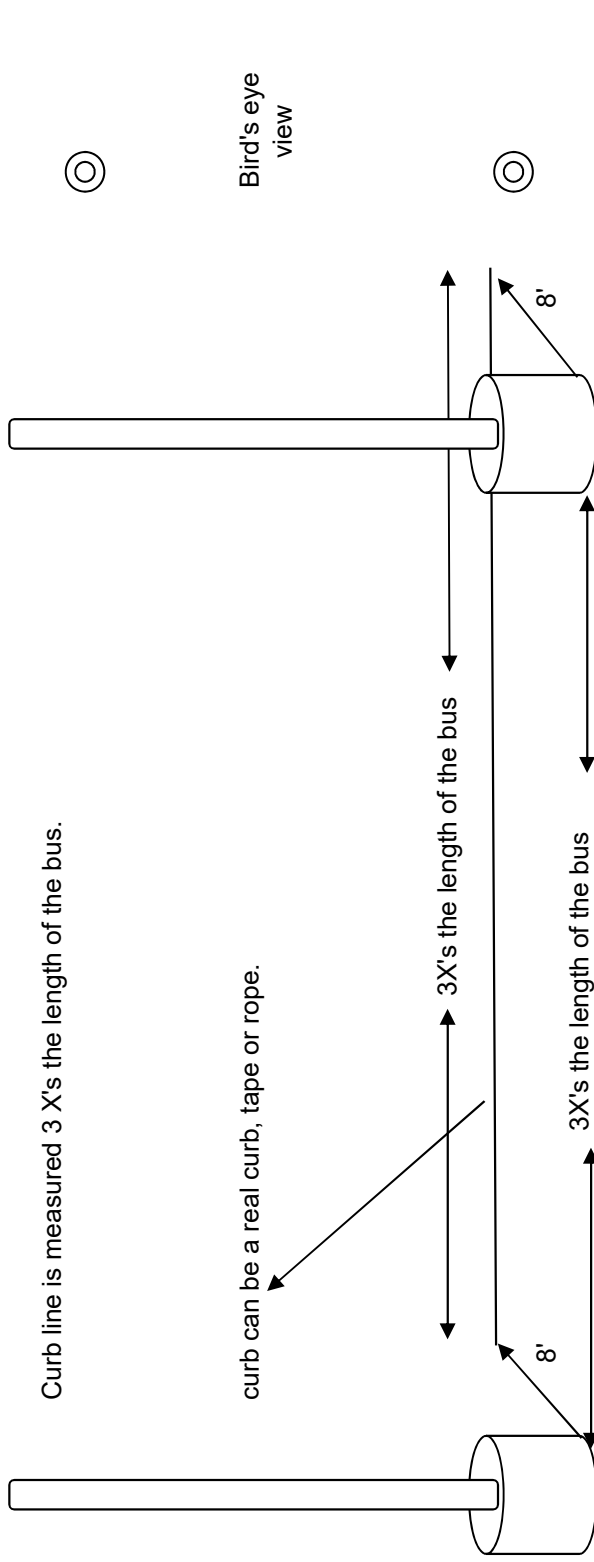
- 2 1 1/4" x 36" PVC pipe
- 2 large coffee cans
- cement
- Drill and cement screws...to hold down rope.

Fill coffee can with cement and insert the pipe to the bottom of the can.

Note: this is set up where the barriers are lined 8' perpendicular to the curbline. This picture looks like it is off set. It is not, it makes a box.

Curb line is measured 3 X's the length of the bus.

curb can be a real curb, tape or rope.



## **STOP LINE**

Maximum Score - 25 points

### **PURPOSE OF EVENT:**

This event determines the contestant's depth perception, ability to use crossover mirrors and the ability to bring the bus to a smooth complete stop.

### **INSTRUCTIONS:**

A stop lane four feet long is established. A yellow rope will be used to mark the line. The contestant should bring the bus to a complete stop as close to the stop line as possible without going over. Only one stop will be allowed. The contestant should bring the bus to a complete stop as close to the line as possible. The stop line may be in sequence with another event, such as a right turn or the railroad crossing. The contestant will activate the parking brake, place transmission in neutral and sound the horn. Measurement will then be taken.

### **SCORING:**

Measurement for scoring the stop line will be taken from the front surface of the bumper to the edge of the line closest to the bus. Measurement will be taken any place on the bumper that is closest to the line. The bus must stop two (2) inches or less from the stop line to avoid demerits being given

0" to 2"	0 demerits
over 2" to 4"	3 demerits
over 4" to 6"	6 demerits
over 6" to 8"	9 demerits
over 8" to 10"	12 demerits
over 10" to 12"	15 demerits
over 12" to 14"	18 demerits
over 14" to 16"	21 demerits
over 16"	25 demerits
Stops with bumper beyond line	25 demerits
Failure to complete event	25 demerits
Backing during event	25 demerits
Failure to keep door closed during event	25 demerits
Failure to wear seat belt	disqualified

## Stop Line

Yellow rope or tape is used to mark the stop line. Tape or Rope is measured 4' in length.



## BACK UP ALLEY

Maximum Score: 50 points

### PURPOSE OF TEST:

This test is designed to evaluate the driver's ability to back the bus into a stall. A stall the width of the bus plus two (2) feet is provided into which the driver must back their bus into without touching the upright standards and without crossing over the stall limit marker lines. Depth perception is tested by penalizing the driver for backing too close to the rear barrier, or parking the bus too far from the rear barrier. (The length of the stall will be determined the day of the event.)

### INSTRUCTIONS:

Two parallel lines on the ground the width of the bus plus two (2) feet identify each stall. Each front corner of the stall will be marked by upright standards that will not interfere with the backing of the bus. In order to limit the driver's maneuvering room, a front wheel limitation line will be placed on the ground perpendicular to the stall parallel marker lines. The distance from the front stall standards to the wheel limitation line will be as follows:

Transit:	Length of the bus plus 1'
Conventional:	Length of the bus plus 4'

The approach to the back-up-stall will be made from the right side only. **This is a timed event.** A two (2) minute time limit starts when the front bumper passes the first upright standard. The bus must be parked in the stall, parking brake set, the bus in neutral, and the horn sounded, within the two minute time limit. Each contestant will be permitted one back-up before demerits are charged for excessive backing.

There will be a one-foot free zone for to five feet in front of the rear barriers in the enter of the stall and demerits will be charged if the bus is parked ahead or behind the free zone. After the bus is measured, the contestant will exit the stall between the upright standards.

### SCORING: (This is a timed event!)

The following are demerits for this event:

Tire tread touches the wheel limitation line	50 demerits
Bus touches the front upright standards	50 demerits
Tire touches stall sidelines	50 demerits
Touching the rear barrier	50 demerits
Failure to park the bus, set parking brake, put in neutral and sound the horn within the 2-minute time limit	50 demerits
Failure to pull out between the front upright standards	50 demerits
Failure to keep door closed	50 demerits
Failure to wear seat belt	disqualified
Failure to complete event	50 demerits

Per instance of forward motion after the first back-up (not to exceed 42 demerits) 6 demerits  
 Bus parked more than 1' off the center line, front or rear (greater only) 2 demerits  
 Bus parked forward of the 1' free zone and each 6" or fraction thereof, (not to exceed 50 demerits) 5 demerits  
 Bus parked behind 1' free zone and each 6" or fraction thereof (not to exceed 50 demerits) 10 demerits

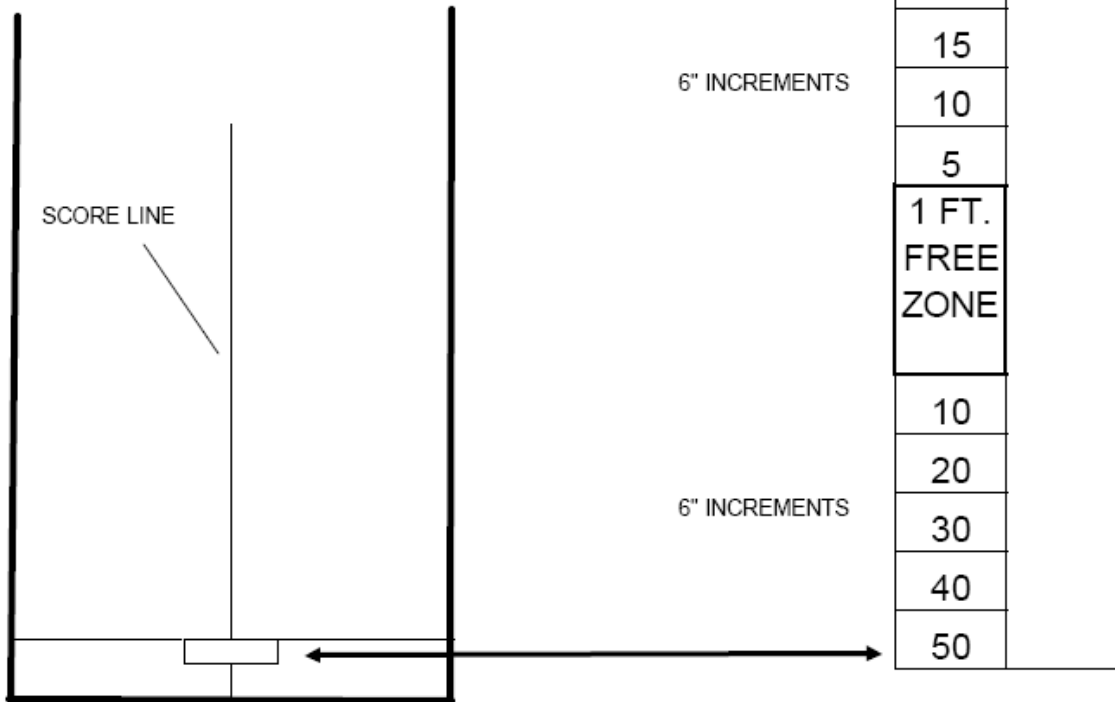
### BACK UP STALL

Wheel limitation line is as follows:

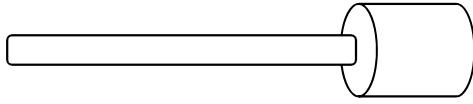
Transit: length of bus plus 1 foot  
 Conv: length of bus plus 4 feet  
 Small Bus length of bus plus 4 feet



**One back up permitted before demerits are charged**



stanchions for front of back up alley



2 1 1/4" X 4' PVC pipe

2 large coffee can  
fill coffee can with cement. Insert PVC pipe and brace it to keep centered.



## **RAILROAD CROSSING AND CLEARANCE**

Maximum Score: 75 points

### **PURPOSE OF TEST:**

The railroad crossing represents one of the greatest hazards insofar as mass casualties or fatalities are concerned. This test evaluates the driver's degree of care and knowledge of the laws, rules and relations when required to operate a school bus across railroad tracks. The test also evaluates the driver's ability to determine the clearance of the tracks with the back of the bus.

### **INSTRUCTIONS:**

A simulated crossing is laid out as follows:

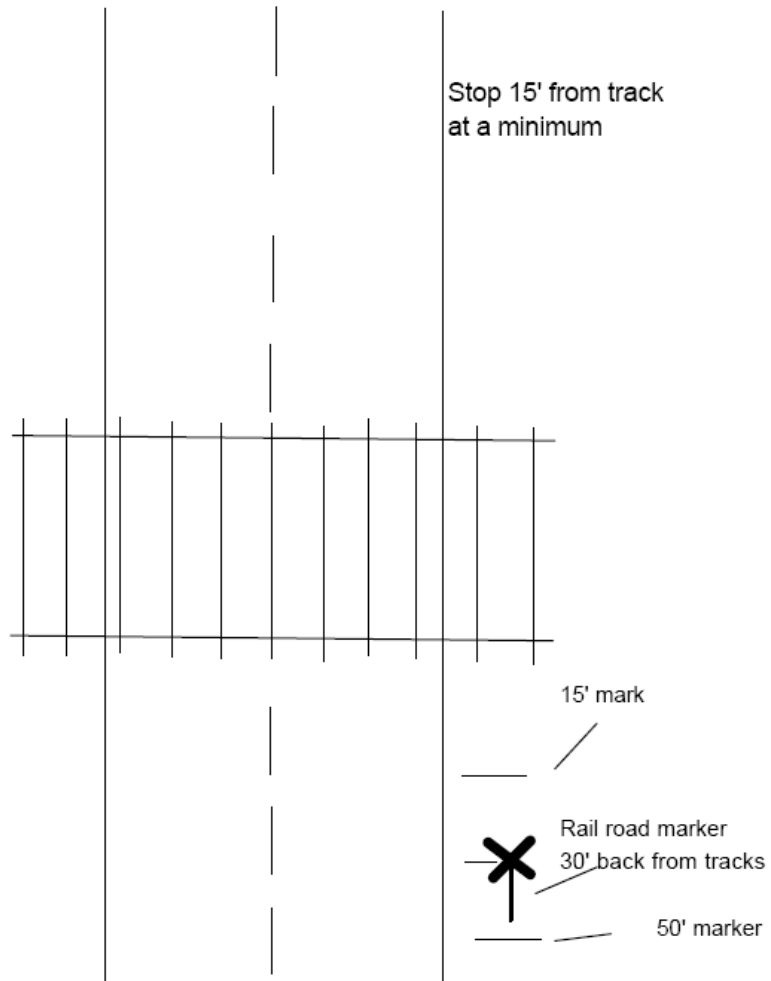
A two-lane roadway crossing one parallel set of tracks  
Railroad crossing signs properly positioned to the right side of the roadway

### **SCORING:**

Drivers are judged from the time they approach the crossing until they reach the other side of the crossing. They will be checked on use of directional signals and mirrors, stopping the bus, turning off all noisy equipment, deactivating the master switch for loading and unloading, opening the door and window, checking the tracks, driving across the railroad tracks, etc. Recommended procedures outlined in "Operation Lifesaver" publications will be used for the basis of scoring:

Failure to complete the event	50 demerits
Failure to wear seat belt	disqualified
Backing up during event	50 demerits
Failure to activate hazards 150' from RR grade crossing	25 demerits
Stops closer than 15 feet from tracks on approach	25 demerits
Failure to check both up and down tracks	25 demerits
Improper use of "School Bus Lights" (8-ways)	25 demerits
Stopping more than 50" from tracks on approach	10 demerits
Failure to clear back of bus at least 15 feet of the track	10 demerits
Failure to keep bus in same gear while crossing tracks	10 demerits
Failure to open door before crossing	10 demerits
Failure to open window, shut off noisy equipment	10 demerits
Failure to check left outside mirror on approach	5 demerits
Failure to check right outside mirror on approach	5 demerits
Failure to check inside mirror on approach	5 demerits
Failure to check left outside mirror before crossing	5 demerits
Failure to check right outside mirror before crossing	5 demerits
Failure to check inside mirror before crossing	5 demerits
Failure to close door before crossing tracks	5 demerits
Failure or cancel signals	5 demerits

# RAILROAD CROSSING EVENT



**Equipment:** wood tracks ( 1" thick) ( tape or painted tracks can be used)  
Railroad sign



## **RIGHT TURN**

Maximum Score: 50 points

### **PURPOSE OF TEST:**

This test is designed to determine the driver's ability to properly perform a right turn.

### **INSTRUCTIONS:**

A lane will be provided in which the driver will make the approach to the corner. The lane is marked on the right with a curb line 50 feet long or more. The driver will approach the corner giving the correct directional signal at least 100 feet from the turn as required by law. The contestant shall continue to steer the bus in a straight line until ready to execute the right turn. The point at which the turn begins is determined by the driver's ability to judge a predetermined relationship with the corner. The bus may not be stopped during the event. The turn must be executed without touching the curb line. The arc degree will be determined on the day of the competition with a minimum of 26 feet.

### **SCORING:**

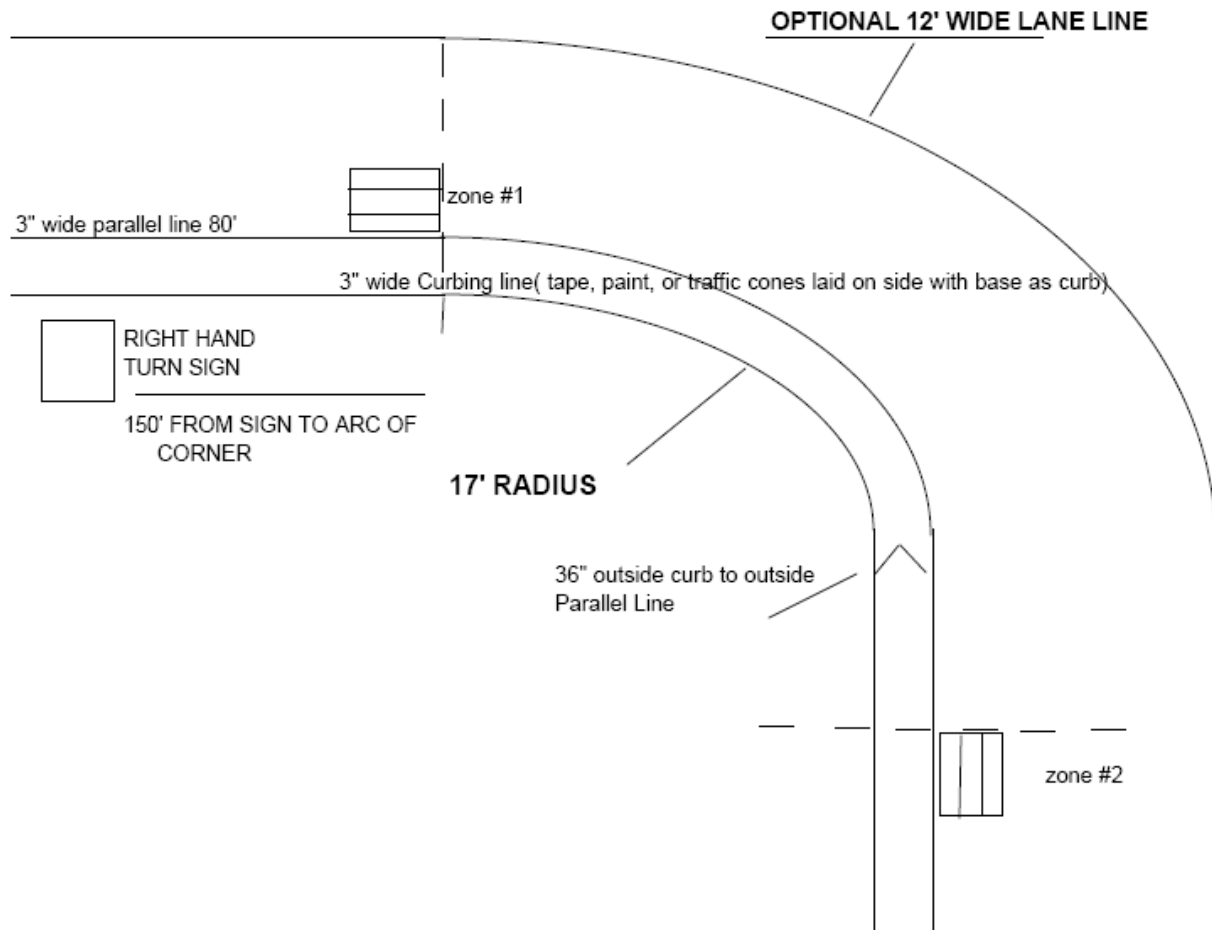
Scoring will be based on the method in which the driver enters and recovers from the turn. The tire's tread will be used. The rear right dual should cover the template. A maximum of 25 demerits will be deducted per template.

If any tire touches the curb at any time	50 demerits
Failure to activate the right directional signal at least 100' from turn	25 demerits
Failure to cancel right directional	5 demerits
Each instance of stopping during the event (maximum of 50 points)	10 demerits
Failure to wear seat belt	disqualified
Failure to keep door closed during event	50 demerits
Backing the bus during the event	50 demerits
Failure to complete the event	50 demerits

### **SCORING FOR TEMPLATE: (not to exceed 25 points per template)**

Entering Turn- Rear right dual travels over scoring plate	
0" to 5"	(10 demerits)
5" to 10"	(20 demerits)
10" to 15"	(25 demerits)
Recovering Turn- Rear right dual travels over scoring plate	
0" to 5"	(10 demerits)
5" to 10"	(20 demerits)
10" to 15"	(25 demerits)

# RIGHT TURN EVENT



**Demerit Zone #1 and #2 prepainted plywood, metal or tape**



**demerit stripes 5" wide paint or tape**

## PARALLEL PARKING

Maximum Score: 50 points

### PURPOSE OF TEST:

This event is designed to evaluate the contestant's ability to park the bus parallel to a curb without touching barriers placed at both ends of the parking area, without touching the curb and within 18 inches of the curb. It is also designed to judge the contestant's ability to drive the bus out of the parking area without touching the barriers or the curb.

### INSTRUCTIONS:

A section of rope will represent the curb, unless a natural curb is available. Two barriers will be set at right angles to the curb line, extending out eight feet from the curb. The distance between the two barriers will be the length of the bus plus 7 feet. A measurement will be made to determine how close the bus is parked to the curb line, and for determining the number of demerits to be charged.

**This is a timed event.** The contestant is allowed three (3) minutes from the time the front bumper of the bus first passes the rear barrier approach. The contestant must have the bus parked, set parking brake, and sound the horn within the three (3) minute time limit.

Backing in: The contestant will be permitted to back up twice before demerits are charged.

Pulling out: The contestant will be permitted to back up twice before demerits are charged.

### SCORING: (This is a timed event!)

Scoring will be based on the method in which the driver enters and exits the stall.

Failure to park the bus, set the parking brake and sound the horn within the three (3) minute time limit	50 demerits
Bus touches front or rear barrier at any time.	50 demerits
Failure to wear seat belt	disqualified
Failure to keep door closed during event	50 demerits
Failure to complete the event	50 demerits

Scoring for backing in:

Failure to use right turn signal before entering	50 demerits
First instance of touching curb with tire	50 demerits
For each instance of backing more than twice (not to exceed 25 demerits)	5 demerits

Scoring for Zones parallel to curb:

Zone 1	0" to 3" from curb	0 demerits
Zone 2	3" to 6" from curb	3 demerits
Zone 3	6" to 9" from curb	6 demerits
Zone 4	9" to 12" from curb	9 demerits
Zone 5	12" to 15" from curb	12 demerits

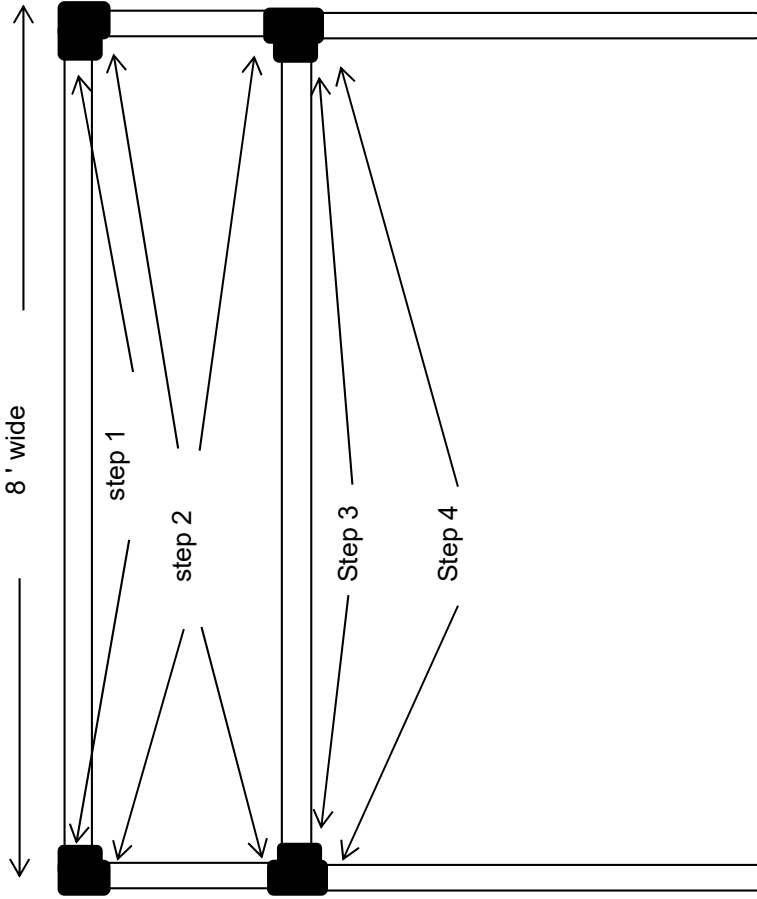
Zone 6	15" to 18" from curb	15 demerits
	Over 18" from the curb	50 demerits

Scoring for pulling out

Failure to use left turn signal	50 demerits
Each instance for backing more than twice (not to exceed 25 demerits)	5 demerits
First instance of touching the curb with tire	50 demerits
Failure to cancel directional signal	10 demerits

## Parallel Parking materials and gate assembly

- 4 1 1/4" X 24"
- 4 1 1/4" X 91"
- 4 1 1/4" X 21"
- 4 1" corner joints
- 4 1" 3 point joints



**step 1**

clean and place glue on each end of the top PVC pipe.  
clean and place glue on the left and right inside elbow joint

**step 2**

do the same for the side pipes in to the bottom of the top right and left joints and

**step3**

so the same for the bottom middle cross member insert into the inside joint to the bottom right and left joint.

**step 4**

do the same to each of the top of the bottom legs and the inside of each bottom part of the left and right joint.  
insert the top of each leg into the inside of each bottom left and right joint.

The legs are then inserted into the whole of your choice of supports.  
Refer to section "Support"

***SUMMARY OF POSSIBLE POINTS***

Written examination	100 points
Pre-trip examination	100 points
Serpentine	50 points
Offset Alley	50 points
Straight Line	50 points
Diminishing Clearance	50 points
Student Loading	50 points
Right Turn	50 points
Parallel Parking	50 points
Curb Line	50 points
Stop Line	25 points
Railroad Crossing	75 points
Back Up	50 points
<b>TOTAL POSSIBLE POINTS</b>	<b>750 points</b>