Road Maintenance In IRAN

By: MOHSEN SADEQI
A- growth rate of Registered vehicle in IRAN

2006 : 6000000
2011 : 12000000
2015 : 16000000

Annual growth rate = 12%

B- growth rate of Road Network in IRAN

Length of Road Network:
(included Freeway, Highway, main Road, Secondry Road):

85000 Km

Growth Rate of Road Construction(equivalent 2 lane Road): 3%
IRANIAN ROAD NETWORK IN 2014

Freeway: 2203 Km
Highway : 14155 Km
Main Road: 21628 Km
Secondary Road: 46458 Km
Paved Rural Road: 103169 Km
Nonpaved Rural Road: 26360 Km

Total: 214000 Km

Number of Bridges: 355000
and
300 tunnels with 142 Km length
Arterial Network: 34633 Km
• Criteria of Arterial Network
  – Traffic Volume
  – Connect to border crossings
  – Connect to ports
  – Connections between provinces Center
  – International Rute

• Value Of existing Road
  – About 40 b$
  – Annual Require Budget for Road maintenance about 2 b$
ROUTINE SERVICE:
The aim of routine service is to ensure the required service level of roads.

- Patching
- Crack sealing
- Strip and spot surface dressing
- Shoulders ordering
- Grass mowing
- Brushwood cutting
- Cleaning of ditches
- Maintenance of culverts
- Marking of roads
- Maintenance of traffic signs and marker posts
- Winter service works

- Keep the surface clean
- Inspection and minor repairs
- Clean and repair the signs and stained them
- Stained and sandblasted fences of bridges and awning
- Inspection and replacement of road lightening
- Maintenance of bridges and tunnels lightening
- Maintenance of tunnels ventilation systems
- Maintenance of guardrails and crash cushions
IMMEDIATE MAINTENANCE

In emergency situations such as floods, avalanches, snowfall, landslides, storms, accidents, and other conditions that cannot be predictable:

- Clearing the Roads with huge volume of waste
- Installing temporary warning signs for route guidance
- Make temporary route in shortest time
- Make Road technical structures in times of floods and storms
PERIODIC MAINTENANCE
THESE ACTIVITIES MUST BE DONE FREQUENTLY AND AT FIXED INTERVALS DURING THE YEAR.

- Periodic maintenance of roads and other structures
- Ensuring road safety, roads and other structures of Roads
- Repairs of gravel roads
- Asphalt surface and Roadmix
- Protective and surface coating
- Repair damaged asphalt road surface
- Repair of the embankment
- Dust binding
- Digging of new ditches
- Construction of culverts
- Installing of new traffic signs and boards and safety barriers
- Surface dressing of paved roads
IMPACT OF ROAD MAINTENANCE

• Improvement of Road quality
• National development
• Road user Cost Reduction
• Increase Road safety and Accident reduction
• Improve environment
• Reduce use of public budget in future
Situation of Arterial Roads surface

- Very Good: 37%
- Good: 19%
- Bad: 20%
- Fair: 24%
Situation of non Arterial Roads surface

Bad: 49%

Very Good: 11%

Fair: 16%

Good: 24%
## Maintenance Arterial Roads Annual Cost

Equivalent 52000 Km of main road

<table>
<thead>
<tr>
<th>Maintenance Operation</th>
<th>Period of implementation</th>
<th>Annual operation(Km)</th>
<th>Cost per Km($)</th>
<th>Sum (million $)</th>
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<tr>
<td>Structural Surface</td>
<td>10 years</td>
<td>5200</td>
<td>60000</td>
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**SUM(MILLION $)** 1014
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## Maintenance Paved village Road Annual Cost

Equivalent 31000 Km of main road

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**SUM (MILLION $)** 604.5
BUDGET ASSIGNMENT

- ANNUAL PUBLIC BUDGET FOR ROAD MAINTENANCE
  - 400 MILLION $
- ANNUAL BUDGET FROM REVENUE OF MRUD
  - 400 MILLION $
- Private sector only participate in freeway (toll way) maintenance
  - 50 MILLION$
PROGRAMS IN FUTURE

- Implementation PMS, BMS and other maintenance systems in IRANIAN road network
- Use ITS for Road maintenance
- Establish Transport fund
- Attempt to annual Road inventory
- Shift heavy goods to rail
THANK YOU FOR YOUR ATTENTION