Balancing Preservation with Realistic Strategies: (When Preservation is No Longer Effective)

Not Enough Funds
Example of Where Preservation Activity is Warranted

Bridges built in 80’s, small portion of expansion joint leaking, NBI ratings for deck, superstructure, and substructure are still 7 or more which is considered to be good condition.

Only one bay is leaking

Armoring needs to be replaced
Bridges Built in 80’s

Recommended Preservation activities:
Seal Joints, apply deck sealer, washing and painting as needed

(1) Epoxy rebar and prior sealer application
   (Bridge deck life projected to last over 50 years without repair)
(2) No functional issues
(3) No strength issues
(4) High ADTT
(5) Long detour length

Note epoxy / sealer policy started in 1980
Example of Where Preservation Activity is not Warranted

Bridges which have various combinations of functional issues (vertical and horizontal clearances), metal fatigue, strength, and poor condition (section loss).

Limited clearances

Metal fatigue cracks due to square coping
Problem Bridges

Recommended Preservation activities:
NONE: Replace

(1) Numerous deck patches
(2) Vertical and/or horizontal clearance issues
(3) Strength issues
(4) Metal Fatigue
(5) Condition issues (section loss)
Expansion Joints on Bridges Built in the 80’s

Due to under reporting, we estimate that as many as 60% of the joints could be leaking.

PONTIS condition state 1 is the best.
Dilemma: Funding is targeting Structurally Deficient Bridges

(1) Delaying preservation activities on bridges built in the 80’s places beam ends and substructure elements at risk
(2) Doing preservation activities on structurally deficient bridges is ineffective and a waste of funds (replacement or rehabilitation is preferred to preservation)
(3) There is a need to Balance Preservation needs with Realistic Strategies with rehabilitation and replacement – Funding is Limited
Discussion
How does your State address joints?