ASCE
American Society of Civil Engineers

America's Infrastructure: Where Are We Headed?

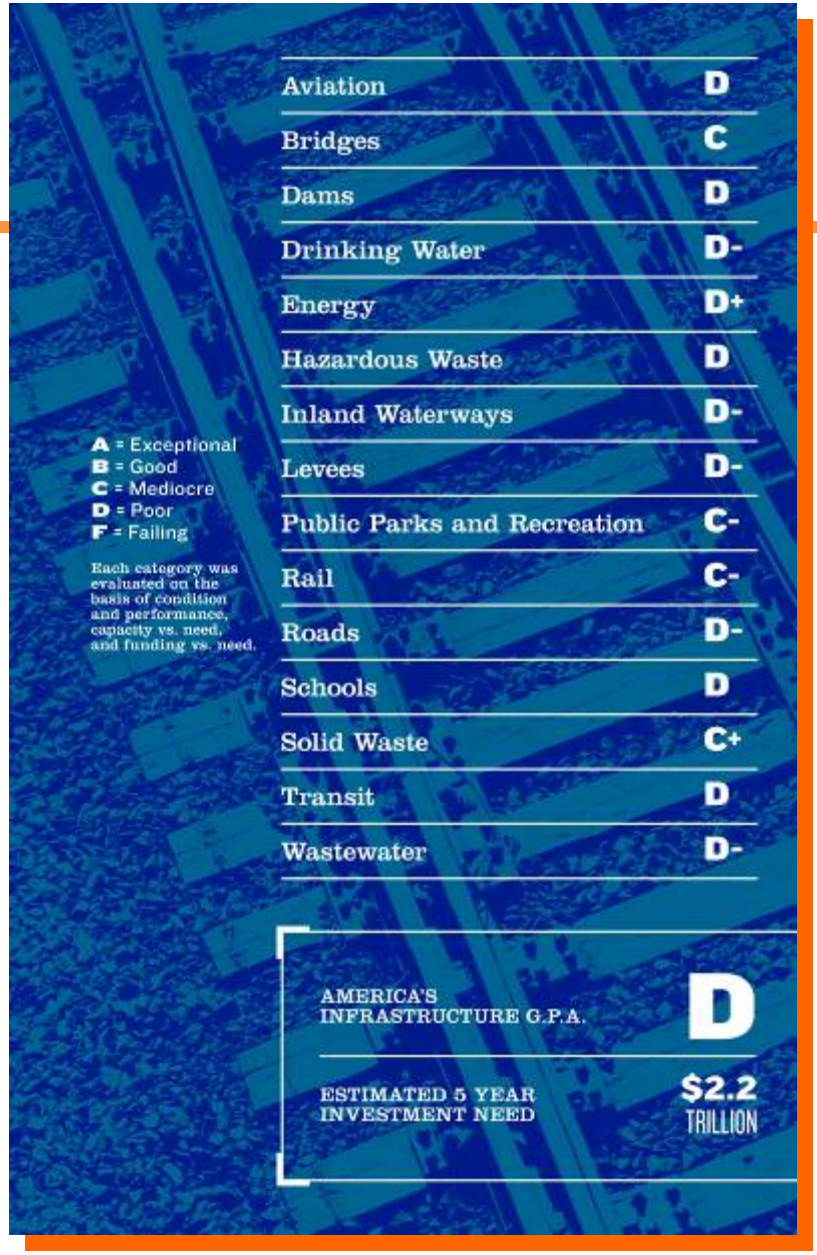
Kristina L. Swallow, P.E.

ASCE/AAAS Congressional Science and Engineering Fellow


COPYRIGHT HEATHER MUNRO


RESCUE
RESCUE

2009 REPORT CARD for ★★★★★ America's INFRASTRUCTURE ★★★★★



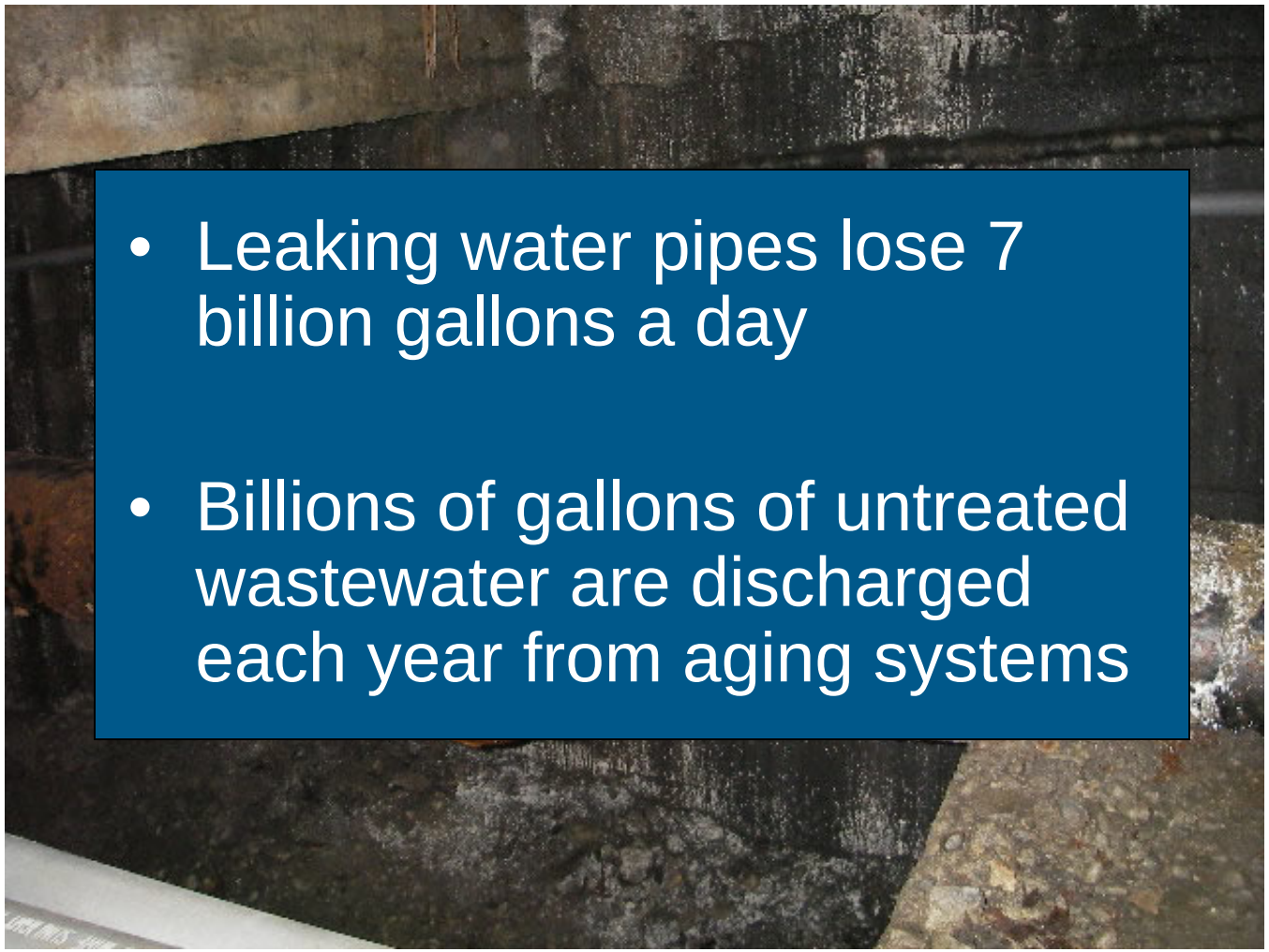
ASCE®
American Society of Civil Engineers

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Drinking Water D-

Wastewater D-



- Leaking water pipes lose 7 billion gallons a day
- Billions of gallons of untreated wastewater are discharged each year from aging systems

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Solid Waste C+
Hazardous Waste D

- U.S. produces 254 million tons of solid waste a year
- 188 cities with brownfields sites awaiting cleanup/ redevelopment

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Levees D-
Dams D

- More than 85% of nation's 100,000 miles of levees locally owned and maintained
- U.S. has more than 85,000 dams

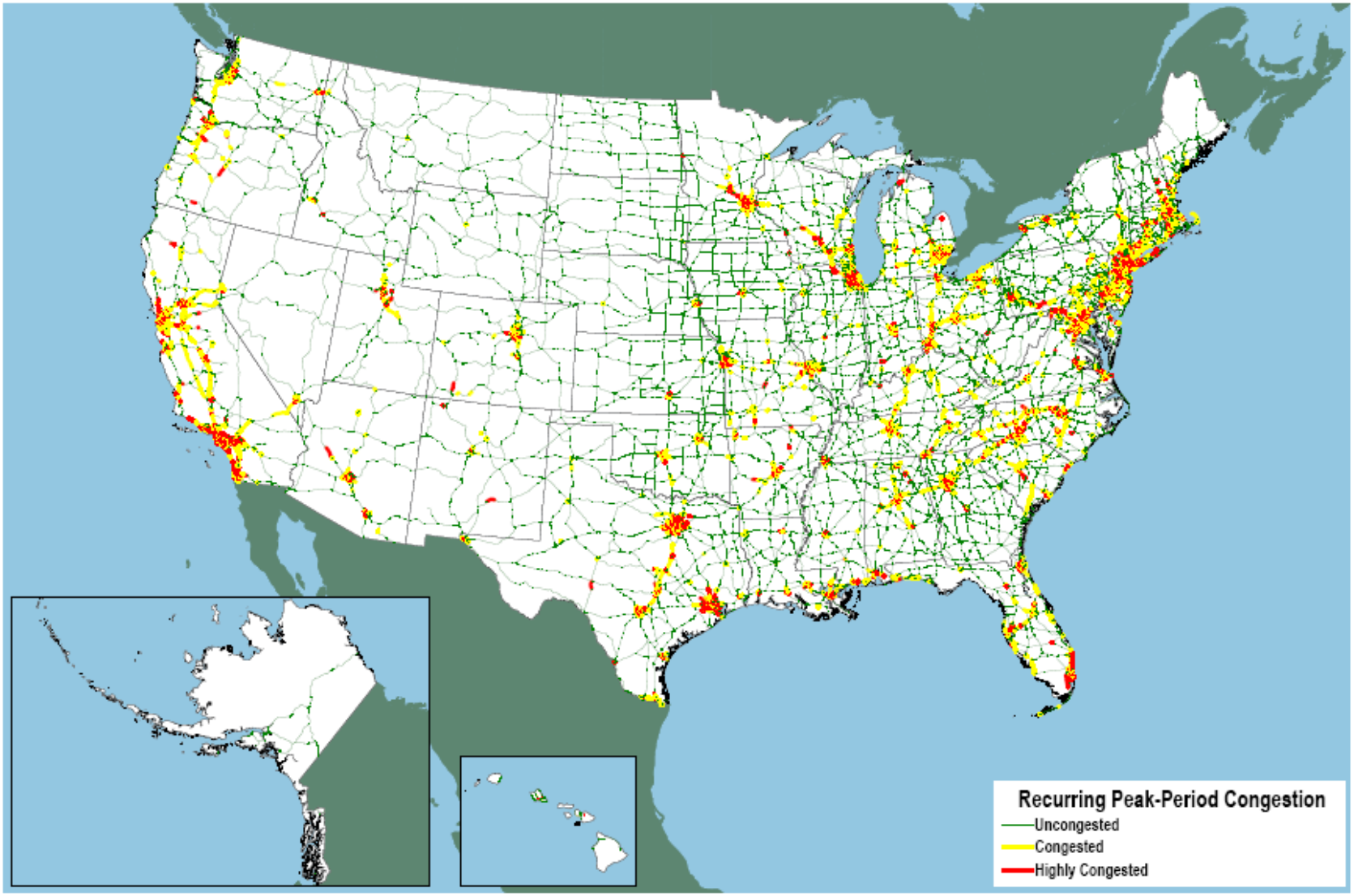
2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Aviation D

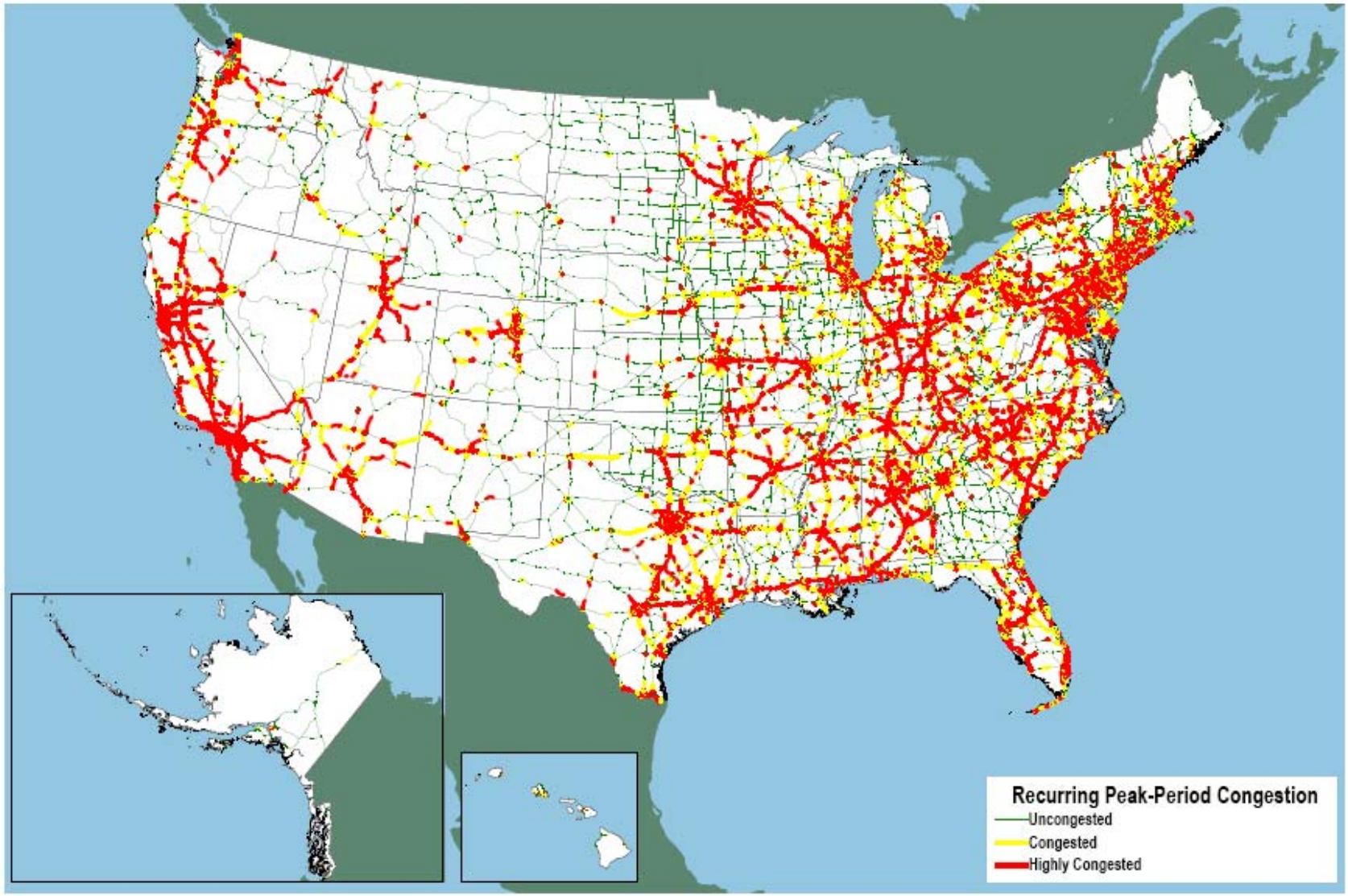
- FAA predicts 3% annual air travel growth

Peak-Period Congestion on the National Highway System: 2002



Note: Highly congested segments are stop-and-go conditions with volume/service flow ratios greater than 0.95. Congested segments have reduced traffic speeds with volume/service flow ratios between 0.75 and 0.95.
Source: U. S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Performance Monitoring System, and Office of Freight Management and Operations, Freight Analysis Framework, version 2.2, 2007

Peak-Period Congestion on the National Highway System: 2035

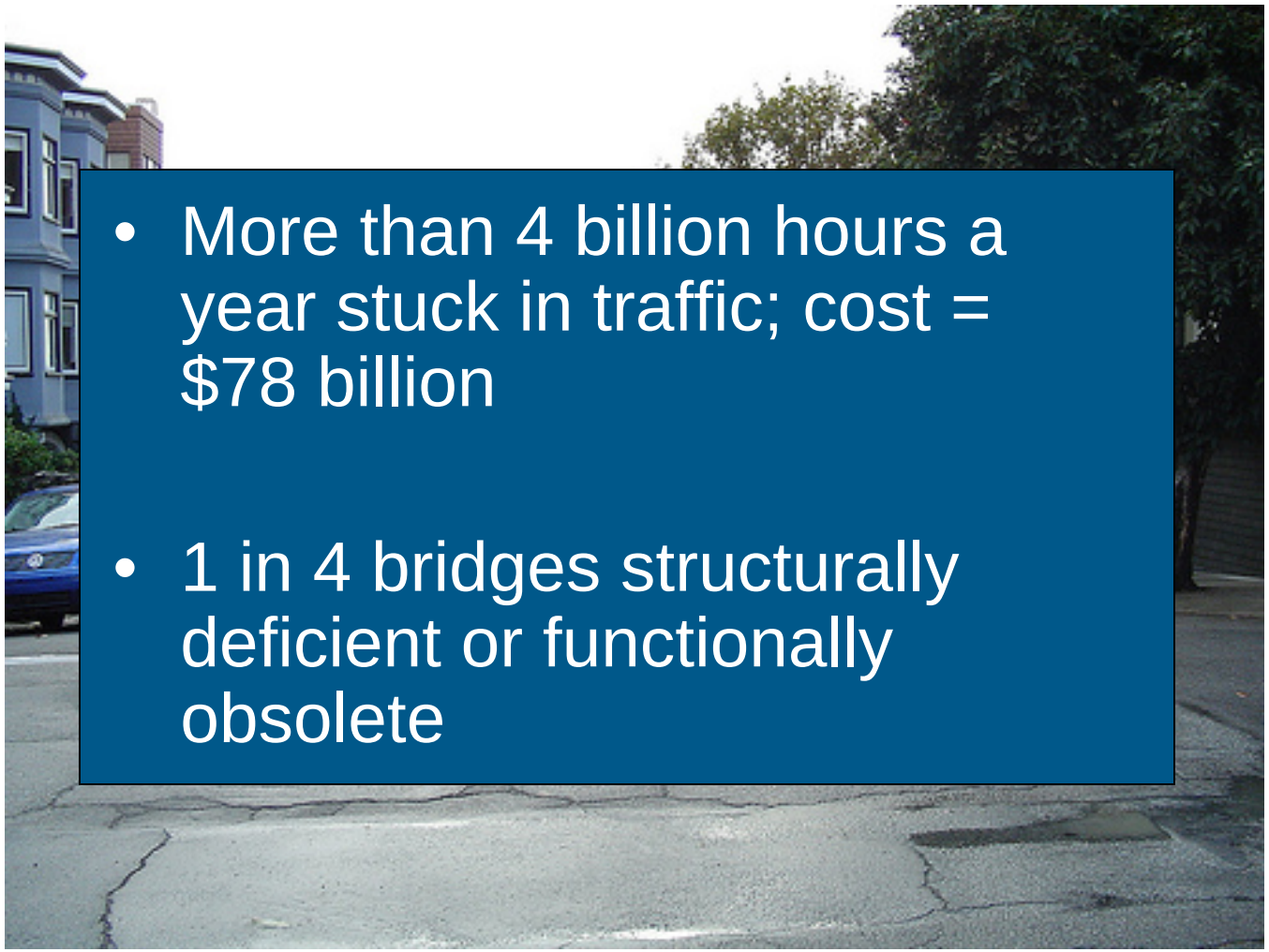


Note: Highly congested segments are stop-and-go conditions with volume/service flow ratios greater than 0.95. Congested segments have reduced traffic speeds with volume/service flow ratios between 0.75 and 0.95.
Source: U. S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Performance Monitoring System, and Office of Freight Management and Operations, Freight Analysis Framework, version 2.2, 2007

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Roads D-
Bridges C



- More than 4 billion hours a year stuck in traffic; cost = $78 billion
- 1 in 4 bridges structurally deficient or functionally obsolete

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

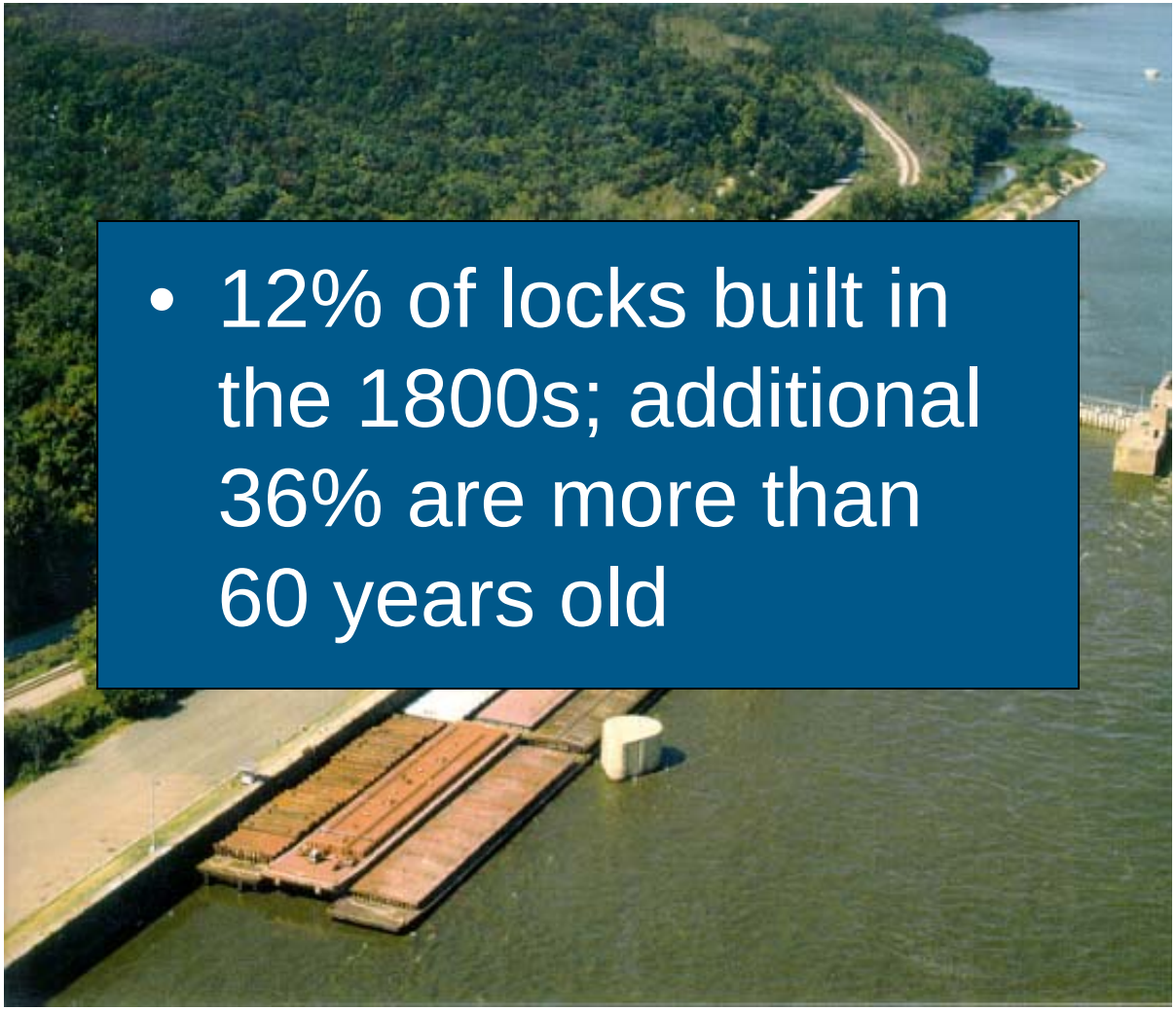
Transit D

- No access to bus or rail transit for nearly half of American households

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Inland Waterways D-



- 12% of locks built in the 1800s; additional 36% are more than 60 years old

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Rail

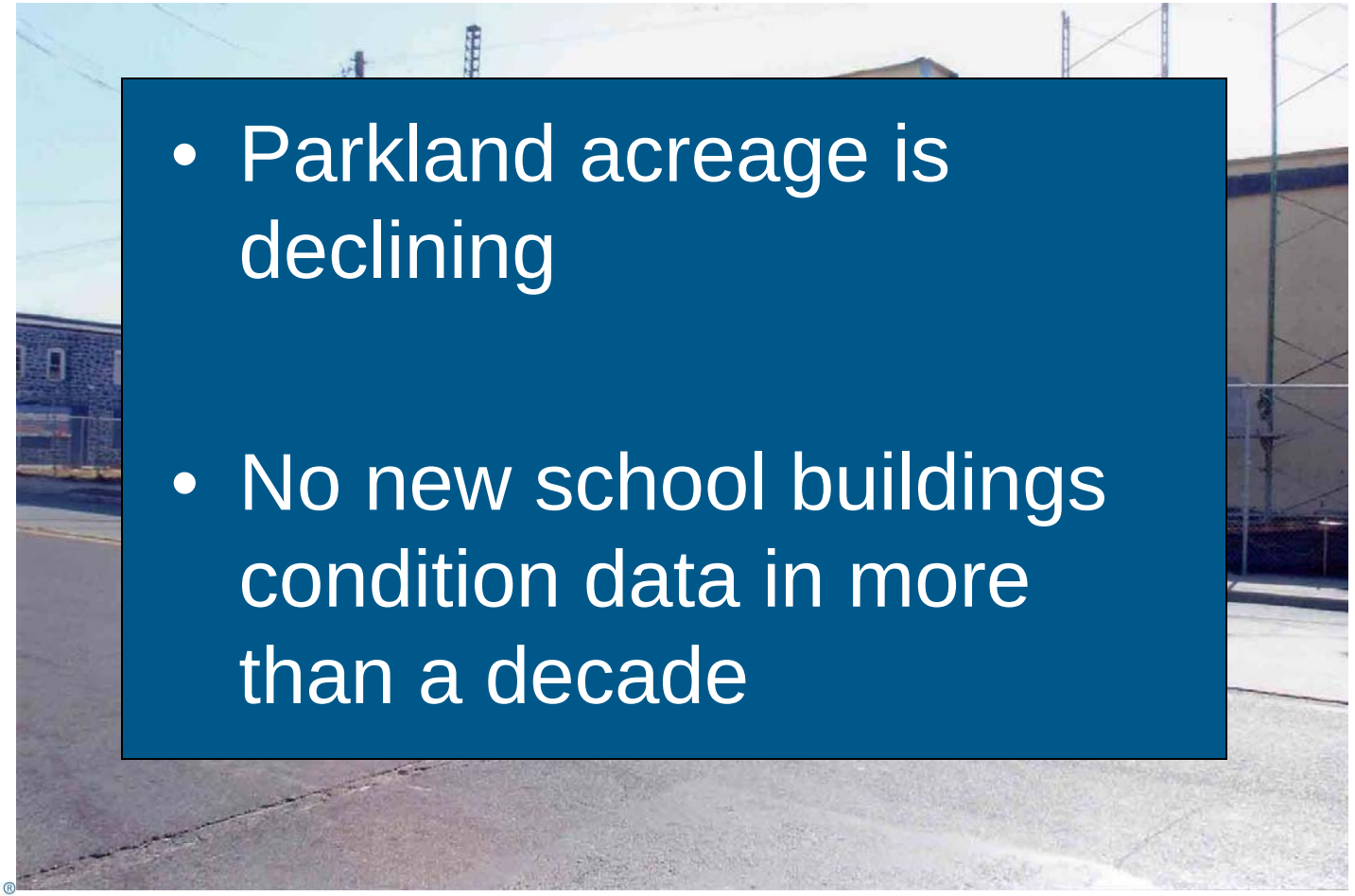
C-

- Changes in demand for rail service have created bottlenecks

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Public Parks C-
Schools D



- Parkland acreage is declining
- No new school buildings condition data in more than a decade

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Energy

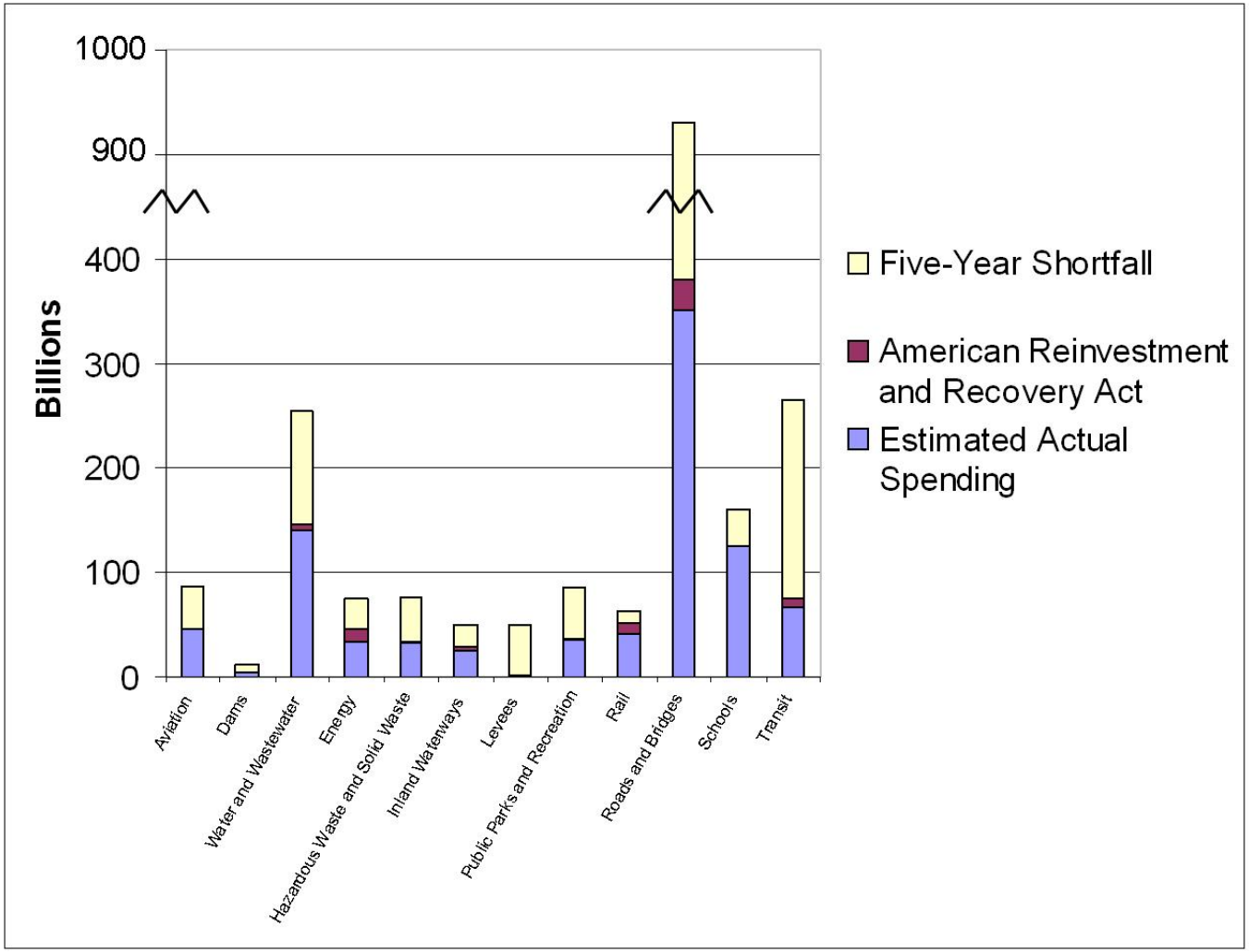
D+

- Electricity demand has grown by 25% since 1990

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Estimated Investment Needs



2009 REPORT CARD for ★★★★★ America's INFRASTRUCTURE ★★★★★

ASCE American Society of Civil Engineers

ASCE's Five Key Solutions

1. **Increase** federal leadership
2. **Promote** sustainability & resilience
3. **Develop** national, regional and state infrastructure plans
4. **Address** life-cycle costs
5. **Increase & improve** investment from all stakeholders

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

Solid Waste Success

Liz Hafalia / The Chronicle

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

What can you do?

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

What can you do?

- Learn more
- Join online community
  - Our Failing Infrastructure blog
  - Facebook
  - Twitter
- Contact elected officials
- Letter to the editor

Do it all at

www.infrastructurereportcard.org

2009 REPORT CARD for America's INFRASTRUCTURE

ASCE American Society of Civil Engineers

www.infrastructurereportcard.org

ASCE American Society of Civil Engineers