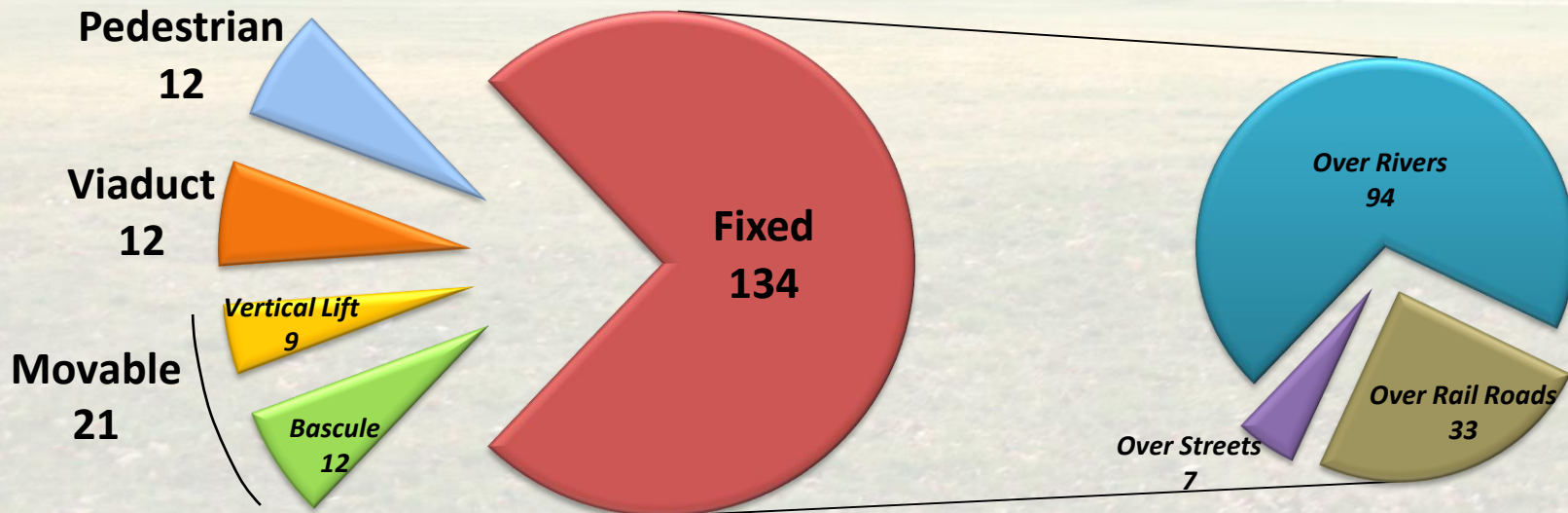


City of Milwaukee Department of Public Works Major Bridge Program



2012 City Bridge Inventory

- 179 City-owned and maintained bridges
- Relative comparison of bridge types:



Bridge Structure Inspection

- In accordance with FHWA and WisDOT standards
- Conducted by DPW personnel
 - FHWA certified Bridge Inspectors
- Bridges inspected *every* 24 months, except:
 - Annually for:
 - Movable bridges
 - Structurally deficient bridges



Types of Bridge Inspection

- Initial
- Routine
- Fracture Critical
- In-Depth with Non-Destructive Testing



Types of Bridge Inspection (Cont'd)

- Interim
- Movable
- Underwater Survey (New)
- Underwater Visual Probe
- Underwater Dive (Every 5 years) Performed in 2013



Bridge Inspection Reports

- Standardized inspection reports
 - Submitted to WisDOT and entered into their database
 - Highway Structures Information (HSIS) database generates a bridge Sufficiency Rating (SR)

Report:

Photographs:

BRIDGE INSPECTION REPORT
 Wisconsin Dept. of Transportation
 DT2007 2003 & M-17 Wis. State Type 5-000000 INSPECTION

page 1

Inventory Data
 Structure No. B-40-0502
 Location: City of Milwaukee, Milwaukee, WI 53202
 County: Milwaukee, Municipality: City of Milwaukee, Precinct: 430011
 Inventory No.: 11774, Inventory No. (old): 11774, Inventory No. (old): 11774, Inventory No. (old): 11774
 Inventory No. (old): 11774, Inventory No. (old): 11774, Inventory No. (old): 11774, Inventory No. (old): 11774

Inspection Type - Supplemental Form Required
 In-Depth: [] LW-Drive: [] LW-Survey: [] LW: [] Movable: []
 Lead Insp: 2602-24-14 2607-23-18 2158-24-18 2008-24-24
 Reason: 24 24 24 24
 Reason: 24 24 24 24
 Reason: 24 24 24 24
 Reason: 24 24 24 24

Load Rating Information
 Condition: [] Measurement: [] Date: [] Deck Surface Type: CONCRETE
 Design Load: [] Min. V. Capacity: [] Insp. Measurement: [] Measurable: []
 Measurable for load capacity? [] Reason: [] Date Last Measured: []

Expansion Joints
 Location: [] Type: [] Year: [] PFA: [] Insp. [] Comments: []
 2158-24-18 4-300A Bridge Mats
 2158-24-18 4-300A Bridge Mats
 2158-24-18 4-300A Bridge Mats
 2158-24-18 4-300A Bridge Mats

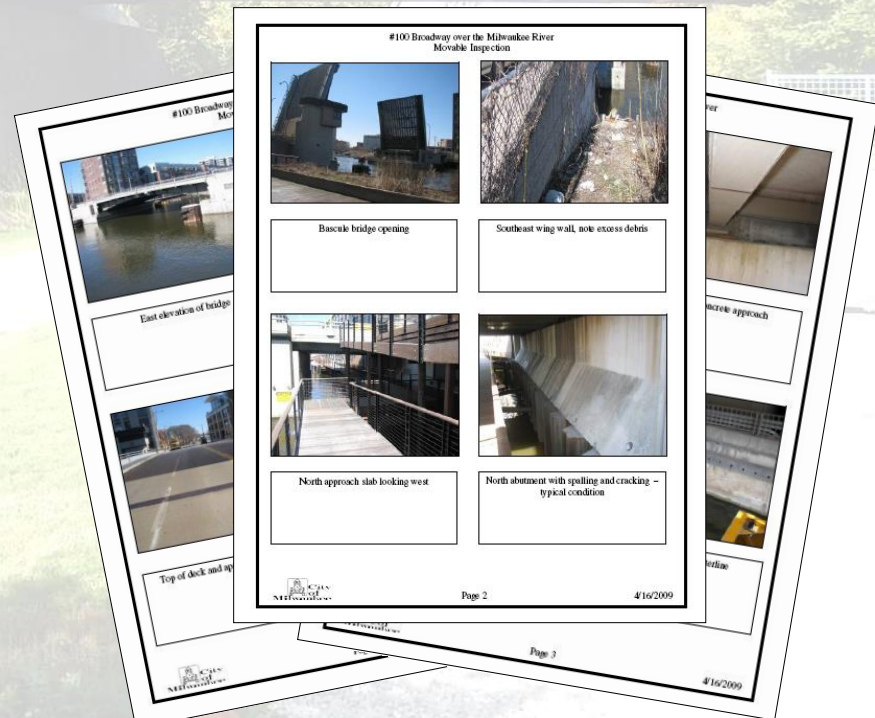
Clearance Control - N or S:
 Min. Vertical Clearance Under (Center): [] File Date: [] File Date: [] New Max. Cl.: []
 Min. Vertical Clearance Under (Approach): []
 Min. Vertical Clearance of: []

Structure Type
 Material: [] Configuration: [] # of Spans: [] Overall Length (ft): [] Year: [] Work Performance: [] Plan: [] Shop: []
 2158-24-18 BRIDGE STRUCTURE 1 227.0 1987 NEW STRUCTURE C285 C285
 2158-24-18 BRIDGE STRUCTURE 1 227.0 1987 NEW STRUCTURE C285 C285

Inspection Information
 VIN: [] Comments: []
 Date: []
 Date: []
 Date: []

Inspector Information
 Inspector: []
 Team Member(s): []
 Team Leader Signature: [] Inspection Date: 2009-04-16 Inspection Agency: CDEV (3)
 District/Local Manager and No. Printed: [] District/Local Manager Signature: [] Review Date: []

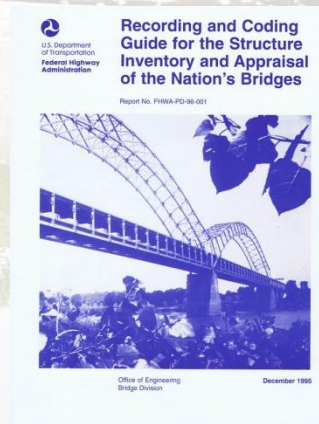
The Jun 30 08:53:27 CDT 2009



Sufficiency Rating (SR)

- FHWA standard measures service condition
- Three separate group factors determine SR Rating
 - Structural adequacy (Deck, Superstructure, and Substructure)
 - Serviceability and functional obsolescence
 - Essentiality for public use
- Condition and function are rated to current standards (not what the bridge may have been built to)

FHWA Coding Guide



Sufficiency Rating (SR) Cont'd

- 100 percent would represent an entirely sufficient bridge; 0 is insufficient or deficient bridge
- Rating is not a quantitative measure of safe versus unsafe
- Example, a 50 year old bridge may be structurally adequate but deficient due to current roadway widths, standards, or clearance

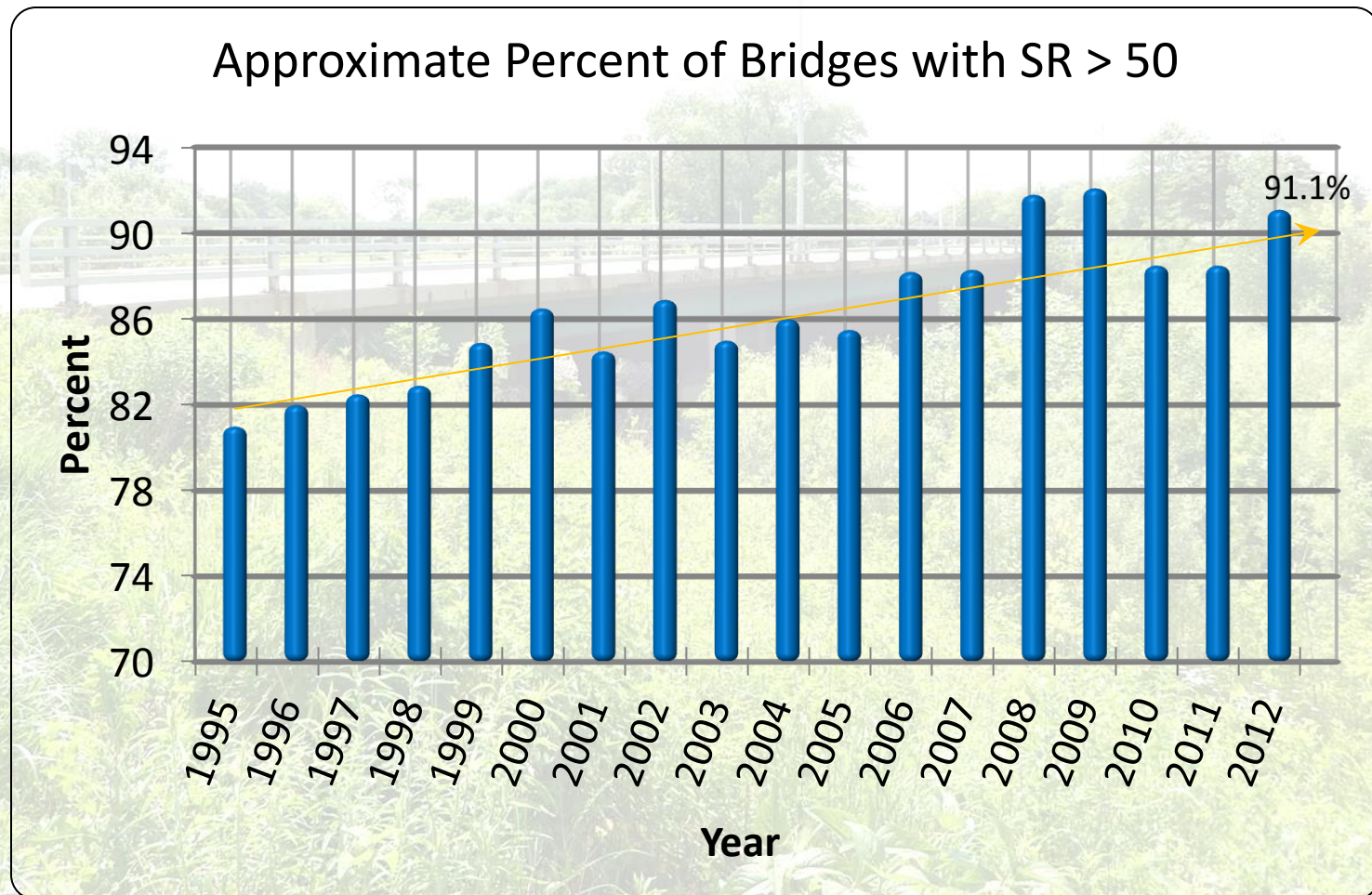


U.S. Department
of Transportation

**Federal Highway
Administration**

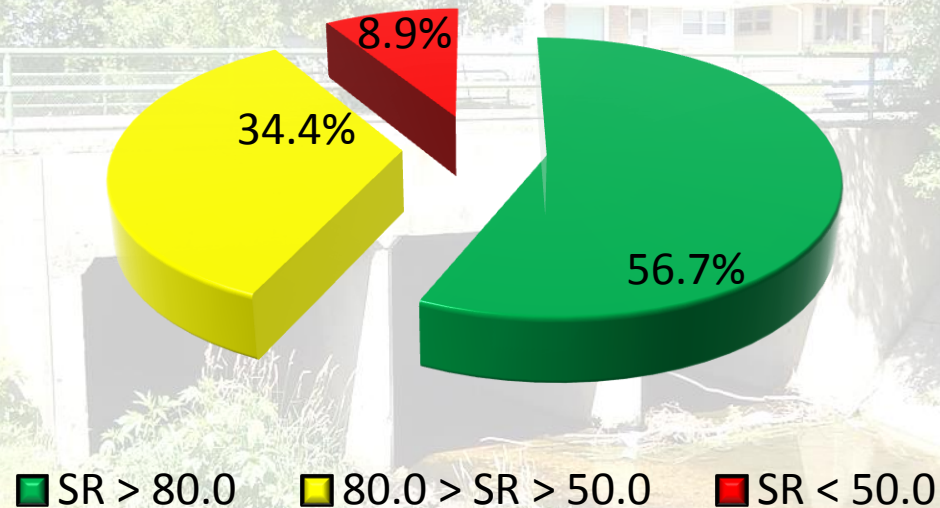
Milwaukee Bridge Performance

- SR of bridge inventory trending upwards



Milwaukee Bridge Performance

- Relative comparison of SR for city rated bridges, 2012



- **Federal/State funding eligibility**

- SR < 80.0 : Bridge eligible for rehabilitation
- SR < 50.0 : Bridge eligible for rehabilitation or replacement

Federal/State Program

- Available only for those bridges deemed as federally eligible
- Competitive application process for limited state-wide program dollars
- Applied for on a 3 year cycle
- Generally 80% Federal/State funded with 20% local share
- Project schedule generally established by limits on available funding

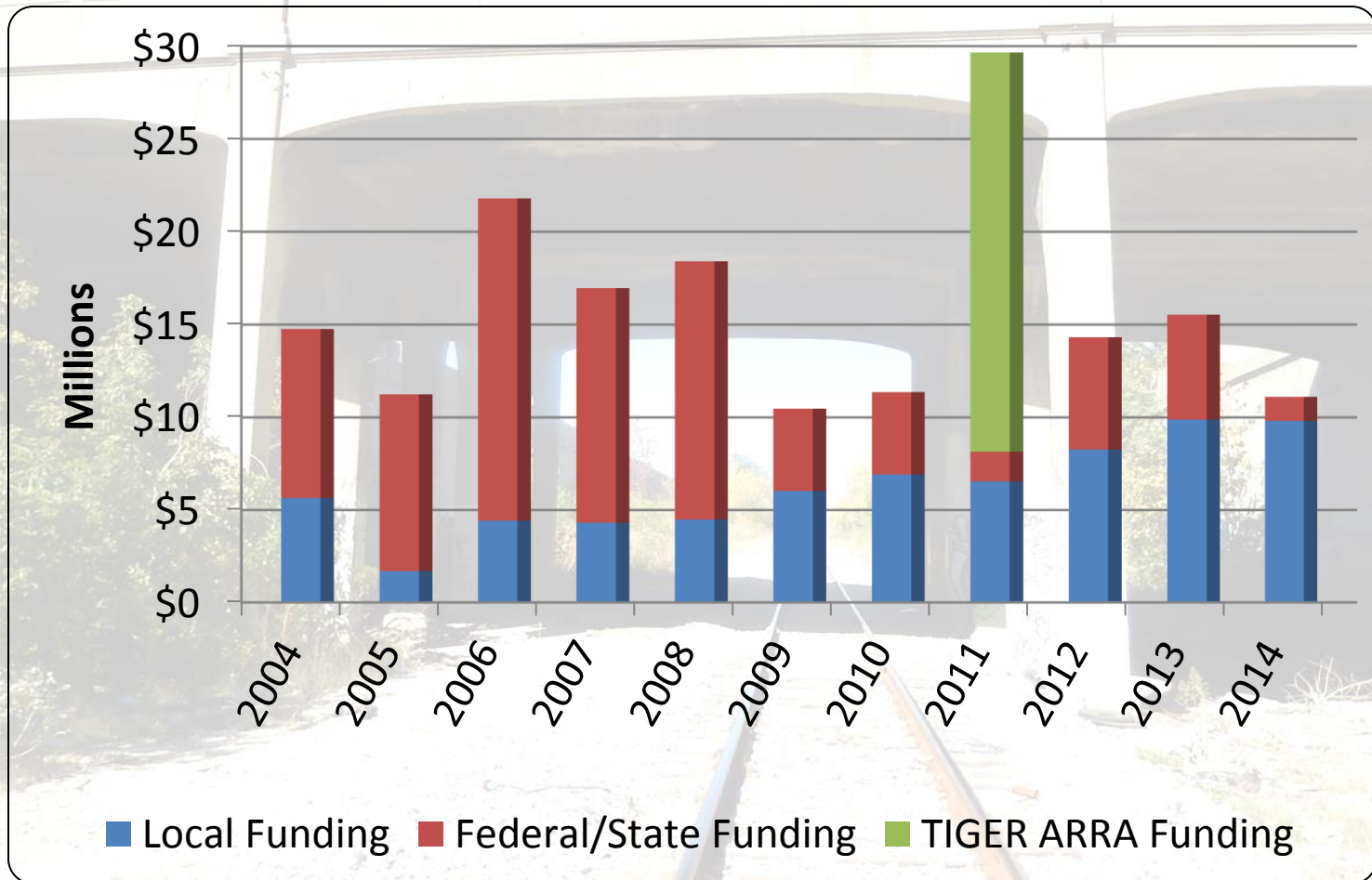


Local Program

- Bridges not deemed Federal/State eligible
- Bridges in which Federal/State funds not available or insufficient
- Maintenance work including structure repair, painting, mechanical upgrades, inspections, pre-engineering activities, etc.



Summary of Capital Bridge Program 2004-2014



Questions?

