

# ***Term Maintenance ('Schedule of Rates' / 'Piece Work') – Pilot Contracting***

*Presentation for RAP3 Senior Technical Management Course*

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# DEFINING THE PROBLEM



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# The Problem – 1 of 3

- ❖ Predictable Interventions (definable in advance):
  - ❑ Routine and light Recurrent by RMGs
  - ❑ Periodic (e.g. re-gravelling) by Contractor
- ❖ Unpredictable Interventions:
  - ❑ Emergency Maintenance by ?
  - ❑ Heavy recurrent (e.g. black-top / gravel patching) by ?
  - ❑ Specific Maintenance by ?

# The Problem – 2 of 3

## ❖ Timing (urgency)

- ❑ **Emergency** (landslide clearance) – need immediate reaction vs direct procurement thresholds etc.
- ❑ **Potholes** – a pothole today .. a patch tomorrow .. resurfacing next month?

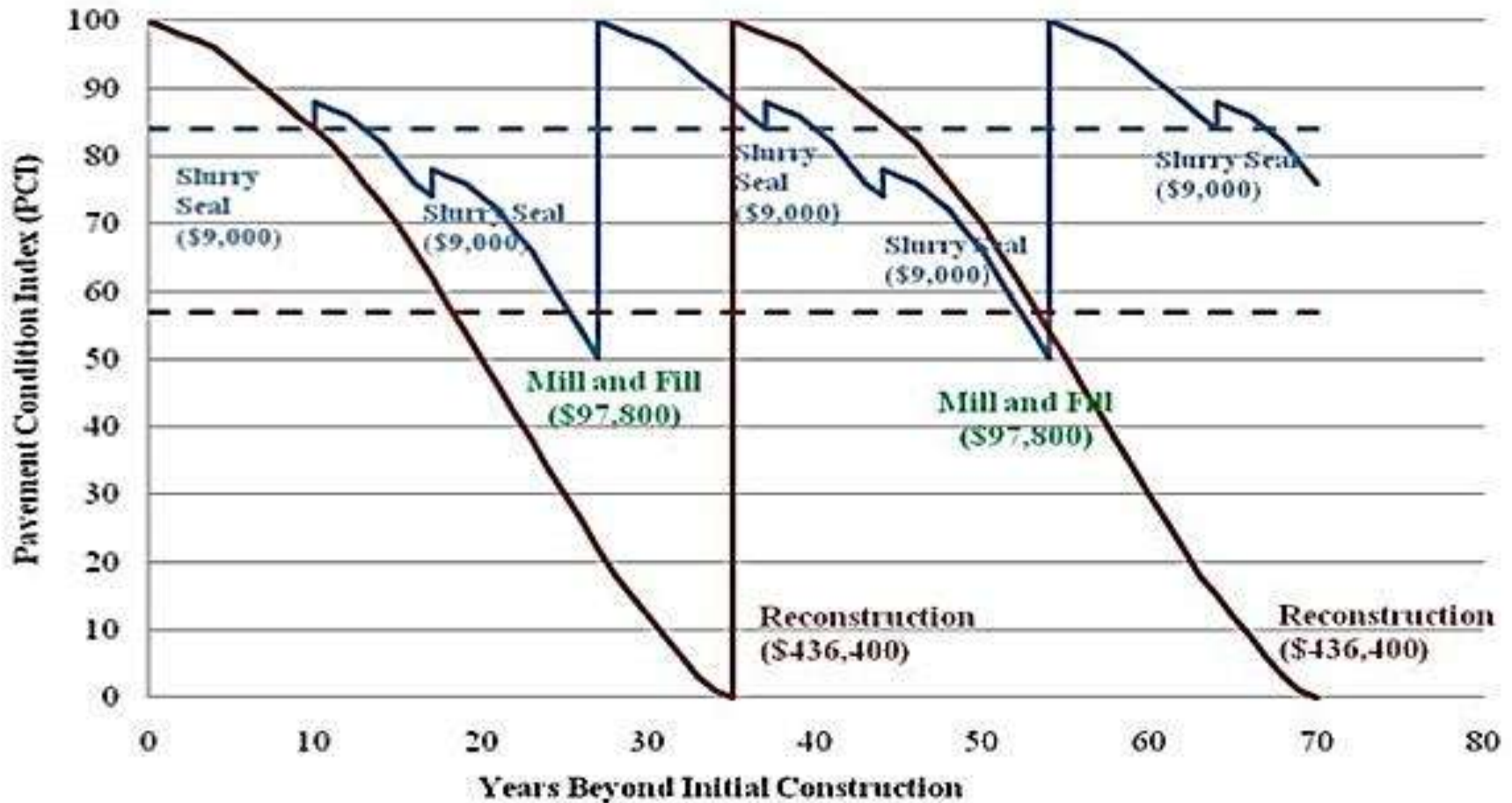
## ❖ Continuity

- ❑ **Contractors** and their machines work only in March to July (monsoon!) – what about Oct. to Feb.?
- ❑ Why should the **public** wait (1 month of pain or 6 months)?

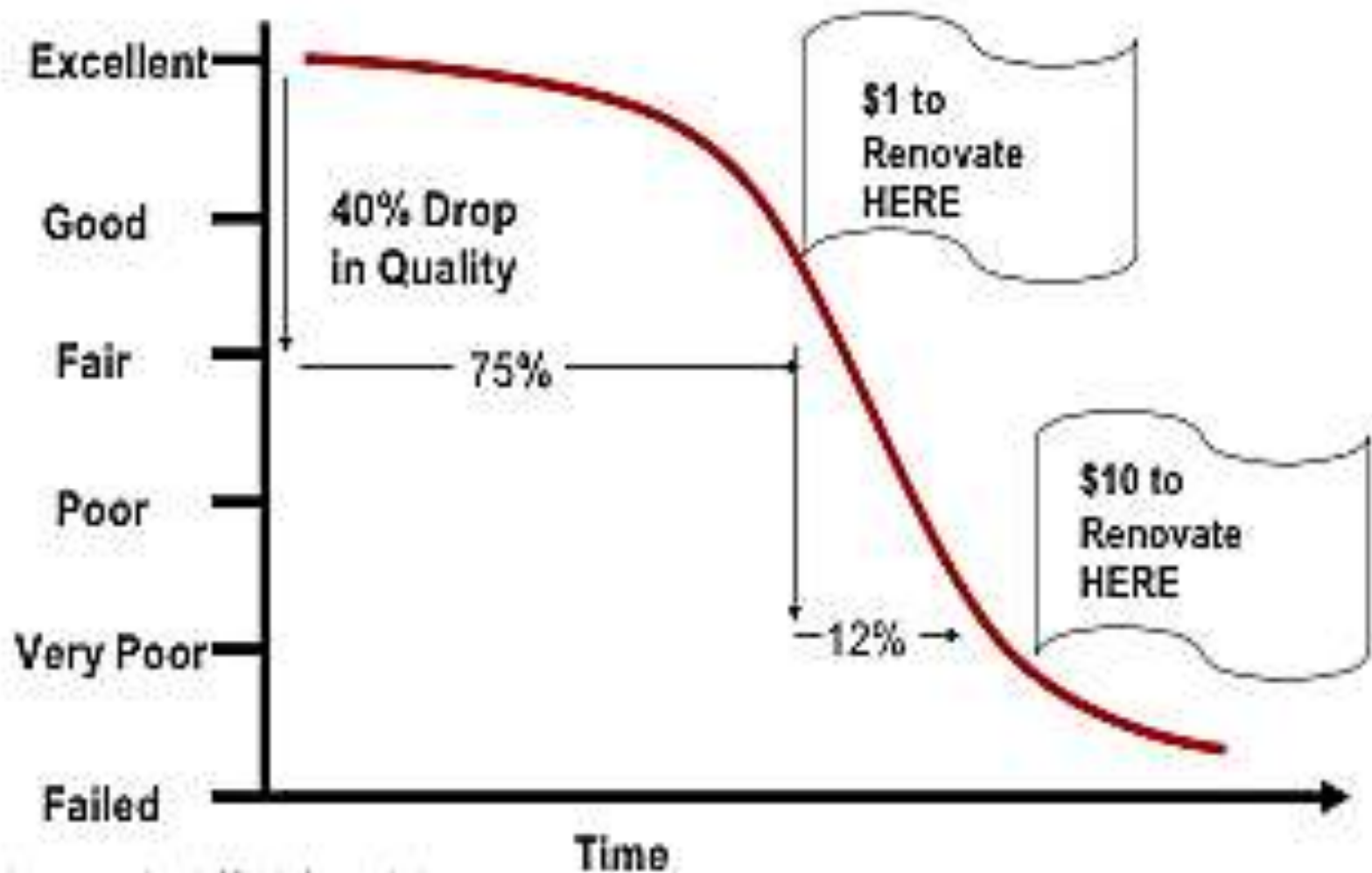
# The Problem – 3 of 3

- ❖ PPR implies a required Design, Drawing and Detailed BoQ – for maintenance!?
- ❖ Procurement is slow (while the road continues to deteriorate)
- ❖ ‘Direct Procurement’ gives poor VfM and isn’t transparent
- ❖ Maintenance Contracts (1 per road) are low value attracting unqualified bidders

# Road Deterioration Cycle



# Pavement Life Cycle





# Late Working into Monsoon



# Potholes > Patches > Resurfacing



# CHOICE OF CONTRACTING APPROACH



# Types of Contract

- ❖ **Conventional Works Contract (e.g. FIDIC)**
  - i) Survey, ii) design, iii) quantity, iv) **procure**, v) implement, vi) re-measure, vii) pay
  - Not well suited to maintenance (reacts too slowly)
- ❖ **Performance Based (e.g. World Bank)**
  - Payments for preserving performance standards
  - Highly advanced (to 'overlay' or 'not to overlay'?)
- ❖ **Term Maintenance 'Schedule of Rates'**
  - i) **Procure** ii) Survey, iii) design, iv) quantity, v) implement, vi) re-measure, vii) pay

# Attributes of TM Contract

- ❖ Suitable for recurring work which cannot be precisely designed in advance.
- ❖ The Contractor provides a 'service' over time rather than undertaking one-off contracts.
- ❖ The Contractor is obliged to work when required within a given geographical area.
- ❖ The contract uses a 'schedule of rates' (often without quantities)
- ❖ The magnitude of the contract can be defined by the anticipated annual budget

# International Usage

- ❖ UK since the 1990's (move from DLO to Contractors)
- ❖ Africa (including South Africa, Uganda etc.)
- ❖ Australia, New Zealand
- ❖ Malaysia, India (hybrid)
- ❖ Hong Kong
- ❖ Etc., etc.

# KEY ELEMENTS OF A TERM MAINTENANCE CONTRACT

# Key Elements of TM Contract

- ❖ Schedule of Rates
- ❖ Service Information (inc network)
- ❖ Work Order



# 'Schedule of Rates'

- ❖ A bid rate for a unit item of work without quantities
- ❖ For a fixed period of time (usually 3-5 years)
- ❖ Often gives bands of quantity e.g.
  - ❑ B-Top patches < 0.5, 0.5-1, 1-5 sq.m categories,
  - ❑ Can include separate mobilisation charges (to compensate small or large volumes of work)
  - ❑ Can include separate transportation / haulage item (depending where in network work is)
- ❖ Bid Evaluated using a 'ghost BoQ' (doesn't go into the contract)
- ❖ UK Std Highways TM has ~ 2,000 'common' work items

# ‘Service Information’

- ❖ Describes the contract ‘**Network**’ and any constraints on the work
- ❖ Describes how the Employer will decide what work to instruct e.g. the system of **prioritisation** and at what **frequency**
- ❖ How the due ‘completion dates’ (durations) are to be determined and the mobilisation periods
- ❖ Specification details, etc.

# 'Work Order'

- ❖ Except 'establishment items' e.g. insurances, site offices etc. works are only initiated based on Work Orders
- ❖ Work Orders ('mini Contracts') state the following:
  - ❑ Detailed description of work (and location)
  - ❑ Priced and totalled list of work (from Schedule of Rates)
  - ❑ Starting and completion dates
  - ❑ Details of Liquidated damages
- ❖ Might also state:
  - ❑ Whether interim payments are allowed

# LEGAL STATUS IN NEPAL



# Legal Status (1 of 2)

## Public Procurement Rules (2064 / 2007):

- ❖ **Rule 22:** *'The public entity may procure construction works by entering into any one contract out of the contracts referred to in Schedule-4'*
- ❖ **Schedule 4:**
  - a) Unit Price contract
  - b) Lump Sum contract
  - c) Cost Reimbursement contract
  - d) Time and Materials Rate contract
  - e) Design and Build contract
  - f) Management contract
  - g) Performance-Based Maintenance or Management Contract
  - h) Piece-Work contract
- ❖ **Rule 24:** *'Where any terms other than the terms set forth in this Chapter in relation to any procurement contract (are required), the public entity may set forth such terms in the tender documents or proposal documents.'*

# Legal Status (2 of 2)

## '(g) Performance-Based Maintenance or Management Contract:

*A performance based maintenance or management contract may be entered into for the procurement of any construction work by specifying only the final performance without specifying the equipment and various item-wise works required for the maintenance or management of such work.'*

## '(h) Piece-Work contract:

*A piece work contract, which establishes a list of prices of construction work, may be entered into for procuring commonly occurring minor items of construction work to be used as and when the need arises. The validity period of this contract shall not normally exceed one year.'*

# STANDARD / ADJUSTED DOCUMENTATION

# Which form of Contract to Use?

- **JCT** (Joint Contract Tribunal, UK) – building orientated
  - ‘Term Contract’
- **NEC** (New Engineering Contract) – requires high degree of partnering / cooperation
  - ‘Service Contract’ & ‘Short Service Contract’
- **ICC** (Infrastructure Conditions of Contract - formerly ICE) – includes traditional role of the ‘Engineer’
  - ‘Term Version’
- **Indian Roads Congress** (2011) – a ‘hybrid’ contract
  - ‘Model Contract Document for Maintenance of Highways’
- **PPMO** (> NRs 6M) – construction works (modifiable?)



# Indian Roads Congress (2011)

- ❖ For maintenance of 'large highways' (blacktop)
- ❖ For networks 40-100km
- ❖ Recommended for 3-5 year terms
- ❖ Hybrid Contract ( 3 main approaches):
  - ❑ Routine Maintenance – lump sum / km / month for achieving Performance Standards
  - ❑ Periodic Renewal / 'Profile Correction Course' (mainly blacktop overlay)
  - ❑ 'Flood Damage Repair' / 'Special Repair Works' (unexpected damage or obstructions) – uses 'Work Order' / Schedule of Rates

# ICC Term Version (2011)

- ❖ UK Local authorities and utilities have used this type of contract for many years to carry out routine maintenance and remedial work within a set geographical area.
- ❖ based on the Term Version of the ICE Conditions of Contract (2002)
- ❖ traditional roles of the Engineer in advising the Employer
- ❖ suitable for planned maintenance or refurbishment work, as well as for emergency works where a contractor may be on call
- ❖ Preferred as basis / incorporate into PPMO?

# PILOTING PLANS



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# RAP3 Approach for Piloting

- ❖ Select Form of Contract (General Conditions) – ICC?
- ❖ Design Approach (Special Conditions)
  - ❑ Schedule of Rates – List of Items
  - ❑ Work Order format
  - ❑ System of works ID / prioritisation
  - ❑ Service Information – ‘response times’ / ‘completion times’, ‘performance standards. Specification (DoLIDAR / DoR) etc.
- ❖ Period: initially < 1 yr. (say Oct. to July)
- ❖ Value: > 6M (for qualification)
- ❖ Network: related to value (EM + Specific)
- ❖ Pilot District: ‘Maintenance COREs’
- ❖ Funding Mechanism: ‘Direct Funding’

# Timeframe to Launch

- ❖ Included as an 'Innovation' in 'RAP3 Extension'
- ❖ Ideally requires bidding during monsoon with main work activities post-monsoon:
  - ❑ Extension Steering Committee (Sept 2016)
  - ❑ System Design / Documentation (Sept – Dec 16)
  - ❑ Sensitise DoLIDAR / DDCs (Jan – Mch 17)
  - ❑ Contract Packaging / Design (May – June 17)
  - ❑ Bidding (July-Aug. 2017)
  - ❑ Works Implementation (Sept. 17 – July 2018)
  - ❑ Cycle Annually

**END**

