5.3 Road Corridor Preparation

5.3.1 Preparing the Site

Site preparation along the road corridor includes all works associated with logging the timber within the right-of-way, including development of pilot trails and skid trails, skidding or yarding, and loading and sorting. Such work may also include the relocation of timber decks or other logistical operations to facilitate construction activities. Grubbing, stripping, and disposal of all unsuitable materials not used in subgrade construction are also considered part of site preparation.

Assess the right-of-way corridor for the presence of any dangerous trees and remove any such trees.

5.3.2 Establishing Clearing Widths

Establish clearing widths to facilitate the construction, use, and maintenance of forest roads. For natural slopes up to 60% slope angle, determine clearing widths from the Tables to Establish Clearing Width. For slopes greater than 60% slope angle, or in areas of moderate or high likelihood of landslides, determine clearing widths from the geometric road design.

Consideration **must** be given to not create hazards for any subsequent potential operations not only within the right of way but in operational forest areas outside this area and especially on the downhill side. (i.e. hazards might include timber decks supports by standing timber, rock supported on slopes by timber to be felled or otherwise in unstable positions. Should hazards be created inadvertently than mitigation strategies and communication to subsequent employers **must** be arranged.

The objective when establishing clearing widths is to minimize the width of the clearing, yet accommodate:

- the road prism;
- user safety;
- decking of right of way timber;
- turnouts;
- subgrade drainage;
- subgrade stability;
- waste areas and endhaul areas;
- pits and quarries;
- landings;
- slash disposal;
- equipment operation;
- snow removal;

- fencing and other structures; and
- standing timber root protection, especially on cut banks.

Figure 5-1 Typical roadway on gentle slopes with no additional clearing

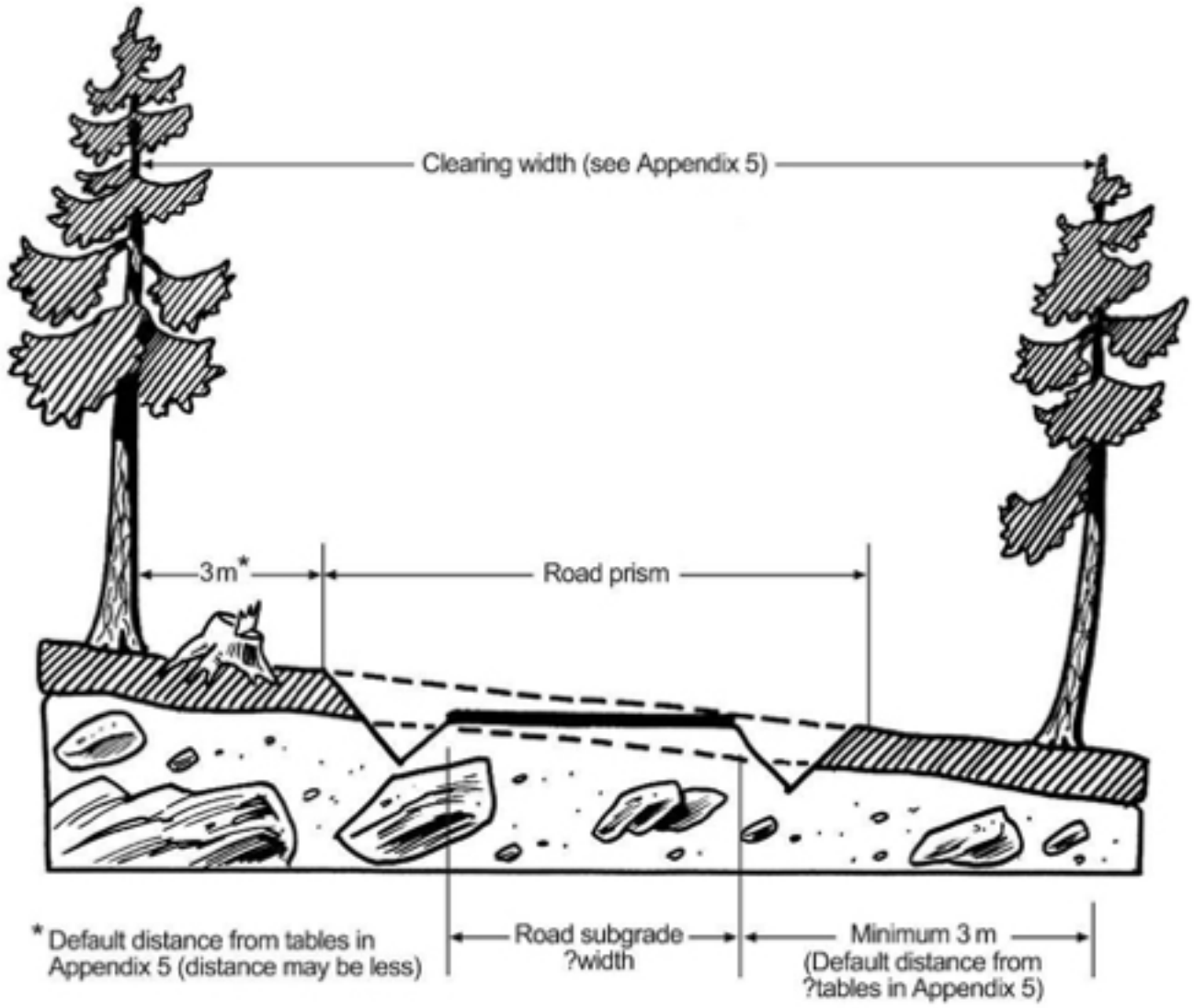
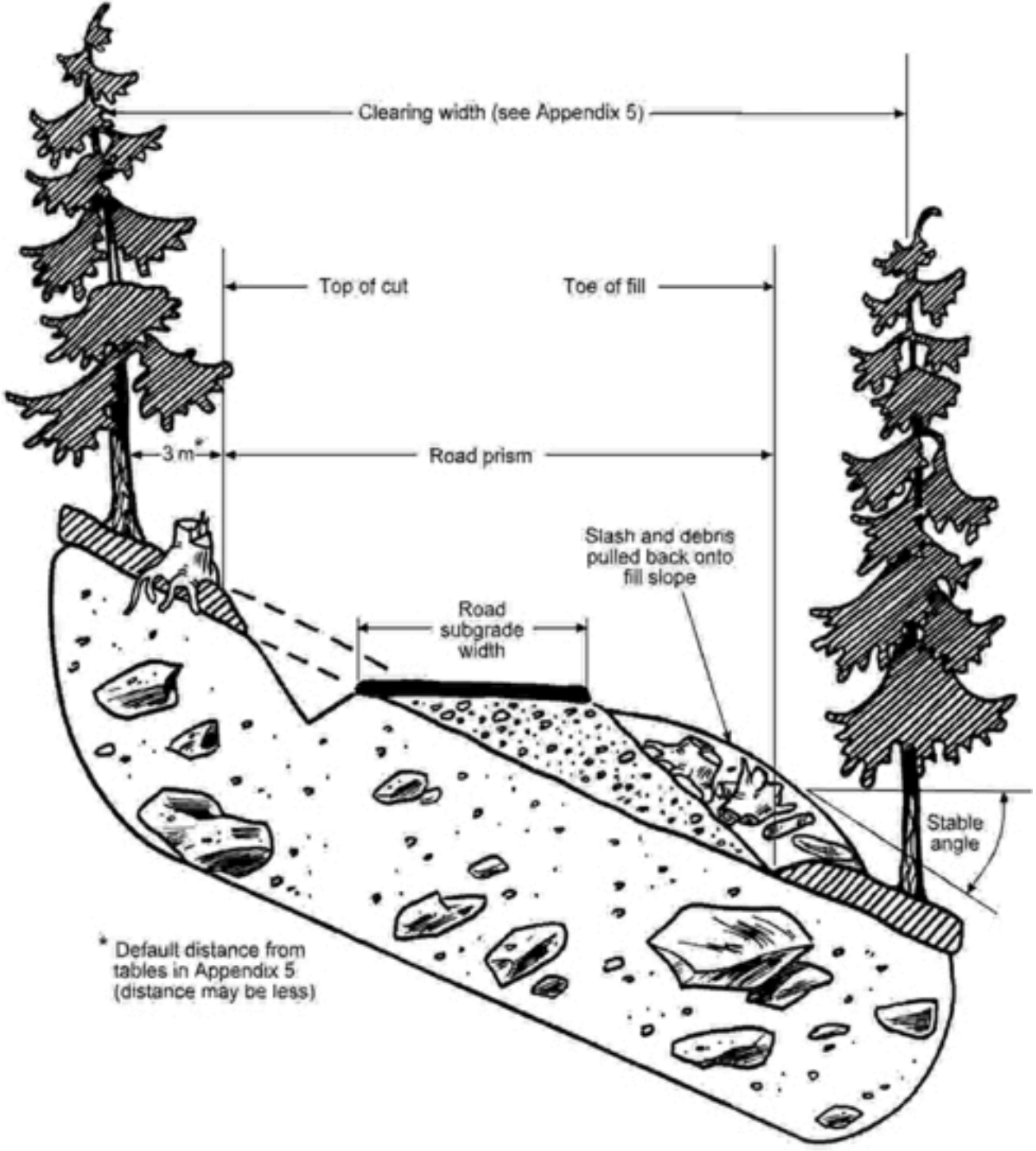


Figure 5-2 Typical permanent roadway on moderate slopes (best practice)



5.3.3 Marking Clearing Widths

Mark clearing widths in the field, usually with flagging tape, so that the clearing boundaries are clearly visible for machine operators or hand fallers to follow.

Ensure that trees that are marked to establish the clearing width remain after the clearing operation is completed. Leave standing those trees that are on the boundary unless the roots will be undermined by operations within the clearing width. Where slope staking is not required, use the flagging as an offset line to establish the top of cut for grade construction.

5.3.4 Establishing Pilot Trails

Frequently, pilot trails or tote roads are built within the clearing width before falling begins. These trails provide access for the faller (hand or mechanical), a route for skidding felled timber to a landing or collection point, and temporary access along the road corridor.

Terrain and soil conditions govern the location of the pilot trail within the clearing width. Generally, construct the trail below the flagged centreline on side hills, near the lower clearing width limits. This allows for easy access to skid-fallen timber, and allows for the toe of the road fill to be keyed into the slope. Where drilling and blasting are required, build the trail above the road centreline, just below the upper clearing limit, to permit vertical drilling of the rock cut.

Ensure that care is taken to remove debris from the downslope during the right-of-way logging phase unless the debris can reasonably be reached by equipment operating on the surface of the pilot trail or final road subgrade.

Install drainage structures concurrently with pilot trail construction, including temporary stream crossings that may be required during the road construction phase until the permanent crossing is constructed. For further details, see Road Drainage Construction.

5.3.5 Felling & Yarding Within the Clearing Width

Expand All | Collapse All

Felling methods

Several methods for falling trees within the clearing width are available depending on terrain, soil conditions, timber size, and total volume.

Fell all standing merchantable and non-merchantable timber along any section of road subgrade remove the timber before construction. Ensure that timber does not become buried under soil, rock, and debris, and the wood is accessible for future retrieval from the road subgrade.

Further information about falling is contained in the British Columbia Occupational Health and Safety Regulation (Sec. 26.11 and 26.21 to 29.30) and the WorkSafeBC Guidelines (Part 26).

Landings

Locate landings within the clearing width so as not to interfere with other operations. Ideally, show landing locations on the construction drawings and mark them in the field.

Protecting streambanks during felling operations

Before falling begins, ensure that streams and their associated riparian management areas and the “machine-free zones” identified on operational plans have their buffer zones flagged in the field. Use appropriate directional falling techniques to protect these areas. For further information, refer to the Riparian Management Area Guidebook.

Protecting streambanks during yarding operations

Yarding operations can result in streambank destabilization. Prevent this damage by yarding away from streams, not across them.

Removing debris from streams

Where debris is accidentally introduced into the stream, carry out clean-up concurrently with clearing operations. Mitigate without delay any stream bank damage, outside of designated crossings.

Dangerous trees

Identify all dangerous trees outside the clearing width deemed hazardous to road workers or users and fell them as part of the falling phase of site preparation. See Preparing the Site.