

SUBSURFACE

Drainage Structure Maintenance & Repair

**RCP JOINT REPAIR
VOID GROUTING
CONCRETE PIPE REHABILITATION**



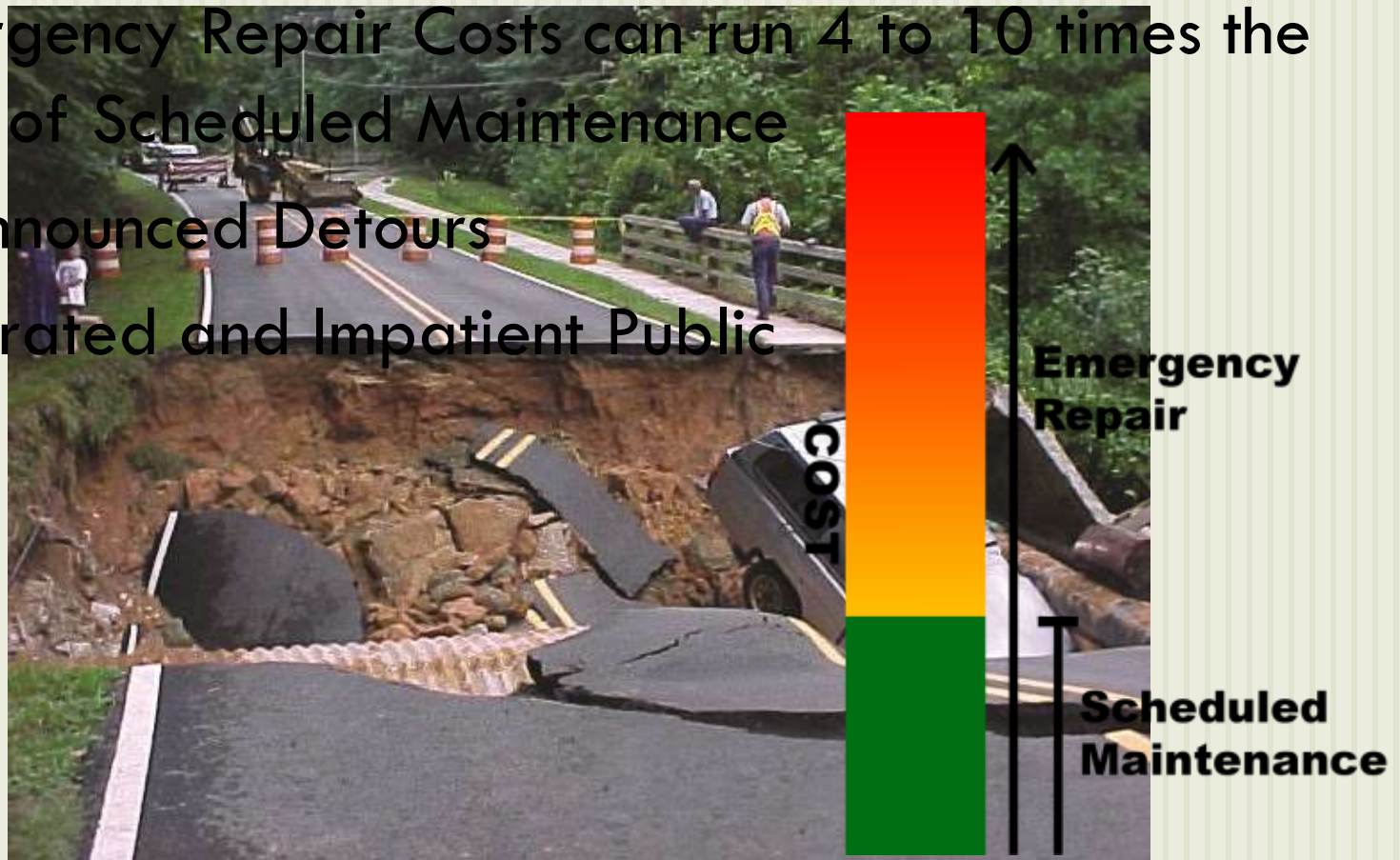
Neglected and Failing Drainage Structures

- Common Throughout the U.S.
- Uncleaned and Dysfunctional drainage systems
- RCP (Re



Cost of Failure vs Maintenance

- Risk to Human Life and Physical Damage to Property
- Emergency Repair Costs can run 4 to 10 times the Cost of Scheduled Maintenance
- Unannounced Detours
- Frustrated and Impatient Public



Cost of Maintenance vs Replacement

- Scheduled budget Item
- RCP Joint Rehabilitation and External Void Grouting runs approximately 35-50% of Open Cutting Hard Surface
- No Detours
- No Special Permitting
- No Inconvenience to Traveling Public

Solutions

- Cleaning
- Lining
- RCP Joint Rehabilitation
- External Void Grouting

Solutions (cont.)

□ Cleaning



Before
Before



After
After

Solutions (cont.)

□ Lining



Solutions (cont.)

□ RCP Joint Rehabilitation



Solutions (cont.)

- External Void Grouting



Solutions (cont.)

- All-season solutions



What is the Next Step?



Assess and Prioritize Needs

- Initiate a Training program for Consistency in Evaluation
- Identify Location, Size, and Type of Structure
- Assess Condition of Structure
 - Alignment
 - Does the invert match the grade?
 - Does it need to be cleaned?
 - Is lining a solution?
 - Will the piping issues be addressed if you choose lining?
 - Will the voids that have been created over the years still exist?
 - Are the joints separated?
 - Are there visible sink holes?

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**WE AT SUBSURFACE
WOULD LIKE TO THANK
YOU AND WELCOME ANY
QUESTIONS YOU MAY HAVE**

