

# 2019 MOTOR-GRADER OPERATOR TRAINING

On-site -Classroom/Field

## Basic Training

- \$350.00/day per county (subject to change)
- 2 hours classroom training
- 4 hours field training
- Classroom training is limited to 30 attendees
- Field training is limited to **10** attendees (includes time in the blade)
- Road Scholar credit 6 hours

## Advanced (Customized) Training

- \$350.00/day per county (subject to change)
- Morning session – 3 hours with 2 operators
- Afternoon session – 3 hours with 2 operators



## Instructors



**Gary Steiner** - Burleigh County Operator. He has 23 year's experience as a motor-grader operator with Burleigh County. Steiner was also a heavy equipment operator for 10 years with the North Dakota National Guard.



**Russell Klimpel** – Mountrail County Operator. He has 6 year's experience as a motor-grader operator with Mountrail County. Klimpel has 7 year's experience rebuilding roads in North Dakota. He also has 10 year's building forest service roads in Montana.

# Classroom Topics – (Basic Training)

## Safety

- Personal protective equipment
- 3-point contact
- On the road safety
- Backing safety
- Motor-grader blind spots

## Equipment Maintenance

- Checking filters/fluids/oils
- Checking tires, pressure and wear
- Checking cutting edges
- Record keeping
- Proper care and handling of batteries
- Cab inspections
- Refueling



## Gravel Road Issues

- Principles of a good road – drainage
- Gravel quality and content
- Understanding correct shape of the roadway cross-section
- Maintaining 4% crown
- Use of a slope meter
- Understanding the importance of straight blades
- Importance of the moldboard angle/pitch
- Articulation
- Operating speed
- Windrows
- Intersections
- Retrieving material
- Vegetation
- Super-elevation



# Advanced – Customized Training - Field Only



## Format of Field Training

NDLTAP staff and the instructor will meet at the county highway department. The instructor will do a safety/maintenance walk around with the operators.

The instructor will communicate with the road superintendent about issues the operators are experiencing on the roads. The instructor will focus on those issues throughout the training.

The instructor will demonstrate to the operator the technique then the operator will do that same technique. The instructor uses a (one-way) headset to communicate with the operator. Or the instructor will ride in the motor-grader with the operator.

Typically, the training will consist of 2 operators in the morning and 2 operators in the afternoon. This can be customized to the county.

Most instruction is given on crown (using a slope meter or automatics), slopes, drainage, pulling shoulders, retrieving gravel, washboards, grading speed and gravel quality.

1 mile of road is usually sufficient for the training. Preferably the road should have minimal traffic. Road signage is required on the road. Supplemental NDLTAP signage will be provided.

Operators are **required** to wear safety vests during the training.

A water truck is required, if one is not available please call us for further arrangements.

If your county has attachments the operators are encouraged to use them the day of training.

Road Superintendents and County Commissioners are encouraged to attend.

Lunch will be on their own, typically 1 hour.

## Contact Information

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