

# Local Agency Bridge Program





# Letting Report

## ■ FY 2012

- 48 Local Bridge Projects Let to Contract: Total = \$40 million
- 53 Total Projects = \$46 million

## ■ FY 2013 (As of March 1<sup>st</sup>)

- 29 Local Bridge Projects = \$28.5 million
- April Advertised Projects
  - 5 Local Bridge Projects = \$ 2.3 million



# 2013 Call For Applications

- Sent out January 31st to CRAM and MML
- **Deadline – May 1, 2013**
- “Call For Applications” Location:  
[www.michigan.gov/mdot](http://www.michigan.gov/mdot), Doing Business, Local Agency Program, Bridge Program, Call For Applications



# Call For Applications

- Limit of 5 Applications
  - Multiple PM's count as 1 Application
- Check Federal Sufficiency Rating (FSR) for project eligibility
- Accurate Inspection and SI & A Information



# Call For Applications

- Application Estimates:
  - General Estimate: Replacements
    - Rural: \$200/sft of Proposed Deck Area
    - Urban: \$220/sft of Proposed Deck Area
    - Approach Costs: \$25k/Sta, \$100k minimum, Urban higher (\$300k to \$500k)
  - Rehabilitation and Preventative Maintenance – Provide Detailed Estimate Worksheet of Costs



# Call For Applications

- Rehabilitation Projects
  - Estimates to General, more detail
  - Unknown factors, Contractors reflect in bids
  - Potential for Quantity Increases
  - Need Detailed Scoping
- **Application Changes**
  - Do NOT include PE, CE and ROW costs
- Prefer Electronic submission of Applications



# Call For Applications

- Common Application Errors
  - Incomplete Narrative – Lacking Information
  - Incorrect ADT, Route Classification
  - Missing Resolutions
  - Estimates too High or Low – Adversely affects Local Bridge Program



# Call For Applications

- Common Application Errors – cont.
  - Underestimating the size of new bridge
  - Incorrect Load Posting/Rating
  - Public Utility relocation costs
  - Incorrect Scope of Work
    - Rehabilitation and PM projects
- What can go wrong when scoping a project?





# Application Scoping

Box Beam - Deck Overlay??





# Application Scoping

Beam Repair or Superstructure Replacement?



vision



# Application Scoping

PM – Painting, Railing Replace, Beam Ends



# Application Scoping



Overlay – Joint  
Replacement





# Application Scoping

**BRIDGE DECK PRESERVATION MATRIX**

DECK CONDITION STATE				REPAIR OPTIONS	POTENTIAL RESULT TO DECK BSIR		NEXT ANTICIPATED EVALUATION
Top Surface		Bottom Surface			Top Surface BSIR #58a	Bottom Surface BSIR #58b	
BSIR #58a	Deficiencies % (a)	BSIR #58b	Deficiencies % (b)				
≥ 5	N/A	N/A	N/A	Hold (c) Seal Cracks/Healer Sealer (d)	No Change	No Change	1 to 8 years
	≤ 5%	> 5	≤ 2%	Epoxy Overlay	8, 9	No Change	10 to 15 years
	≤ 10%	≥ 4	≤ 25%	Deck Patch (e)	Up by 1 pt.	No Change	3 to 10 years
4 or 5	10% to 25%	5 or 6	≤ 10%	Deep Concrete Overlay (h)	8, 9	No Change	25 to 30 years
		4	10% to 25%	Shallow Concrete Overlay (h, i)	8, 9	No Change	10 to 15 years
				HMA Overlay with waterproofing membrane (f, h, i)	8, 9	No Change	8 to 10 years
		2 or 3	> 25%	HMA Cap (g, h, i)	8, 9	No Change	2 to 4 years
≤ 3	>25%	> 5	< 2%	Deep Concrete Overlay (h)	8, 9	No Change	20 to 25 years
		4 or 5	2% to 25%	Shallow Concrete Overlay (h, i)	8, 9	No Change	10 years
				HMA Overlay with waterproofing membrane (f, h, i)	8, 9	No Change	5 to 7 years
				HMA Cap (g, h, i)	8, 9	No Change	1 to 3 years
		2 or 3	>25%	Replace Deck	9	9	40+ years

- (a) Percent of deck surface area that is spalled, delaminated, or patched with temporary patch material.
- (b) Percent of deck underside area that is spalled, delaminated or map cracked.
- (c) The "Hold" option implies that there is on-going maintenance of filling potholes with cold patch and scaling of incipient spalls.
- (d) Seal cracks when cracks are easily visible and minimal map cracking. Apply healer sealer when crack density is too great to seal individually by hand. Sustains the current condition longer.
- (e) Crack sealing can also be used to seal the perimeter of deck patches.
- (f) Hot Mix Asphalt overlay with waterproofing membrane. Deck patching required prior to placement of waterproofing membrane.
- (g) Hot Mix Asphalt cap without waterproofing membrane for ride quality improvement. Deck should be scheduled for replacement in the 5 year plan.
- (h) If bridge crosses over traveled lanes and the deck contains slag aggregate, do deck replacement.
- (i) When deck bottom surface is rated poor (or worse) and may have loose or delaminated concrete over traveled lanes, an in-depth inspection should be scheduled. Any loose or delaminated concrete should be scaled off and false decking should be placed over traveled lanes where there is potential for additional concrete to become loose.



# On-Off System Funds (MAP-21)

- MAP-21 Federal Off-System Waiver
  - MAP-21 requires 15% of Fed Bridge funding be spent on Off-System bridges
  - MDOT gives all 15% Off-System funds to Local Bridge Program
  - Equates to  $\frac{1}{2}$  of the Local Bridge Funds
  - Remaining funds are State(MCS) funds
  - State funds can be used for On or Off-System bridges





# On-Off System Funds (MAP-21)

- Waiver based on Statewide system condition and goals
- Waiver allows for greater funding flexibility
- $\frac{1}{4}$  Federal On-System,  $\frac{1}{4}$  Federal Off-System and  $\frac{1}{2}$  State funds for On or Off-System
- Allows for the highest rated bridges to be selected for funding





# 2012 Bridge Applications

- 287 Bridge Applications Received
  - \$208 million in applications ~ \$46 million in funding
- 97 Projects selected for FY 2015
  - “Mix of Fixes” – ½ Replacement – ½ Rehab/PM
  - 25% of total \$ selected are Rehab/PM
- “Mix of Fixes” follows MDOT’s overall Asset Management Plan



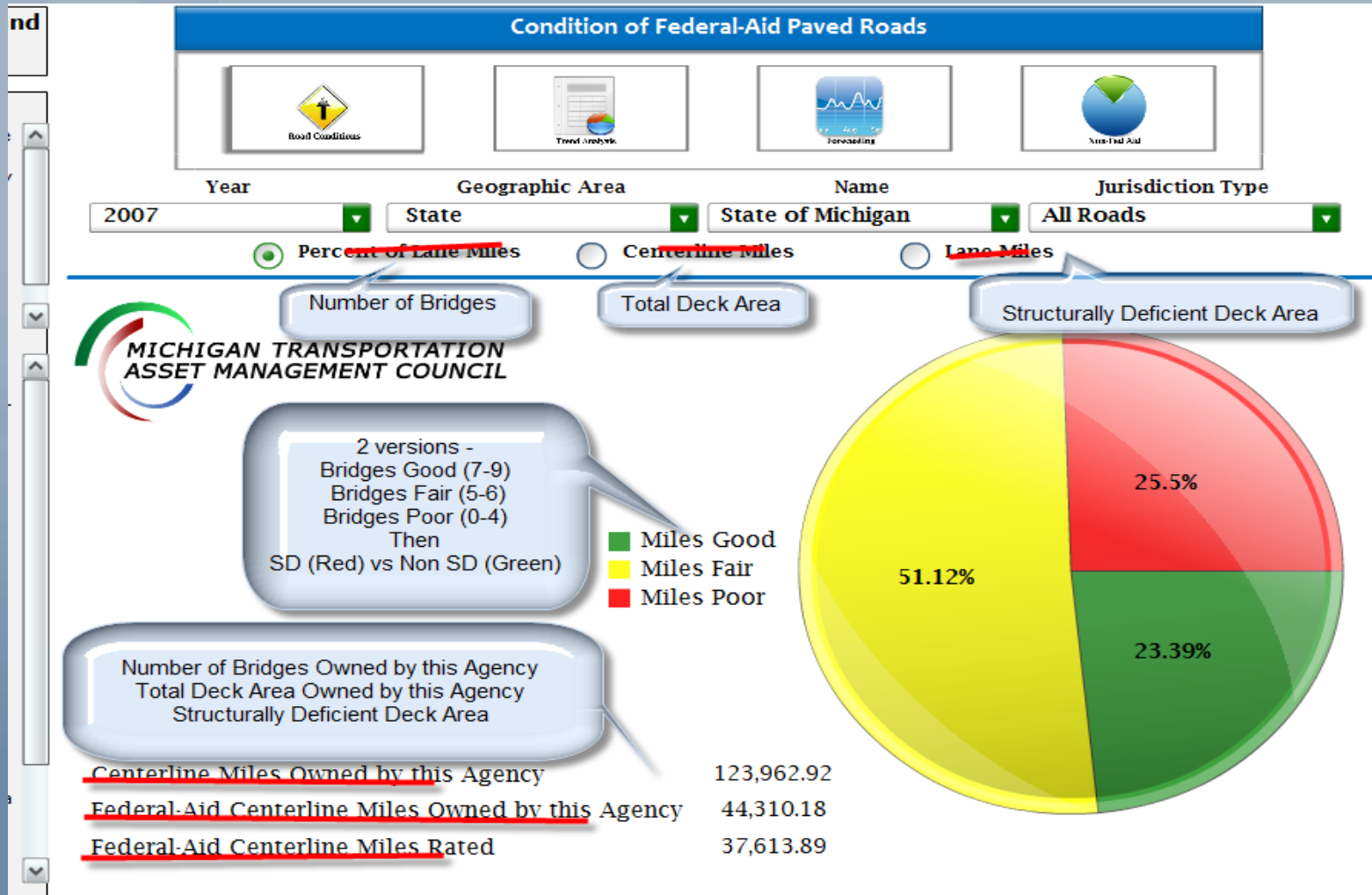


# Bridge Asset Management

- Transportation Asset Management Council (TAMC)
  - TAMC website
  - Redesigned Bridge Dashboard
  - Access data for each Region, County, City
  - Compare data with other Local Agencies
    - Region
    - County
    - City

# Bridge Asset Management

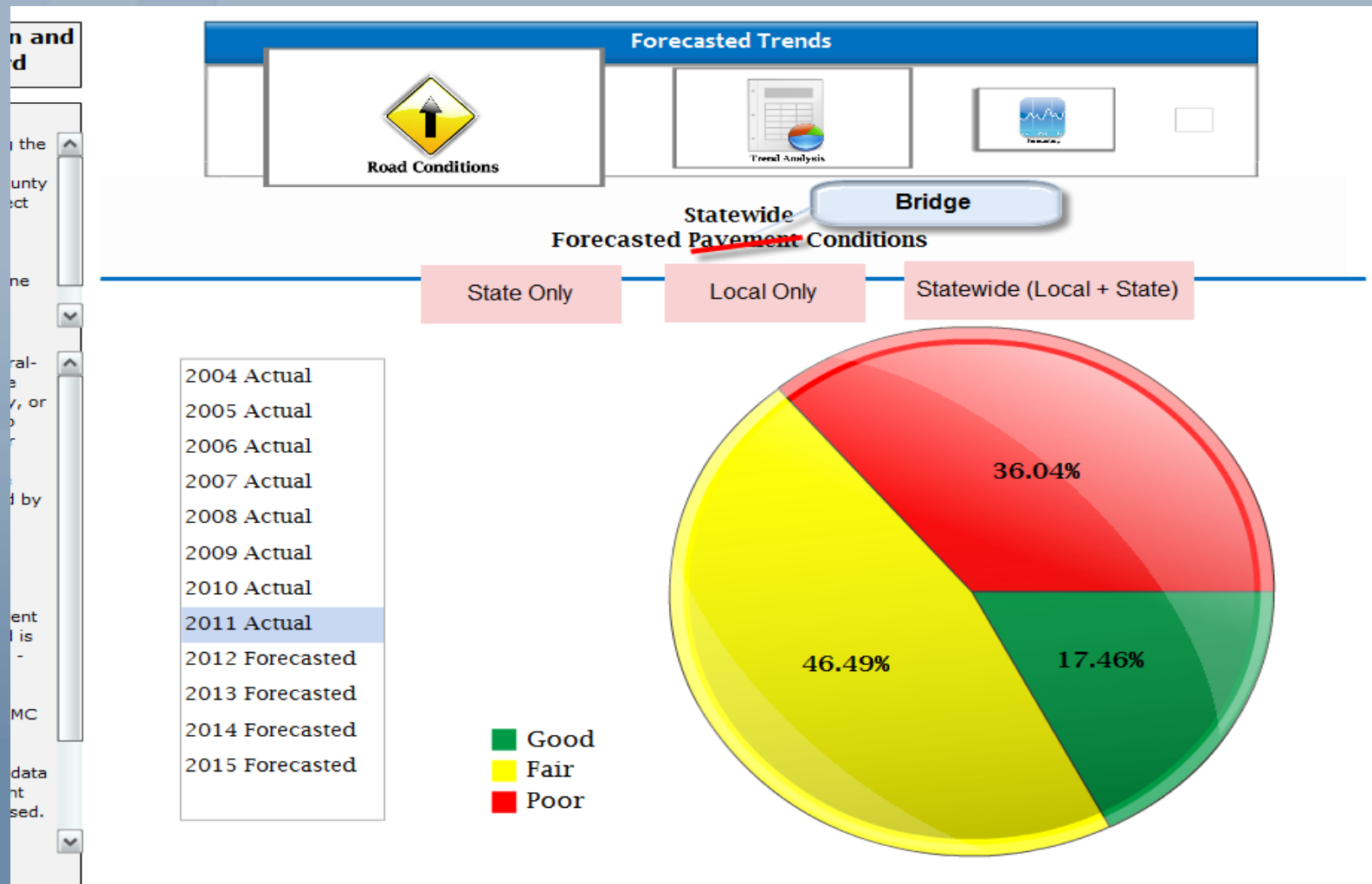
## Under Construction





# Bridge Asset Management

## Under Construction





# Bridge Asset Management

## Under Construction

- Summary
- Pavements**
- Pavement Comparison
- Bridges
- Traffic
- Safety
- Maintenance
- Finance

### TAMC Pavement Condition and Forecasting Dashboard

#### Road Condition

Pie Charts can be generated showing the condition of the Federal-Aid highway system by year, geographic area, county or road ownership (jurisdiction). Select options from the drop down boxes to create the desired pie charts. The condition data can be displayed as percentage, lane miles or by centerline miles\*.

#### Trend Analysis

Changes in the condition of the Federal-Aid highway system over time can be displayed by geographic area, county, or road ownership. Select from the drop down boxes to create the desired bar chart. The data can be displayed as percentages, lane miles or centerline miles\*. Year can be deleted or added by selecting check boxes.

\*Based on Michigan Geographic Framework data.

This dashboard utilizes the most current dataset available as of May 2012 and is updated periodically. [Sources: 2004 - 2011 PASER]

\* For the years 2008 to 2011, the TAMC had road agencies collect pavement condition data on at least 50% of the federal-aid system. Where condition data was not available for the more current year, the previous year's data was used.

### Trend Comparison of Federal-Aid Paved Roads

Road Conditions

Trend Analysis

Forecasting

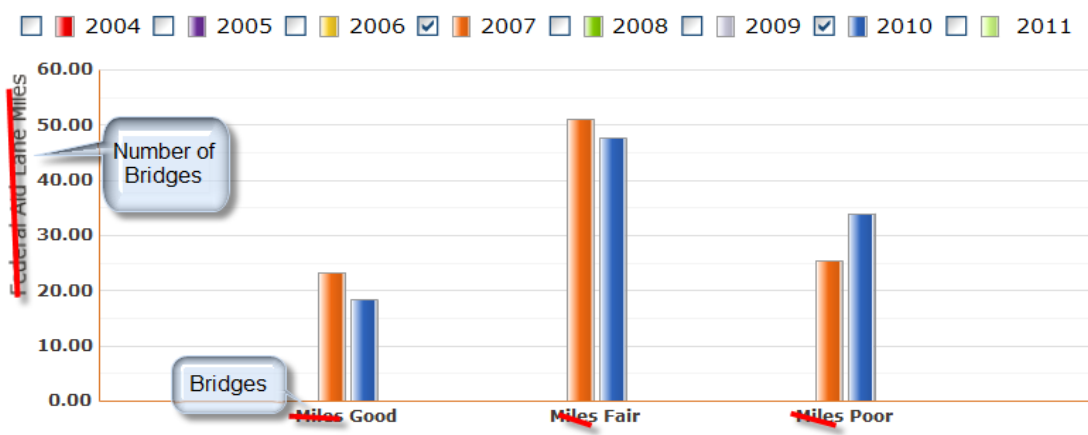
Federal Aid

Year: 
 Geographic Area: 
 Name: 
 Jurisdiction Type:

Percent of Lane Miles
  Centerline Miles
  Lane Miles

Bridge

### Pavement Condition by Year





# Bridge Asset Management

## Asset Management Guide Training

Training course is being developed for  
Local Bridge Asset Management

Completed by mid to late summer

1 Day Workshops available in late  
2013 and 2014.



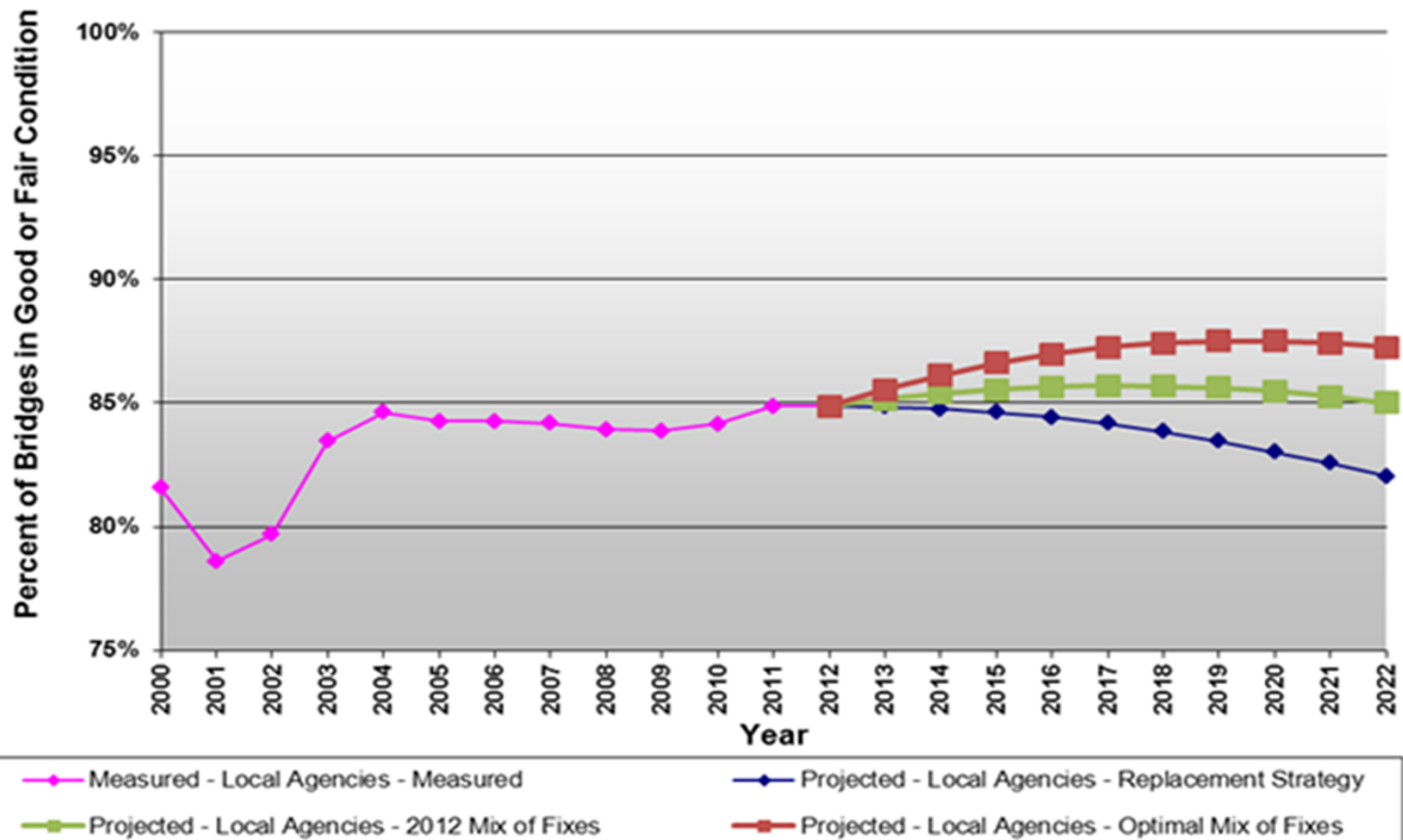
# Bridge Asset Management

- Workshop Outline
  - Introduction to Bridge Asset Management
  - Bridge Condition – Assessing Needs
  - Maintenance Options – Replace, Rehab, PM
  - Cost Estimating
  - Optimizing Bridge Preservation – “Mix of Fixes”
  - Developing a Local Bridge Preservation Plan



# Bridge Asset Management

## Local Agency Bridge Condition Forecast System





# Local Bridge Program Website

- [www.Michigan.gov/mdot](http://www.Michigan.gov/mdot)
  - Click: Doing Business
  - Click: Local Agency Program
  - Click: Bridge Program
    - Details of the Local Bridge Program
    - 3-Year Plan – Selected Projects
    - Reference Guides, Manuals & Special Details





# Regional Bridge Council Meetings

## Financial and Program Update

Bay Region: April 24<sup>th</sup> @ 10:00am, Genesee CRC

Grand Region: May 6<sup>th</sup> @ 10:00am, Ottawa CRC

Metro Region: May 8<sup>th</sup> @ 10:00am, St. Clair CRC

North Region: April 18<sup>th</sup> @ 10:00am, MDOT Gaylord Office

Southwest Region: April 29<sup>th</sup> @ 10:00am, Van Buren CRC

Superior Region: April 19<sup>th</sup> @ 8:30am, Marquette CRC

University Region: May 2<sup>nd</sup> @ 9:00am, Ingham CRC



# Bridge Unit Staff

- **Keith Cooper: Bridge Program Manager**
  - Phone: (517) 373-2346
- **Mark Harrison: Project Development Engineer**
  - Phone: (517) 373-2286
- **Chris Tennes: Staff Engineer**
  - Phone: (517) 335-2844
- **Pablo Rojas: Staff Engineer**
  - Phone: (517) 373-2232
- **Rita Levine: Transportation Engineer**
  - Phone: (517) 373-0041



Questions?