

SEACAP 3.01

**Appropriate LVRR Standards
and Specifications
for Lao PDR**

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Key Aims

The development & mainstreaming of appropriate rural road standards based on road function & available resources

Formal STANDARDS are essential to provide the framework within which resource-based LVRR options can be mainstreamed with appropriate technical SPECIFICATIONS.





The Requirement



Key Issues

Designs or options need to meet road task requirements (Task-Based)

- **Designs based on available human; budget; materials and construction resources (Resource-Based)**
- **Designs appropriate to the road environment (Environmentally Optimised)**



Standards: Three Key Points

- ❑ **Compatible with Lao PDR Road Law**
- ❑ **Based firmly on the road function NOT administration**
- ❑ **Falling within the Low Volume Rural Road traffic envelope**



LVRR Envelope

The LVRR classification

Upper axle load of 4.5T

Upper limit of an equivalent ADT of 150 motor vehicles

Traffic analysis based on assessment of key vehicles



Key Function Issue: Safety

LVRs are very likely to carry mixed traffic; from light trucks to pedestrians.

Safety is a key issue in mixed traffic environment.

Need to keep traffic slow (40km/hr) rather than designing for maximizing speed.

Wider shoulders is also an option



Appropriate Specifications

The use of local construction materials is essential: specifications and design must suit the available materials.

Specifications and design options aimed at an Environmentally Optimised Design (EOD) and Spot Improvement strategy; best use of available budget resources



Delivered

The key delivered outputs are:

- ❑ A new LVRR Classification with a suitable set of Geometric Specifications**
- ❑ A matrix of pavement and surfacing design options**
- ❑ A guideline document associated with (1) and (2) above.**



Key Pavement Outcomes

1: Reduction in pavement thickness

2: Allows variation in material quality

3: Use of capping layer material

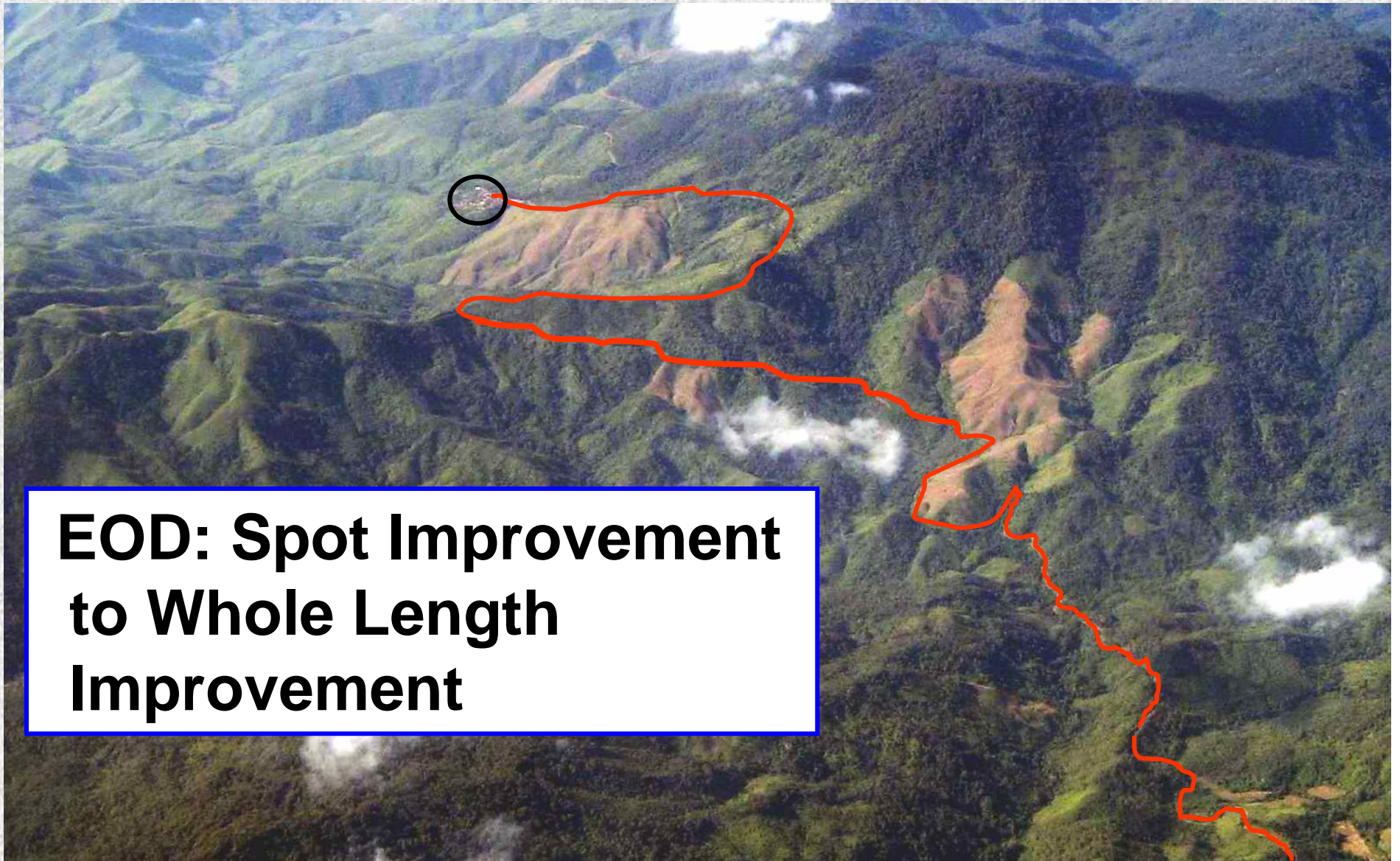


Application Framework

Whole-Life Costed & Environmentally
Optimised Design (EOD)

Utilising the available resources of budget
and materials in the most cost-effective
manner.





EOD: Spot Improvement to Whole Length Improvement



An aerial photograph showing a river winding through a dense, green forested area. The riverbed is visible, showing some erosion and sediment. The surrounding landscape is hilly and covered in thick vegetation. The text is overlaid on the bottom left of the image.

Regional variation in Standards & Specifications – Design Exceptions



Research into Practice through appropriate Standards and Specifications

