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Development of a 10-year Plan for Interstate Highways in NC

Judith Corley-Lay, PE
NC Dept. of Transportation, USA



Outline of Presentation

- **Purpose and scope**
- **Approach**
- **Getting Input from Divisions**
- **Impact of scope changes**
- **Conclusions and Recommendations**

Problem

- Interstate Maintenance funding was historically “siphoned off” ... used for adding interchanges and other capital improvements to the Interstate.
- Cost for interstate preservation and rehabilitation exceeded the small amount of funding remaining.
- Worst first and worst fastest prevailed.

Purpose and Scope

- Purpose: Develop a plan to maintain, preserve, and rehabilitate the Interstate Highways in NC with an annual budget of \$100 million.
- Scope: Plan work on all interstate pavements over a 10 year period so that every mile is “touched” at least once.

Approach

- Use PMS to generate listing of all sections of Interstate, their conditions, and the last treatment type and time.
- Estimate time and type of next treatment and fill into 10 year matrix.
- Use preservation treatments as much as possible.
- Identify critical projects that will require extra funding.

Approach (continued)

- Costs were estimated from PMS. PMS sections were combined into typical project lengths.
- Balancing was done to achieve yearly total of \$100 million. Effort was made to also “balance” geographically to some extent.

Plan Contents

- Division
- County
- Route
- Begin
- End
- Length
- Surface type
- Treatment
- Cost for Inventory Direction
- Cost for Both Directions
- Yearly Total

Example from Year 2

Div.	County	Route	Length	Surface	Treatment	Cost (Inventory Direction)	Cost (Both Directions)
14	Henderson	I-26	4.927	JCP Concrete	Concrete patching 3%/ Diamond Grinding/ reseal joints	\$2,477,904	\$4,955,808.00
3	Pender	I-40	12.400	asphalt	Interstate - 1.5" Overlay (C Level) +OGFC	\$2,743,948.00	\$5,487,896.00
4	Nash	I-95	1.700	concrete	Interstate - Minor Concrete Rehab / Diamond Grinding	\$793,068.00	\$1,586,136.00

Division Input

- The balanced plan was distributed to the divisions for their input. Asked them to identify completed work that had not yet been entered in PMS, alternate timing, missing segments.
- Many modifications were made, but few were substantial.

Division Input (continued)

- Two divisions have segments of I-73, which had not yet been added to the interstate linework, but needs repairs.
- One project in the mountains was treated unsuccessfully a few years ago, and additional work is now needed.

Division Input

- Almost every division wanted more money earlier in the plan.
- Some disagreements with PMS costs. PMS is based on statewide averages. Mountains and coast have less competition and higher unit costs.

Scope Change!

- Following the division input process, leadership decided to carve out \$15 million for bridge work and other items.
- Allowed deck treatments for bridges as part of pavement projects. Reduced user impacts.

Scope Change

- Maintained schedule of preservation.
- Since the PMS estimated \$100 million per year to maintain and attain LOS targets for pavements, the change in funding reduced the pavement work per year and extended the time to treat all segments beyond 10 years.

Implementation

- Year 1 of the plan was converted into TIP projects and these were let.
- Now in the process of reviewing the plan, updating the conditions and finalizing the next year's lettings.

Conclusions

- Use of a long range treatment plan helped us reach compromises on project scheduling.
- The plan puts preservation into the cycle so that once a segment is rehabilitated, it will remain in good condition longer.
- Having confidence in the recurring funding is critical to obtaining buy-in.

Conclusions

- The plan must remain somewhat flexible. Like the one pavement treatment that did not perform as expected, we must be able to interject needed treatments.
- We are currently working on improving our unit cost structure to allow regional cost variation and to add project oversight and contracting costs for outsourced work.

My contact information: jlay@ncdot.gov

***THANK YOU FOR YOUR
INTEREST.***