



Mining Geotechnical Stability Checklist

Site Overview & Data Review

Initial assessment of site conditions and review of existing geotechnical data (borehole logs, stability reports, etc.).

Date of Review

Reviewer ID

Geotechnical Domain (e.g., Open Pit, Underground)

- ☐ Open Pit
- ☐ Underground
- ☐ Tailings Storage Facility

Brief Summary of Site History & Previous Instabilities

Relevant Geotechnical Reports (e.g., stability analysis, hydrogeological studies)

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Current Geological Formation

- ☐ Sandstone
- ☐ Limestone
- ☐ Shale
- ☐ Granite
- ☐ Other

Summary of existing monitoring data and trends

Write something...

Slope Monitoring Equipment

Verification of installation, calibration, and functionality of slope monitoring instruments (inclinometers, extensometers, piezometers).

Inclinometer Reading (Max)

Enter a number...

Extensometer Reading (Length Change)

Enter a number...

Piezometer Pressure (kPa)

Enter a number...

Last Calibration Date (Inclinometer)

Enter date...

Last Calibration Date (Extensometer)

Enter date...

Time of Reading

Equipment Status (Inclinometer)

- ☐ Operational
- ☐ Needs Maintenance
- ☐ Faulty

Equipment Photo (Optional)

 Upload File

Visual Inspection - Ground Movement

Detailed observation and documentation of any visible ground movement, cracking, or deformation.

Describe any observed ground cracking (size, orientation, pattern).

Write something...

Maximum crack width observed (mm).

Enter a number...

Types of ground movement observed (select all that apply)

- ☐ Subsidence
- ☐ Lateral movement
- ☐ Vertical displacement
- ☐ Rockfall
- ☐ None observed

Note any signs of recent settling or displacement of structures.

Write something...

Upload photos of observed ground movement.

 Upload File

Record precise location of observed movement (GPS coordinates)

 Set My Current Location



Visual Inspection - Support Systems

Assessment of the condition and effectiveness of ground support systems (rock bolts, shotcrete, mesh).

Rock Bolt Quantity

Enter a number...

Shotcrete Thickness (mm)

Enter a number...

Rock Bolt Condition

- ☐ Good
- ☐ Fair
- ☐ Poor

Shotcrete Condition

- ☐ Intact
- ☐ Cracking
- ☐ Delamination

Comments on Mesh Condition (if applicable)

Write something...

Photos of Support Systems

 Upload File

Mesh Density (kg/m²)

Enter a number...

Water Management & Seepage

Evaluation of water ingress, drainage systems, and potential for instability due to water pressure.

Piezometer Reading (kPa)

Enter a number...

Inflow Volume (m³/hr)

Enter a number...

Drainage System Condition

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor


Observations on Surface Water Flow

Write something...

Evidence of Seepage

- ☐ None
- ☐ Minor
- ☐ Moderate
- ☐ Significant

Photos of Water Ingress/Seepage

 Upload File

Weather Condition Impacts

Assessment of recent weather patterns (rainfall, freeze-thaw cycles) and their potential impact on slope stability.

Date of Last Significant Rainfall Event

Enter date...

Rainfall Amount (mm) during Last Event

Enter a number...

Ground Temperature (°C)

Enter a number...

Freeze-Thaw Cycle Risk?

- ☐ High
- ☐ Moderate
- ☐ Low
- ☐ None

Observed Weather Impacts (e.g., surface runoff, saturation)

Write something...

Wind Direction

- ☐ North
- ☐ South
- ☐ East
- ☐ West
- ☐ Variable

Wind Speed (km/h)

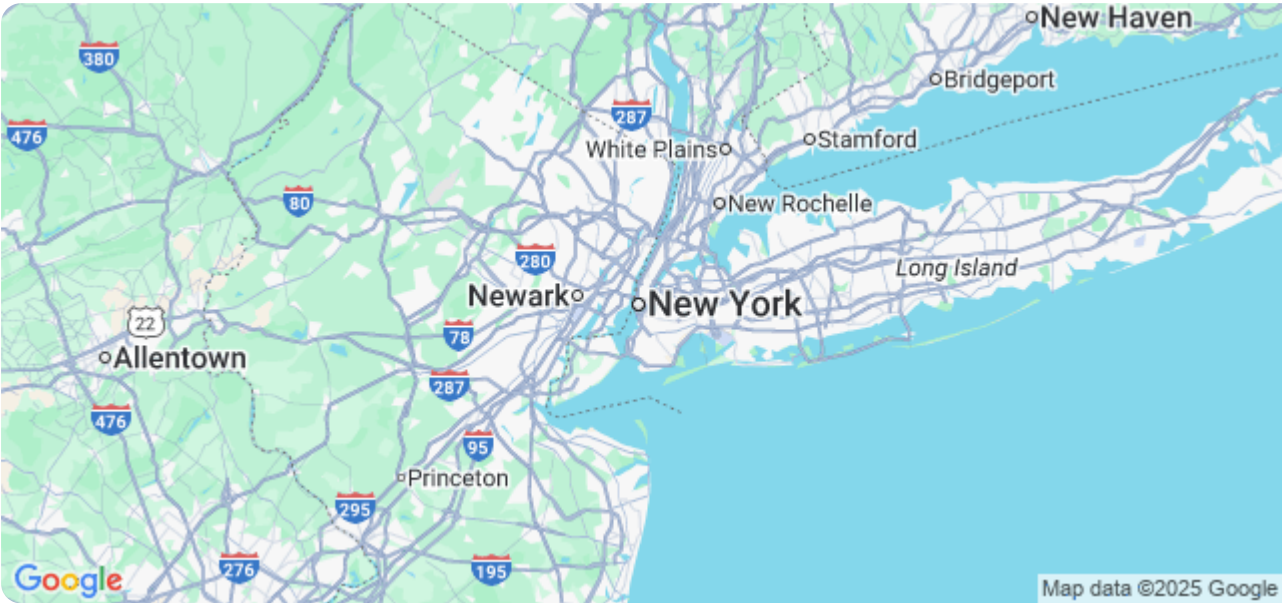
Enter a number...

Equipment & Traffic Routes

Review of equipment placement and traffic routes relative to slopes and potential hazards.

Equipment Staging Area Coordinates





Distance from Slope Edge (meters)

Route Designation

- ☐ Primary
- ☐ Secondary
- ☐ Restricted

Slope Angle (degrees)

Potential Hazards?

- ☐ Rockfall
- ☐ Subsidence
- ☐ Debris Flow
- ☐ Unstable Ground

Notes on Route Condition

Write something...

Unstable Ground Identification

Documentation of any areas of concern or potential instability requiring further investigation or mitigation.

Description of Observed Ground Feature (e.g., crack, slump)

Write something...

Approximate Crack Width (mm)

Enter a number...

Approximate Displacement/Movement (mm)

Enter a number...

Type of Ground Failure

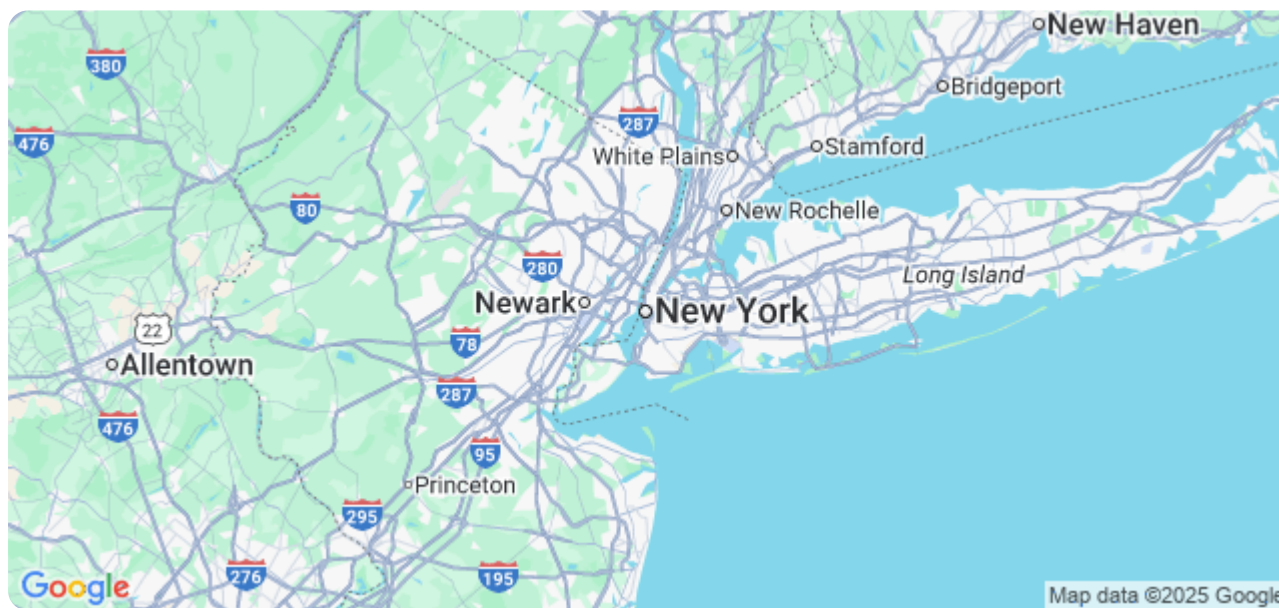
- ☐ Rockfall
- ☐ Slump
- ☐ Subsidence
- ☐ Creep
- ☐ Other

Contributing Factors (e.g., water, blasting)

Write something...

Precise Location of Feature

[📍 Set My Current Location](#)



Photographic Evidence

[📁 Upload File](#)

Mitigation Actions & Recommendations

Proposed actions to address identified risks and improve overall slope stability.

Detailed Description of Recommended Mitigation Action

Write something...

Quantity of Rock Bolts Required

Enter a number...

Thickness of Shotcrete Required (mm)

Enter a number...

Type of Ground Support System

- ☐ Rock Bolts
- ☐ Shotcrete
- ☐ Mesh
- ☐ Sprayed Concrete
- ☐ N/A

Planned Completion Date for Mitigation

Enter date...

Urgency Level of Mitigation Action

- ☐ Immediate
- ☐ High
- ☐ Medium
- ☐ Low

Justification for Recommended Mitigation

Write something...

Supporting Documentation (e.g., Design Calculations)

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Follow-up & Reporting

Details of planned follow-up actions and reporting requirements.

Next Inspection Date

Enter date...

Time of Inspection

Inspection Severity Level

- ☐ Low
- ☐ Medium
- ☐ High
- ☐ Critical

Summary of Findings & Recommendations

Write something...

Supporting Documentation (Photos, Reports)

 Upload File

Days Until Next Inspection

Enter a number...

Inspector Signature