Section X - Operations

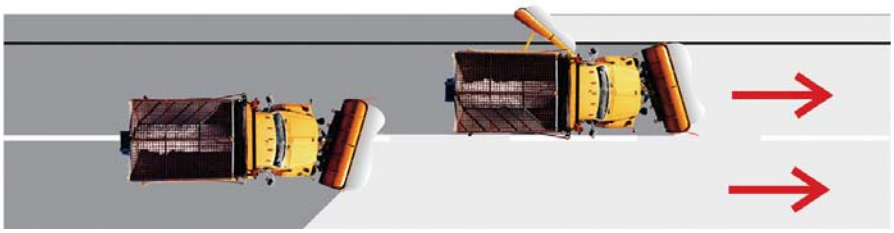
Plowing Operations

Plowing snow and/or ice is a maintenance operation, which the operator should give special consideration. Winter operations can fail or succeed, depending on the effectiveness of plowing operations.

Plowing Operation

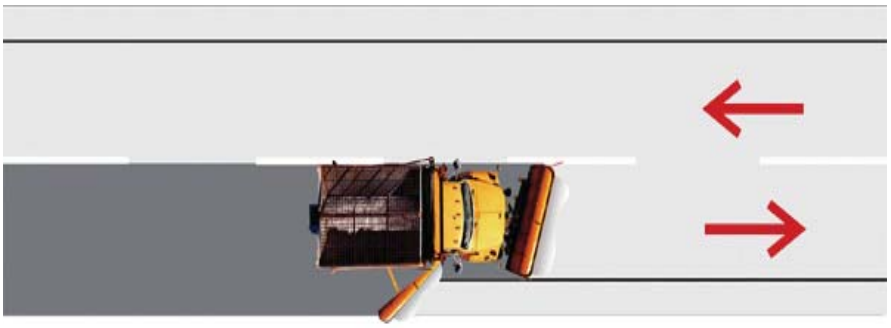
Speed: Best results occur at slower speeds; as traffic allows and road conditions warrant, the operator should maintain a truck speed between 25-30 mph.

The plow should "hug" the centerline **but not cross the centerline**. On the next pass, work towards the shoulder. It is important to keep the centerline clear so you will know where you are in relation to the road and other traffic.



Two-lane Highway (two-way traffic)

It is important not to over plow. If roads are "spotty" with patches of cover, the operator may want to pick up the plow slightly to avoid "sparking" and reduce extensive wear on the plow blades. It is also important not to carry your plow too high as this could cause the truck to overheat.



Two-lane Highway (one-way traffic)

Gang Plowing

Gang plowing is probably the safest and most effective method for clearing first priority (high volume) routes in urban areas. Gang plow trucks should be positioned as shown.

Gang Plowing

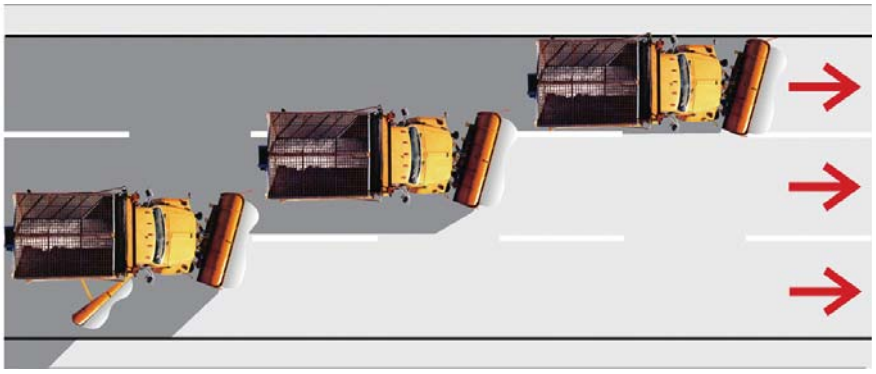
The truck speed should be kept between 20-30 mph and the distance between each gang truck should be close enough to prevent other vehicles from "squeezing" in between them.

A gang plow operation can consist of almost any number of trucks but the standard rule is to have 2 to 3 more trucks than there are lanes being plowed. By overlapping plow widths, the road can be cleared shoulder to shoulder with little or no windrowing.

When utilizing more than three trucks, it is recommended that the trucks in the rear be tandems due to larger loads of snow left by the trucks in the front.

Due to the amount of snow windrowed when gang plowing, either a clean-up plow or the last truck in the gang should drop off to open ramps and provide access to traffic on and off of the main highway.

In some cases, a protective or "blocker" vehicle may be used to help control traffic for gang plow operations.



Gang Plowing

Plowing Intersections

When cleaning intersections the operator must be aware of his/her surroundings at all times. The operator must be aware of obstacles such as raised islands, delineators, guardrails, signs, and most importantly, other vehicles.


Cleaning the Intersection

Cleaning an intersection requires the operator to maneuver the truck backwards and forwards while watching for traffic hazards. Be sure snow isn't being piled in a manner that creates a sight distance problem for drivers.

Each vehicle has a large blind spot behind it, causing obstacles and vehicles to be hidden from the operator's sight.

When cleaning an intersection, begin in the center and work toward the edges. Begin by plowing the middle of the intersection first. In most locations, the snow can be moved to both sides of the intersection. Continue working the snow toward the edges until you have cleaned the intersections beyond the edge of the pavement, and preferably beyond the edge of the shoulder. Be careful not to get the wheels of the vehicle off of the pavement or solid shoulder, as this may cause the vehicle to become stuck.

Most importantly, snow should never be piled so high on either side of the intersection that it obstructs sight distance for motorists pulling out of the intersection.

When backing up in an intersection while cleaning it, avoid backing into the lane of oncoming traffic, when possible. If you must back into the lane of oncoming traffic use extreme caution and be sure there is no traffic coming. Remember to show courtesy toward other motorists.

Plowing Bridges and Overpasses

Pay attention to weather and temperature changes since bridge decks will be the first to freeze over. Plow and treat bridges as you would road surfaces. Pay special attention to elevated bridge decks. Treating the high side of a bridge deck will allow chemicals to work down to the low side.

When plowing bridges over highways or railroads, do not throw snow over the bridge rail and parapet onto traffic, pedestrians, or rail traffic.

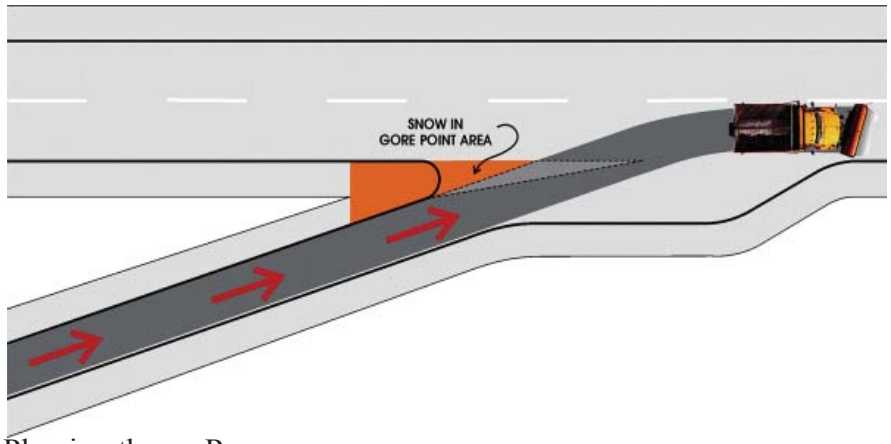
Plow shoulder on bridges often throughout the storm to eliminate snow accumulation against the bridge rail and parapets causing snow ramps.

Pay special attention to bridge approaches and expansion joints. Adjust or raise plow to avoid striking these hazards.

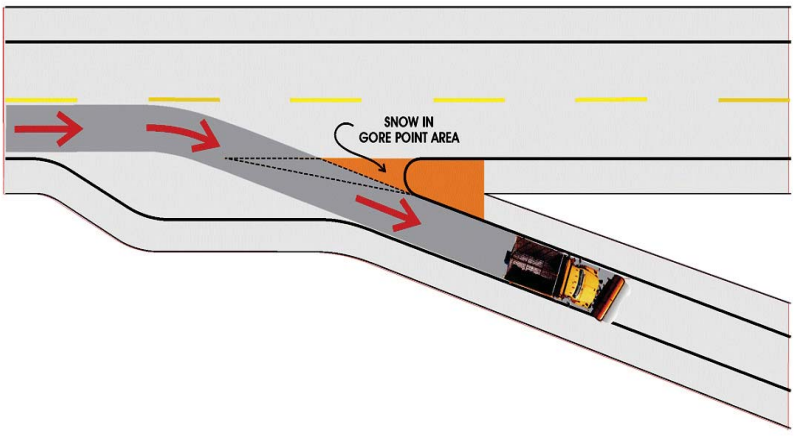
Plowing Ramps

When plowing ramps, the snow can be pushed to either side of the ramp until you reach the gore point. This is the area where the ramp contacts the main roadway. At this point, all of the snow should be moved toward the outside shoulder.

As snow is removed from the main roadway, it is cast toward and sometimes onto the ramp area. To keep the ramp safe for motorists merging onto the main roadway, plow the portion of the ramp that is closest to the lane of the main roadway first. This removes any snow or windrow that motorists may have to drive through to get to the main roadway. Using this method to plow ramps also keeps you from having to push the remaining snow into a pile at the end of the quadrant causing a dangerous "ramping" effect. See illustrations for more details.



Plowing the on Ramp



Plowing the off Ramp

Front Mounted Plow

The front-mounted plow is the most commonly used plow for snow/ice removal. The front mounted plow offers multi-directional plowing, as well as pushing power. The operator should become familiar with the operational controls and safety aspects associated with the front-mounted plow, prior to inclement weather.

Spreading Operations

There are a few simple rules to follow when it comes to spreading material effectively. In most cases, your supervisor will communicate to you the desired amount of material to be applied, or there will be a chart that is located in the truck you are operating. Remember, if you have questions, don't be afraid to ask your supervisor.

You should always be aware of your surroundings in relation to other traffic. This reduces the chance of property damage to other vehicles (i.e. broken windshields).

Operators should try to place materials toward the center of the road and allow the chemicals to work their way out toward the edges of each lane. With banked curves, the materials should be placed on the high point of the roadway so they can work down the grade. In any case, the operator should give the chemical time to work before replowing.