



Technology Transfer Concrete Consortium (TTCC) and National Concrete Consortium (NCC) PennDOT's Policy

Presented by
Joshua T. Freeman
Pavement Design Engineer
Harrisburg, PA

josfreeman@pa.gov

1) What length of analysis period does PennDOT use?

- 55-year Analysis Period includes:
 - Concrete New Construction or Reconstruction (including construction on break and seated, crack and seated, or rubblized concrete pavement)
 - Unbonded Concrete Overlay
- 50-year Analysis Period includes:
 - Asphalt New Construction or Reconstruction (including construction on break and seated, crack and seated, or rubblized concrete pavement)
- 30-year Analysis Period includes:
 - Bonded Concrete on Concrete Overlay
 - Concrete Pavement Rehabilitation (CPR) and Structural Asphalt Overlay

2) Are concrete overlays considered as a rehabilitation strategy?

- YES, these currently include:
 - Bonded Concrete on Concrete Overlay
 - Unbonded Concrete on Asphalt Overlay
 - Ultra-Thin Portland Cement Concrete on Asphalt Overlay

3) How does PennDOT determine rehabilitation phase?

- Ideal Rehabilitation cycles based on historical data from past practices. Field viewing and testing of the existing pavement is still an essential step in the rehabilitation process.
- Asphalt
 - **Year 20 & 40**
 - Full depth patch 2% of pavement area
 - Leveling Course & 2-inch Asphalt Overlay
 - Replace shoulders

3) How does PennDOT determine rehabilitation phase?

- Ideal Rehabilitation cycles based on historical data from past practices. Field viewing and testing of the existing pavement is still an essential step in the rehabilitation process.
- Concrete
 - **Year 25**
 - Concrete patch 8% of project area
 - Clean and Seal all transverse & longitudinal joints
 - 4"-5" Asphalt Overlay, Saw and Seal all transverse joints
 - **Year 45**
 - Concrete patch 5% of project area
 - Leveling Course & 2-inch Asphalt Overlay
 - Saw and Seal all transverse joints

4) Pavement preservation treatments and performance expectancies

- Asphalt
 - **Year 5 and every 10 years after**
 - Clean and Seal 25% longitudinal joints
 - Crack Seal, 500 lineal feet per mile
 - Seal Coat or Micro Surface shoulders as needed
 - **Year 10 & 30**
 - Full depth patch 2% of project area
 - Mill & Asphalt Overlay 1.5 - 2 inches
 - Replace shoulders

4) Pavement preservation treatments and performance expectancies

- Concrete
 - **Year 8, 30 and 40**
 - Clean and Seal 25% of longitudinal and transverse joints
 - **Year 15**
 - Concrete Patching 2%, Diamond Grinding 50%
 - Clean and Seal all transverse and longitudinal joints
 - **Year 30 and 40**
 - Seal Coat or Micro Surface shoulders
 - Crack Seal, 500 lineal feet per mile
 - **Year 35**
 - Mill & Asphalt Overlay 2 inches
 - Saw and Seal all transverse joints
 - Seal Coat or Micro Surface shoulders

5) Are the planned preservation treatments tied into PMS?

- YES, pavement preservation treatments are tied into PennDOT's pavement management system.
- Procurement of an actual software program for a pavement management system is currently in progress.

6) Are the planned preservation treatments actually accomplished?

- NOT ALWAYS
 - Due to performance variations and/or funding issues.