

## Lecture #3:

Pavement Condition Index (PCI)

0 - 10 - 25 - 40 - 55 - 70 - 85 - 100

(Rating: Failed - Very Poor - Poor - Fair  
- Good - Very Good - Excellent)

Engineer's Rating

Pavement Condition Survey: (Distresses)  
Types, Severity Levels, Densities

Appendix A - Blank Field Survey Sheets

Appendix B, C - AC & PCC Roads

Appendix D, E - AC & PCC Airfields  
(Distress Definitions and Deduct Value  
Curves)

Brief description of each distress type

LTPP Distress Identification Manual

(下學期「鋪面評估與維修」補充講義)

ASTM D5340-93 (略)

“Standard Test Method for Airport  
Pavement Condition Index Surveys”

## PCI Procedure (“New” v.s. “Old”)

1. Dividing Pavement into Sample Units
2. Determining Sample Units to be Surveyed

$$nN \frac{Ns^2}{(e^2 / 4)(N > 1) < s^2}$$

3. Performing the Condition Survey (distress types, severity levels, densities)
4. Calculating the PCI (“OLD”)
  - a. Determine Deduct Values
  - b. Compute Total Deduct Value (TDV)
  - c. Adjust TDV to Corrected Deduct Value (CDV)
  - d. Compute  $PCI = 100 - CDV$
4. Calculating the PCI (“NEW”)
  - a. Determine Deduct Values
  - b. Determine the Max. Allowable Number of Deducts (m)  
 $mN 1 < (9 / 95)(100 > HDV)$  for Airfields  
 $mN 1 < (9 / 98)(100 > HDV)$  for Roads
  - c. Determine the Max. Corrected Deduct Value (CDV)
  - d. Compute  $PCI = 100 - \text{Max. CDV}$

