Session 6

Desk Exercise

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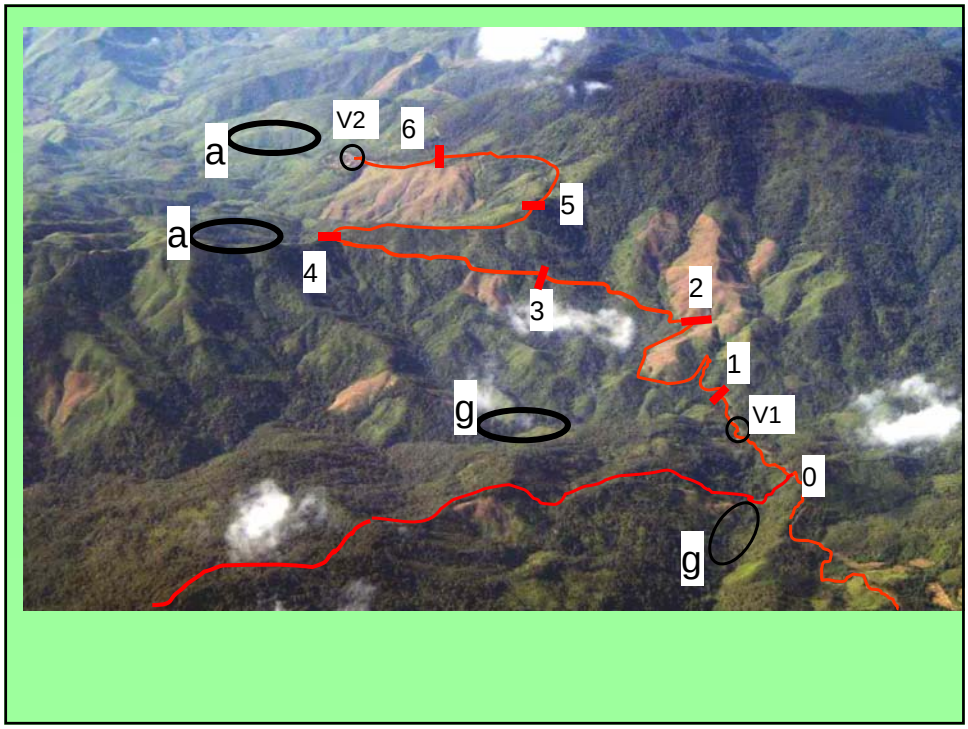
Introduction

The object of this exercise is gain some experience in the assessment of LVRR pavement options based on the previous 2 days of lectures and discussions and in particular in the use of EOD principles.

The exercise will involve dividing the trainees into 3 groups, each of which will compile a 15 minute presentation on the selection of possible pavement options for rehabilitating a LVRR under EOD principles within a fixed budget and based on a package of information


Road Rehabilitation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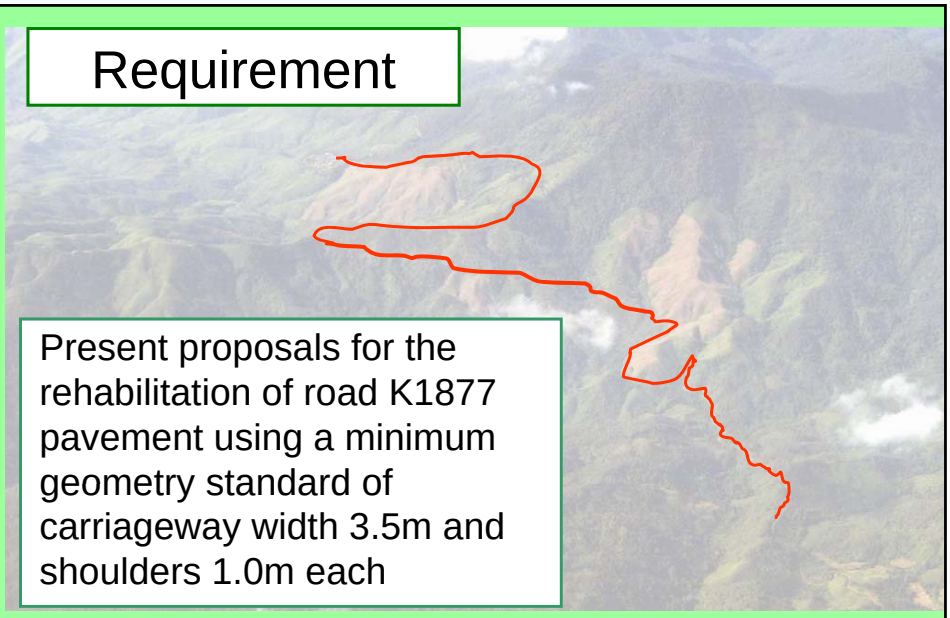
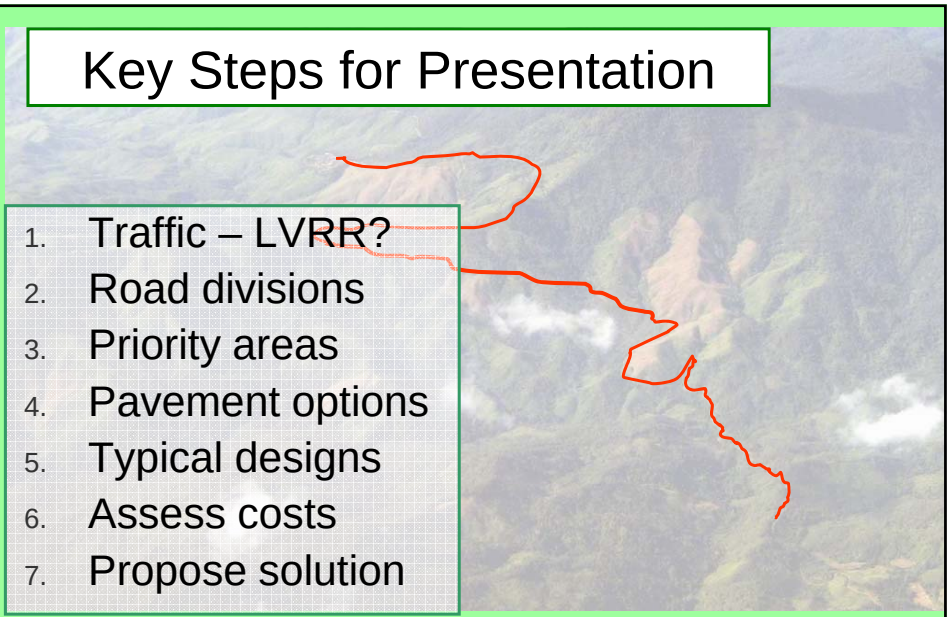
Requirement



Present proposals for the rehabilitation of road K1877 pavement using a minimum geometry standard of carriageway width 3.5m and shoulders 1.0m each

Key Steps for Presentation



1. Traffic – LVRR?
2. Road divisions
3. Priority areas
4. Pavement options
5. Typical designs
6. Assess costs
7. Propose solution

Basis of EOD Manual Approach

Division of the road into a number of similar sections based on factors such as:

- Road geometry
- Road condition
- Gradient
- Village
- Flooding
- Subgrade.

Specific Health-Environment Issues

If the road is:.

In a village
Beside a school or health centre

Ideally road should not have a dusty unsealed surface

The is in addition to other engineering considerations such as rainfall, gradient etc

Traffic Volume Calculation

From completed site forms the daily average flow counts for each vehicle type can be calculated and then converted into an equivalent daily traffic using the factors in the following table to determine the **Average Daily Traffic (ADT) or motorised ADT.**

If traffic is known to pass at night, then a multiplication by 1.2 should be applied to estimate the 24 hour count.

Take account of unusual days – eg market days.

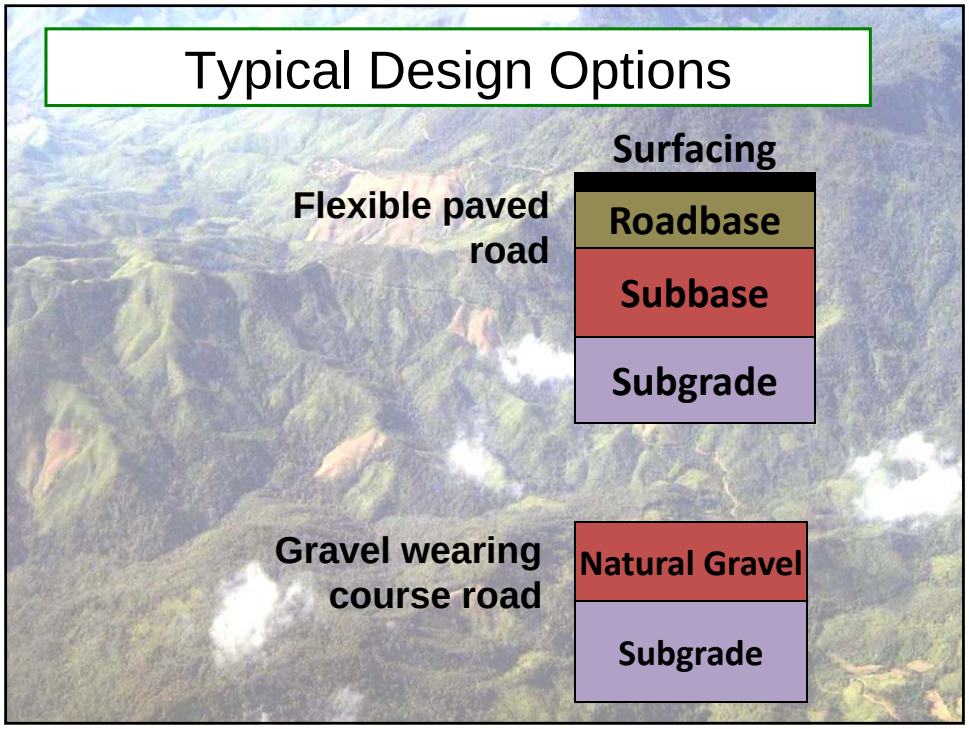
Traffic Counted	ADT Factor
Truck>5t	5
Large Bus	5
Truck <5t	2.5
Small Bus	2
Motor cycle trailer	1
Car	0.8
Animal	0.2
Motorcycle	0.1
Bicycle	0.05
Pedestrian	0.02

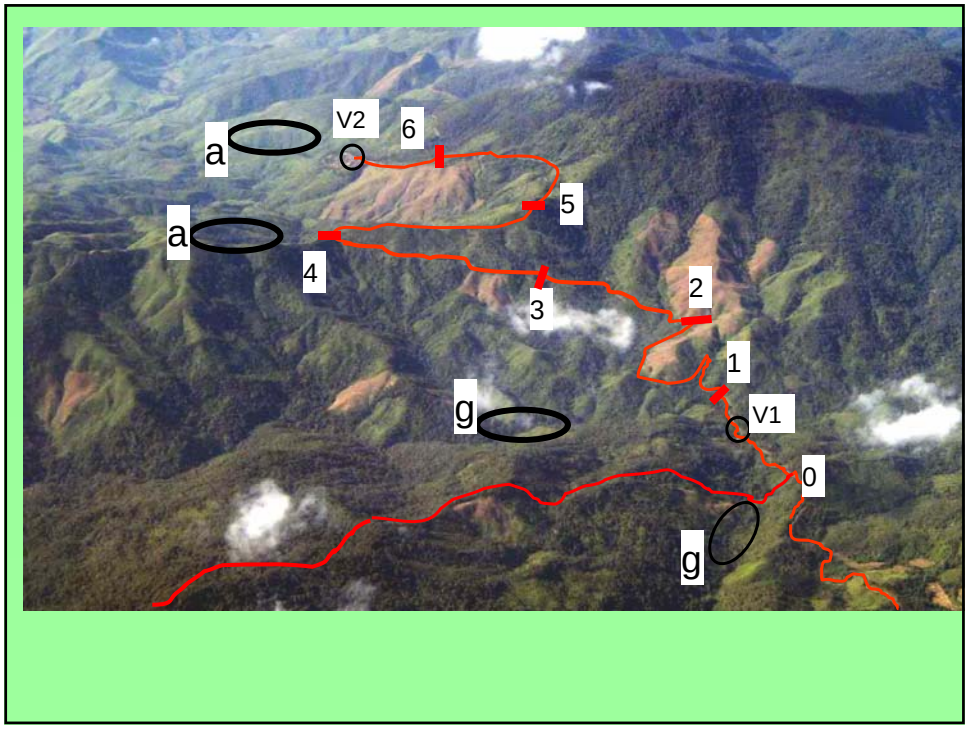
Traffic Analysis

4 wheel (2 axle) Motorised traffic

Outline Designs

Subgrade Soaked CBR%	Pavement Layer	Traffic A Layer Thickness (mm)	Traffic B Layer Thickness (mm)
2-3.9	Surface Base Sub-Base	Seal 100 175	Seal 120 200
4-6.9	Surface Base Sub-Base	Seal 100 150	Seal 120 175
7-10.9	Surface Base Sub-Base	Seal 100 100	Seal 100 175
>11	Surface Base Sub-Base	Seal 100 100	Seal 100 150

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