

I-440

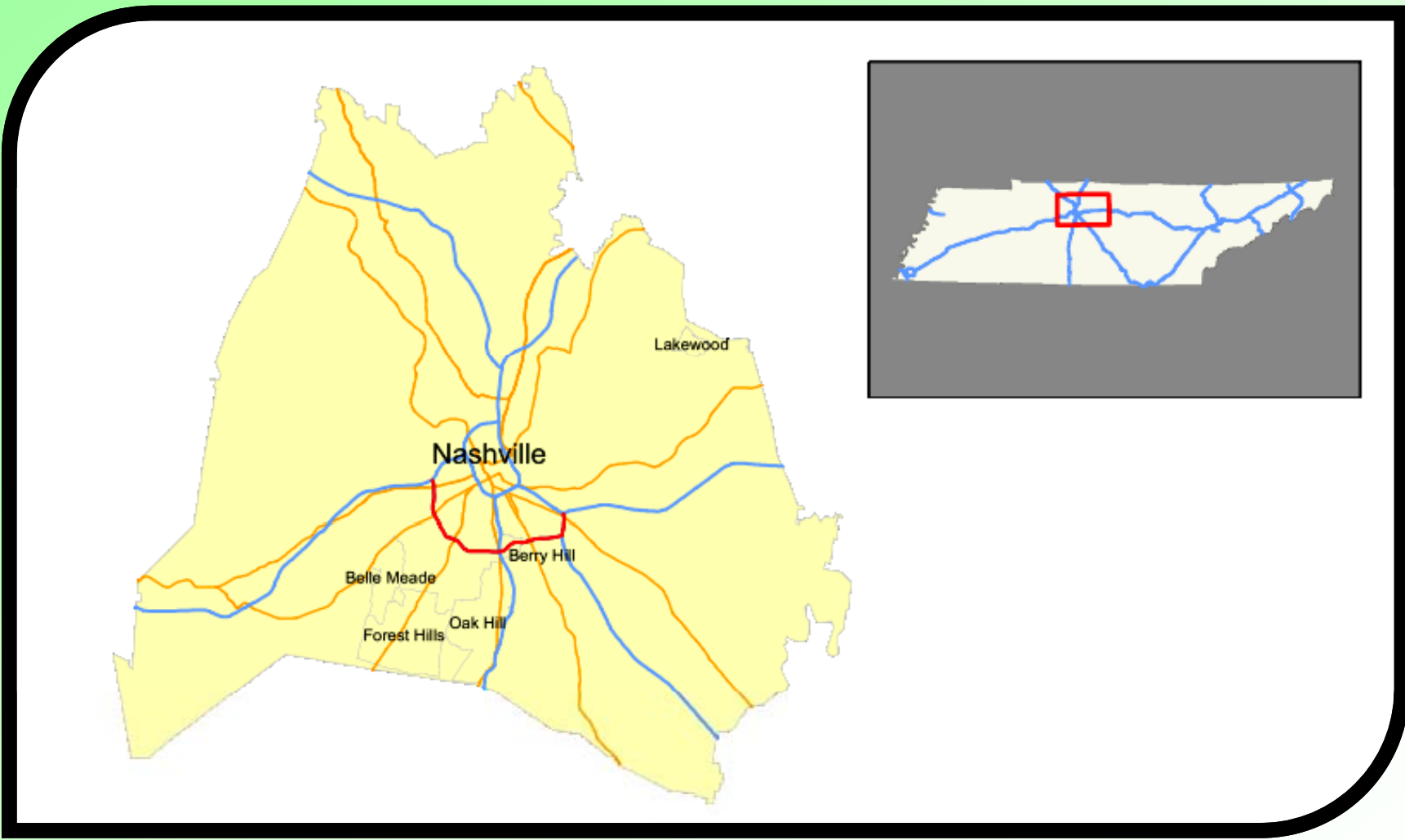
Concrete Pavement Repair Project



Jay Norris, TDOT
Donald Looney, Lojac Inc.







In January 1982, after some 22 years of planning, replanning and several redesigns brought on by constant litigative delays, countless bitter dialogs and a whole host of concessions, the Department found itself in position to construct the I-440 Parkway - ... even the name itself a carefully labeled concession to opposition. Only after letting to





- Began Service in 1986/1987
- 120,000 ADT
- 19, 25, 24, 18

TRAFFIC DATA *	
I-440-4(9)205	
WEST END AVENUE TO HILLSBORO PIKE	
A.D.T. (1965)	24,230
A.D.T. (1989)	61,300
D.H.V.	6,130
D	55% - 45%
T	6%
V	70 M.P.H.

10" Concrete

PROPOSED PAVING SCHEDULE		
1. MINERAL AGGREGATE BASE AT FULL DEPTH THROUGH SHOULDERS 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING "D"	5. BITUMINOUS SURFACING (ROADWAY) AT 1 1/2" THICK (125 lbs. PER Sq. Yd.) 411-01.01 MINERAL AGGREGATE FOR ASPHALTIC CONCRETE SURFACE (ACS) GRADING "D" 411-01.02 ASPHALT CEMENT FOR ASPHALTIC CONCRETE SURFACE (ACS) GRADING "D"	9. PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) AT 0.35 Gal. PER Sq. Yd. 402-02 AGGREGATE FOR COVER MATERIAL (PC) AT 12 lbs. PER Sq. Yd.
2. SEE NEXT COLUMN.	6. STABILIZED SHOULDER AT 1 1/2" THICK (125 lbs. PER Sq. Yd.) 411-02.01 MINERAL AGGREGATE FOR ASPHALTIC CONCRETE SURFACE (ACS) GRADING "E" 411-02.02 ASPHALT CEMENT FOR ASPHALTIC CONCRETE SURFACE (ACS) GRADING "E"	10. TACK COAT 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) AT 0.02 Gal. PER Sq. Yd.
3. BITUMINOUS COATED AGGREGATE BASE AT 3 1/2" THICK (315 lbs. PER Sq. Yd.) 307-01.05 AGGREGATE FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) "A-CRL" 307-01.06 ASPHALT CEMENT FOR BITUMINOUS PLANT MIX (HOT MIX) (BPMB-HM) "A-CRL"	7. CONCRETE PAVEMENT 501-01.03 PORTLAND CEMENT PAVEMENT (PLAIN) 10" 501-01.04 SAND (UNDER CONC. PAVEMENT) ALTERNATES	11. FILTER CLOTH UNDERDRAIN 710-04 FILTER CLOTH UNDERDRAIN (WITH PIPE). (SEE STD. DWG. RD-UD-2).
3A. BITUMINOUS COATED AGGREGATE BASE AT 3 1/2" THICK (315 lbs. PER Sq. Yd.) 307-01.03 AGGREGATE FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRAD. "A-S" MIXTURE 307-01.04 ASPHALT CEMENT FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRAD. "A-S" MIXTURE	8. CONCRETE SHOULDER 501-03.02 CONCRETE SHOULDER (DEPTH VARIES 10" MAX.)	12. BITUMINOUS LEVELING AT 1 1/2" THICK (165 lbs. PER Sq. Yd.) 307-03.01 AGGREGATE FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRADING "C" 307-03.02 ASPHALT CEMENT FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRADING "C"
4. BITUMINOUS BINDER AT 2 1/2" THICK (275 lbs. PER Sq. Yd.) 307-02.01 AGGREGATE FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRADING "B" 307-02.02 ASPHALT CEMENT FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRADING "B"	ALTS: 305-02 LEAN CONCRETE BASE (LCB) 312-01 MINERAL AGGREGATE (ALFSB) 312-02 LIME (3-1/2%) 312-03 FLY ASH (11%) 312-04 BITUMINOUS MATERIAL (ALFSB)	
4A. BITUMINOUS BINDER AT 4 1/2" THICK (440 lbs. PER Sq. Yd.) 307-02.01 AGGREGATE FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRADING "B" 307-02.02 ASPHALT CEMENT FOR BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRADING "B"		



First Major Project 1997

- **Lojac awarded \$1,294,952**
- **100,000 SY Grinding Concrete Pavement**
- **400,000 LF Cleaning and Resealing Joints**
- **300 SY Full Depth Repair**

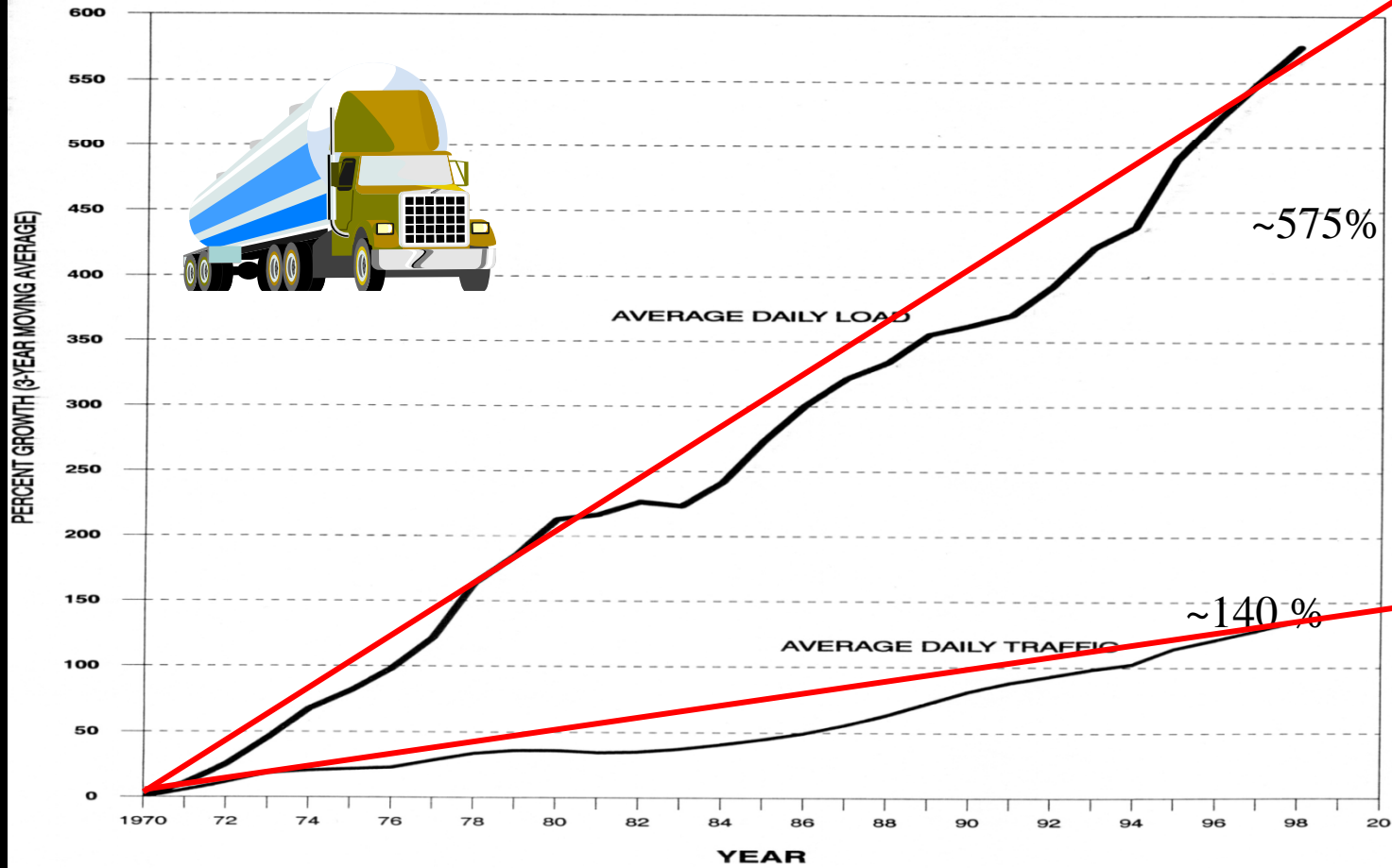


2006 On-Call Repair

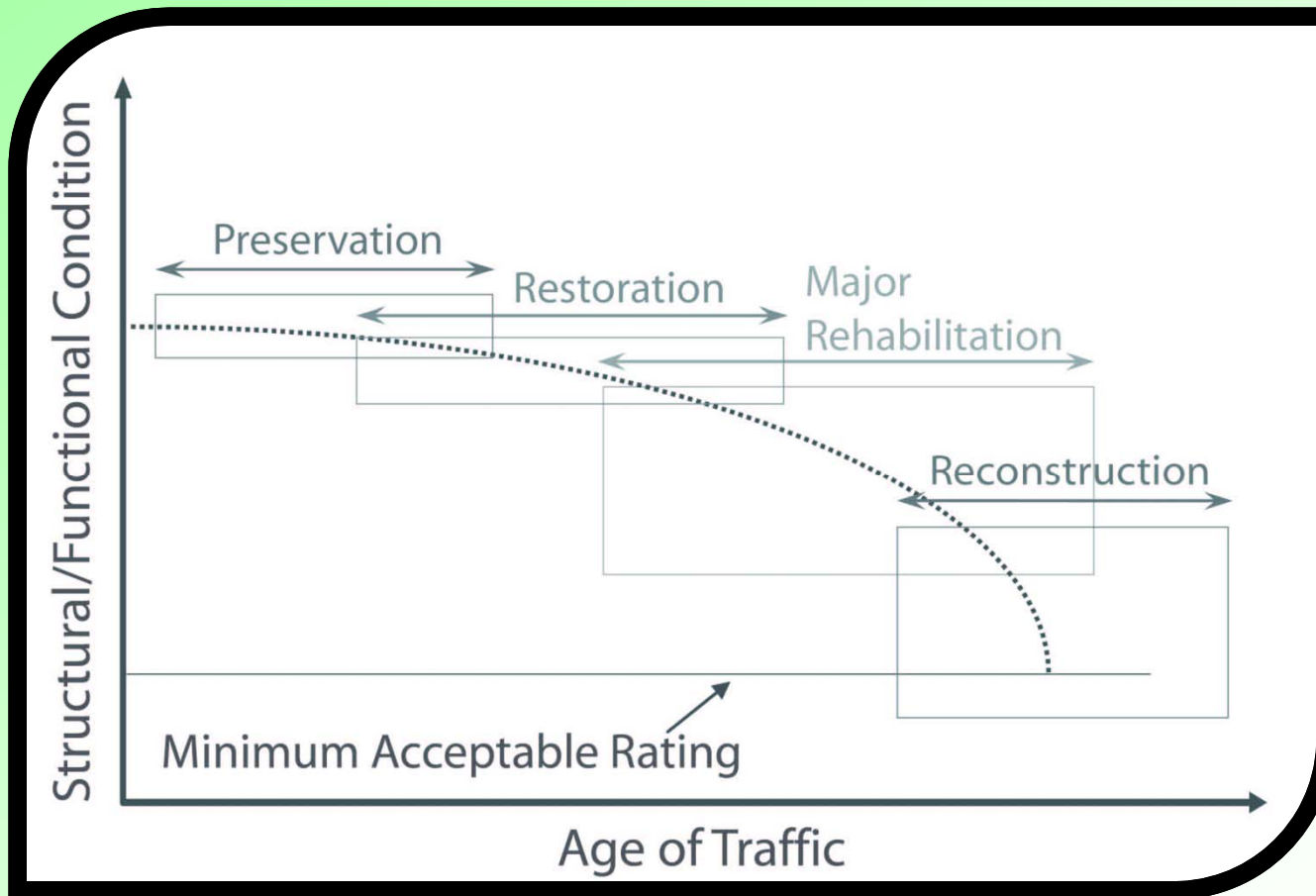
- **Lojac Awarded \$986,941**
- **4,720 SY of PCC Pavement Replacement**



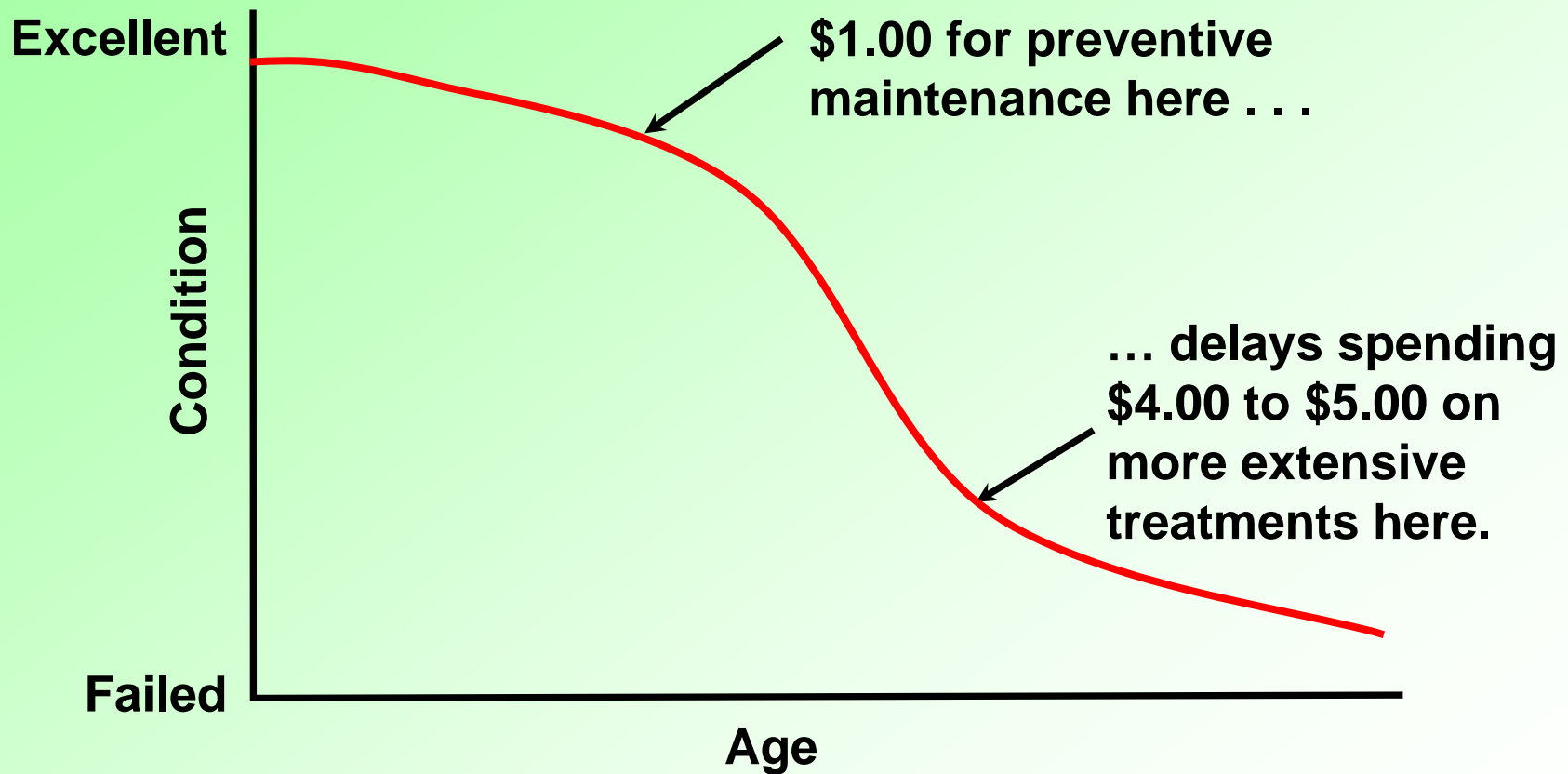
COMPARISON OF GROWTH IN VOLUME AND LOADINGS ON THE RURAL INTERSTATE SYSTEM



Pavement Deterioration Curve



The Concept of Preventive Maintenance



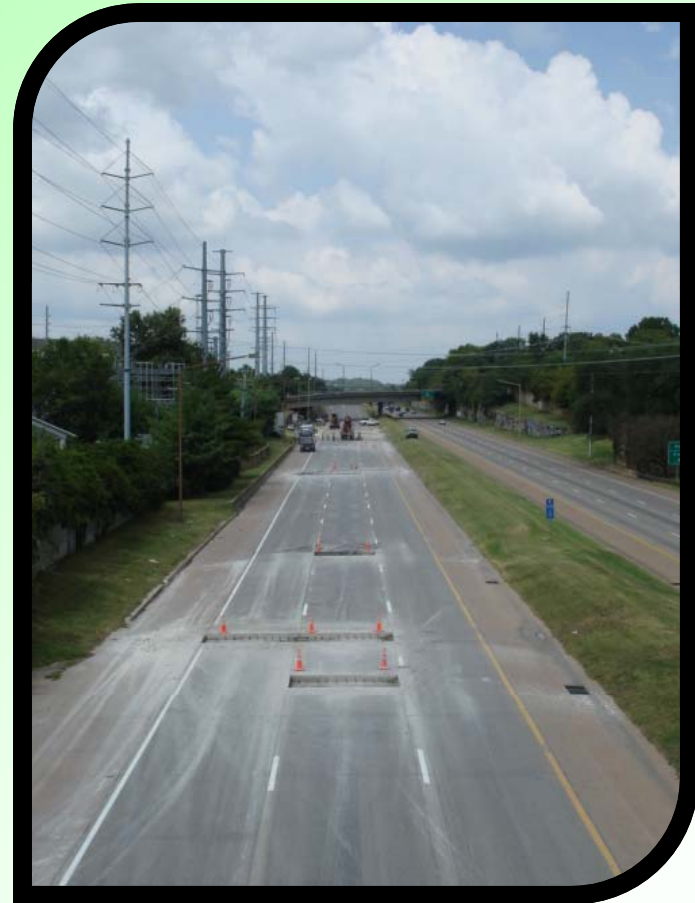
CNH700

- **ARRA Funded**
- **Pavement was 22 years old**
- **Healthier Pavement**
- **Smoother Pavement**
- **Safer Road**



Project Details

- **10,000 SY Full Depth Replacement**
- **350,000 SY Grinding Grooving**
- **450,000 LF Joint Replacement**
- **No Plans Contract**



Special Provision 503 Diamond Grinding

50 to 52 Grooves /Foot
0.7 inch/0.1 mile



Total Closure

