Haulage road conditions can play a big part in the safety of a mining operation. Poor road conditions can make it much more difficult to operate equipment safely.

Hazardous conditions include: grades that are too steep; roadways that are too narrow; inadequate traffic control signs; unstable slopes; poor drainage; problems due to weather conditions; inadequate sight distance at the crest of hills and around curves; and lack of adequate berms or guardrails.

These conditions can lead to loss of control of the truck, collisions with other vehicles, runaway trucks, and trucks going off the roadway and overturning.

Important considerations for keeping haul roads safe include:

• Roadways wide enough to allow the safe passage of the largest equipment that uses the haul road.

• Adequate berms or guardrails on elevated roadways where there is a danger of a vehicle running off the road. Berms higher than axle-height should be used in more critical areas such as at steep grades and sharp curves.
Roads and haulage systems need to be carefully designed and maintained to ensure safe operation. Factors such as road grade compatibility with the equipment using them, and the presence of steep grades, must be considered. 

Traffic signs should be in place to control traffic and provide information such as speed limits, grades, and traffic patterns. Vehicle operators should be alert to changes in road conditions, especially after weather-related changes. Operators should promptly report any unusual or potentially dangerous road conditions, such as:

- Poorly drained areas;
- Soft shoulders;
- Washed-out areas, ruts, and gullies;
- Boulders or debris on the roadway;
- Ice and snow drifts;
- Ice and snow drifts on the roadway;
- Traffic signs to control traffic flow and provide vehicle operators with information about road conditions.

It is especially important that new operators be instructed on the capabilities of the equipment they are operating and any special driving precautions that should be taken on the mine's haul roads. Drivers trained on any change in traffic conditions should be made aware of any unusual or potentially dangerous road conditions.

To help ensure safe operations, haulage grades have been a factor in haulage system design and operation. Steep grades have been a factor in haulage accidents. Haul road grades compatible with the capabilities of the equipment using them are essential for safe operation.