

## PennDOT Maintenance Business Model

Shoulder cutting removes excess material and debris from unpaved shoulder areas. Shoulder grading involves the shaping and stabilizing of those same areas. Both operations improve drainage, allows water to leave the roadway, and eliminates shoulder drop-offs.

Shoulder cutting and grading requires equipment such as graders, trucks, brooms, belt loaders or wheel loaders, and rollers and typically 12 crew members. The grader cuts excess material from the shoulder and places it in a pile to be picked up by a belt loader. It is deposited into a truck and hauled away to an approved fill site. Any shoulder drop-offs are corrected by adding material. Any remaining material on the roadway is swept clean and the roller compacts the disturbed soil to prevent erosion.

These are important highway maintenance operations. When drainage systems do not function properly, water collects on the roadway, creating potential icing conditions in the winter and weakening pavement, causing potholes.

# HOULDER MAINTENAN

### **PennDOT Maintenance Business Model**

Although Pennsylvanians see PennDOT crews on the roads year-round, they may not always realize the scope or importance of the work we do.

Common maintenance activities may not receive as much public attention as building new bridges or highways, but they are integral to the maintenance of the state's 40,000 roadway miles and 25,400 bridges. Core maintenance operations are planned on reoccurring cycles to effectively manage and preserve our assets.

Activities such as crack sealing, patching, surface treatment, shoulder cutting and side dozing; in addition to keeping our drainage systems functional through pipe replacement, flushing and ditch cleaning are key components of the maintenance business model. These ensure that we are effectively managing and preserving our assets, while also dedicating resources to system improvements.

Combined with other activities such as successful winter maintenance, line painting, vegetation management, signing, bridge maintenance and litter cleanup, PennDOT is making improvements, enhancing equity in our organization and transportation systems for all people, and – as always — aiming at a safer, more connected Pennsylvania.

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### PennDOT Maintenance Business Model

Side dozing removes excess material from beneath guiderail areas. This improves drainage and allows water to sheet flow off the roadway.

Side dozing is typically performed with around 6 crew members. This process requires equipment such as a skid steer, mini-excavator or loader equipped with a special attachment designed to fit between the guiderail posts.

Equipment pushes excess material from between the guiderail posts. The material is graded to match the slope of the shoulder and allow water to sheet flow over the embankment. Workers may need to use hand tools to properly grade the slope behind the guiderail when the equipment cannot reach to the top of the embankment.

This is an important highway maintenance operation. When drainage systems do not function properly, water cannot leave the roadway, creating potential icing conditions in the winter and weakening areas designed to support the pavement, causing pavement distresses and washouts.

## SIDE DOZING

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