A Quick Check of Your Highway Network Health

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Example:

Agency Highway Network

Network Size = 4,356 lane miles

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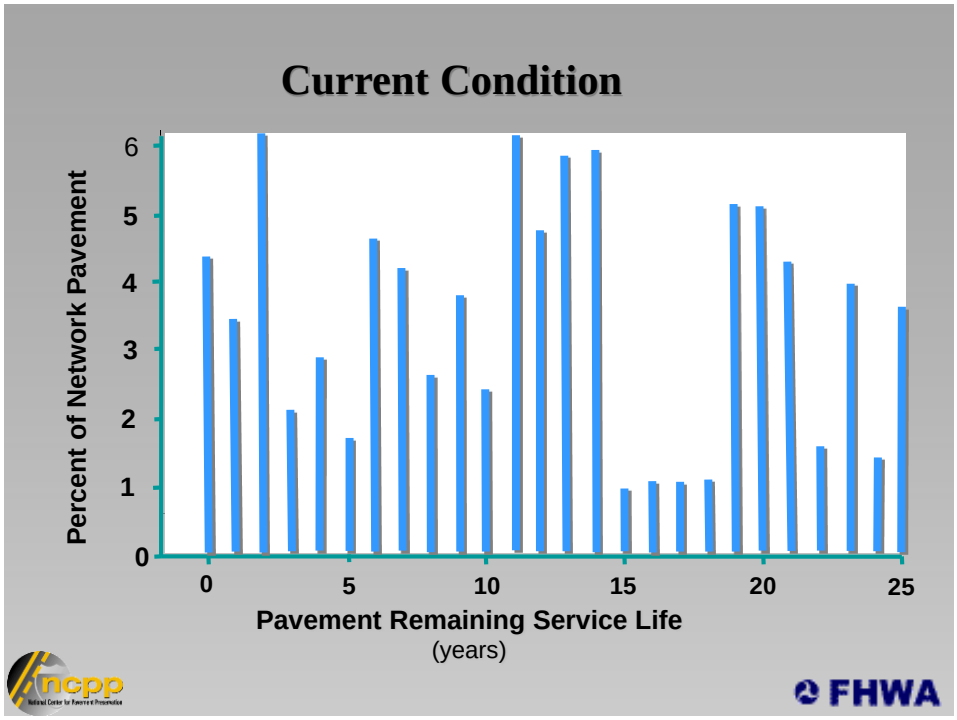
Current Condition
Percent of Network Pavement
0
1
2
3
4
5
6
0
5
10
15
20
25
Pavement Remaining Service Life
(years)
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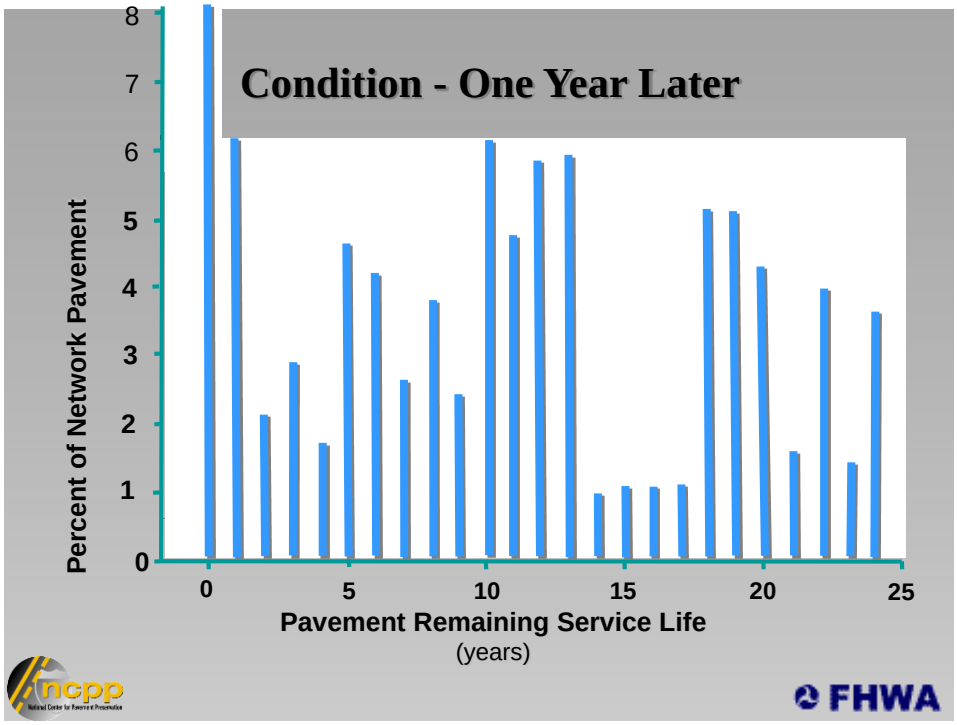
Condition - One Year Later
Percent of Network Pavement
0
1
2
3
4
5
6
7
8
0
5
10
15
20
25
Pavement Remaining Service Life
(years)
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Agency Highway Network = 4,356 lane miles

Each year the network will lose

4,356 lane mile years

Reconstruction Evaluation

Project	Lane Miles	Design Life	Lane Mile Years	Lane Mile Costs	Total Cost
#1	22	25 yrs	550	$463,425	$10,195,350
#2	18	30 yrs	540	$556,110	$10,009,980
	Total	=	1,090		$20,205,330

Rehabilitation Evaluation

Project	Lane Miles	Design Life	Lane Mile Years	Lane Mile Costs	Total Cost
#3	22	18 yrs	396	$263,268	$5,791,896
#4	28	15 yrs	420	$219,390	$6,142,920
#5	32	12 yrs	384	$115,848	$3,707,136
	Total	=	1,200		$15,641,952

Pavement Preservation Evaluation

Project	Lane Miles	Life Ext.	Lane Mile Years	Lane Mile Costs	Total Cost
#101	12	2 yrs	24	$2,562	$30,744
#102	22	3 yrs	66	$7,743	$170,346
#103	26	5 yrs	130	$13,980	$363,480
#104	16	7 yrs	112	$29,750	$476,000
#105	8	10 yrs	80	$54,410	$435,280
	Total	=	412		$1,475,850

Network Trend

Required: 4,356 lane mile years

Programmed Activity	Lane Mile Years	Total Cost
Reconstruction *(40 lane miles)* $$$$	1,090	$20,205,330
Rehabilitation *(82 lane miles)* $$$	1,200	$15,641,952
Pavement Preservation *(84 lane miles)* $	412	$1,475,850
Total =	2,702	$37,323,132

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Network Needs Summary

Network Size *(needs)*	4,356 *(lane mile years)*
Programmed Activity	2,702 *(lane mile years)*
Deficit =	**1,654** ***(lane mile years)***

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Steps to Address Minimal Needs

Required: 4,356 lane mile years

Programmed Activity	Lane Mile Years
Reconstruction (31 la... (~~40 lane~~	*820* ~~1,090~~
Rehabilit... ...es)	*1,125* ~~1,200~~
Pavem... ...reservation (84 lane miles)	412
Total =	*2,357* ~~2,702~~

Savings = $ 6.1 M

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Program Modification

Savings = $ 6,101,940 Needs = 1,999 LMY

Preservation Treatment	Life Ext	Lane Miles	Lane Mile Years	Total Cost
Concrete Reseal	4 yrs	31	124	$979,600
Thin HMA Overlay	10 yrs	16	160	$870,560
Micro-surfacing	7 yrs	44	308	$1,309,000
Chip Seal	5 yrs	79	395	$1,104,420
Crack Seal	2 yrs	506	1,012	$1,296,372
			1,999	$5,559,952

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Revised Network Strategy

Required: 4,356 lane mile years

Programmed Activity	Lane Mile Years
Reconstruction *(31 lane miles)*	*820*
Rehabilitation *(77 lane miles)*	*1,125*
Pavement Preservation *(2,083 lane miles)*	*2,411*
Total =	4,356

Net Savings = $ 541,988

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Quick Assessment Method

- Establishes Network Need
- Evaluates
  - Reconstruction
  - Rehabilitation
  - Preventive Maintenance
- Incorporates
  - Design Life
  - Life Extensions

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Questions ?

Thank You !

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Network Needs Worksheet

Required: _____ lane-mile years

Programmed Activity	Lane-Mile Years
Reconstruction *(____ lane-mile X ___ yrs)*	_____
Rehabilitation *(____ lane-mile X ___ yrs)*	_____
Pavement Preservation *(____ lane-mile X ___ yrs)*	_____
Total =	_____