

Collaboration to Support Regional and Statewide Transportation Asset Management

Lessons Learned in Cleveland

presented to

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presented by

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Northeast Ohio Areawide Coordinating Agency



What is NOACA

... and what does it do?



- **NOACA is the federally designated metropolitan planning organization (MPO) for northeast Ohio**
 - ❑ **Conducts multi-modal transportation & environmental planning for a five-county region**
 - ❑ **Determines how federal transportation dollars are spent**
 - ❑ **Conducts transportation-related air quality planning and public education activities**
- **Functions as the “areawide” water quality planning agency for the region**

The Landscape for Regional Asset Management

MPOs typically...

- Don't own or operate infrastructure
- Have a stake in regional data resources
- Serve as a regional policy leader
- Are leaders in performance management and target setting
- Help set regional priorities and policies
- Play a major role in federal fund allocation
- Lead regional long range planning

Why Does NOACA Need Transportation Asset Management?

- With a surface transportation program (STP) annual allocation of only \$27.5 M, a strategic framework for making cost effective decisions about allocating resources and managing infrastructure was needed
- Valuable assets are not receiving the attention or funding needed to achieve a state of good repair
- Allocates funding where it will provide the greatest return
- Improves performance, cost-effectiveness, communication, accountability and credibility



What Have Other MPOs Done?

There are good examples of MPO AM efforts that prioritize:

- Identifying preservation needs
- Promoting preservation as a regional priority
- Establishing performance targets
- Lead regional data collection and sharing
- Developing asset management policies



Source: CMAP GOTO2040 Plan

Some key decision factors:

- Relationship to Long Range Plan
- Needs of MPO members
- Nature of challenges facing region

NOACA Transportation Asset Management Program Development

- **NOACA has made strides in AM, looking for long range strategy**
- **First MPO-level TAMP meeting MAP-21/FAST Act State DOT requirements (that we're aware of)**
- **Includes purchase and implementation of Pavement Management System**
- **Project funded under FHWA Accelerated Innovation Deployment (AID) Grant**

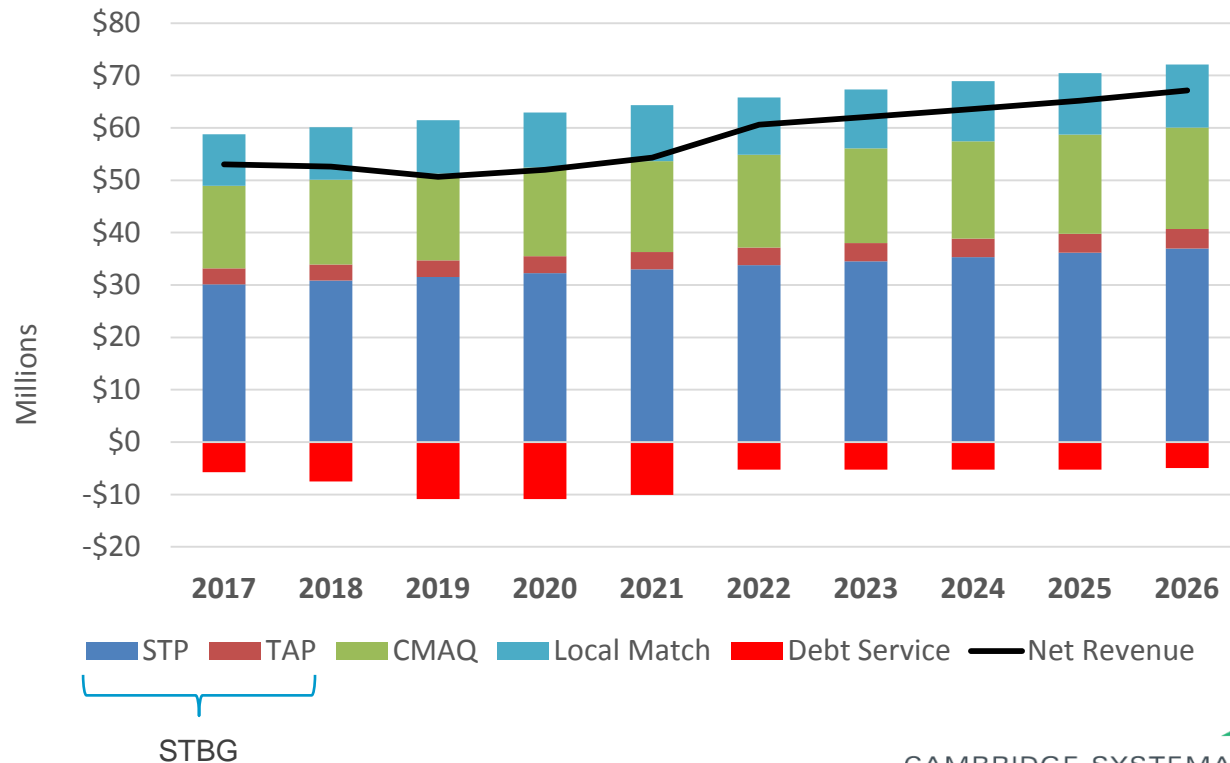
Project Tasks

- **Asset Inventory and Condition**
- **Select and Implement PMS**
- **TAMP Sections**
 - » **Asset Inventory & Conditions**
 - » **AM Objectives & Measures**
 - » **Performance Gap Assessment**
 - » **Lifecycle Cost**
 - » **Risk Management Analysis**
 - » **Financial Plan**
 - » **Investment Strategies**
 - » **TAM Process Enhancements**
- **Stakeholder Outreach**

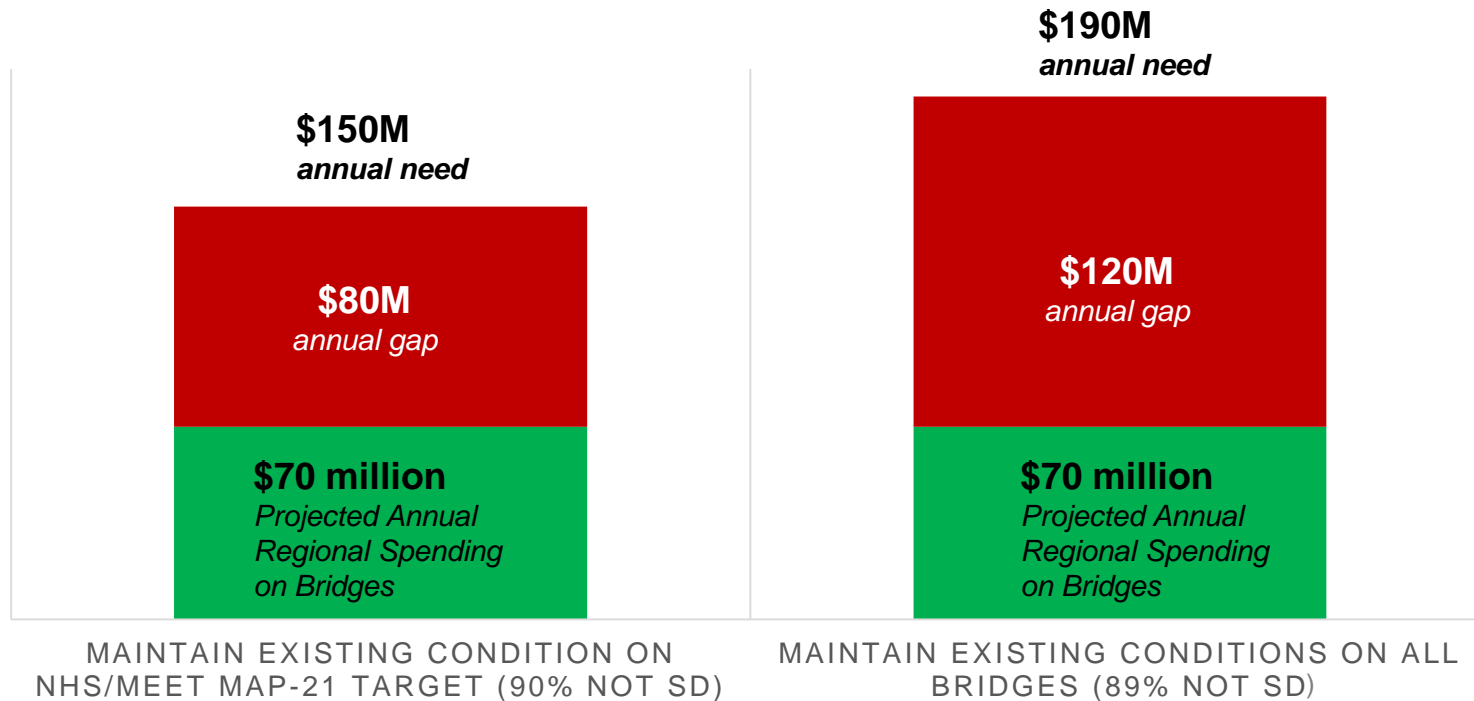


Financial Plan

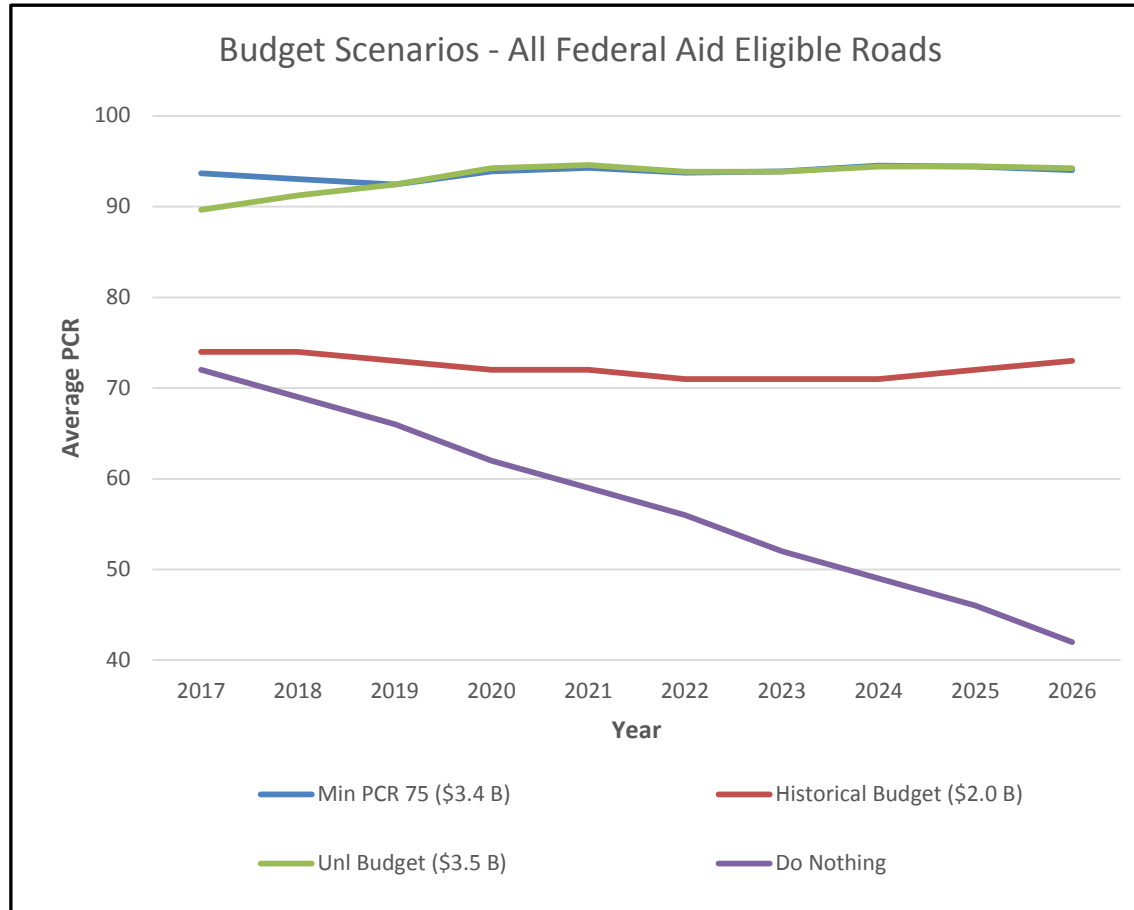
- Needs to identify anticipated regional revenue as well as NOACA-controlled revenue
- Emphasis on NOACA's STBG (former STP)



Bridge SOGR Performance Gaps



Pavement Performance Scenario Results



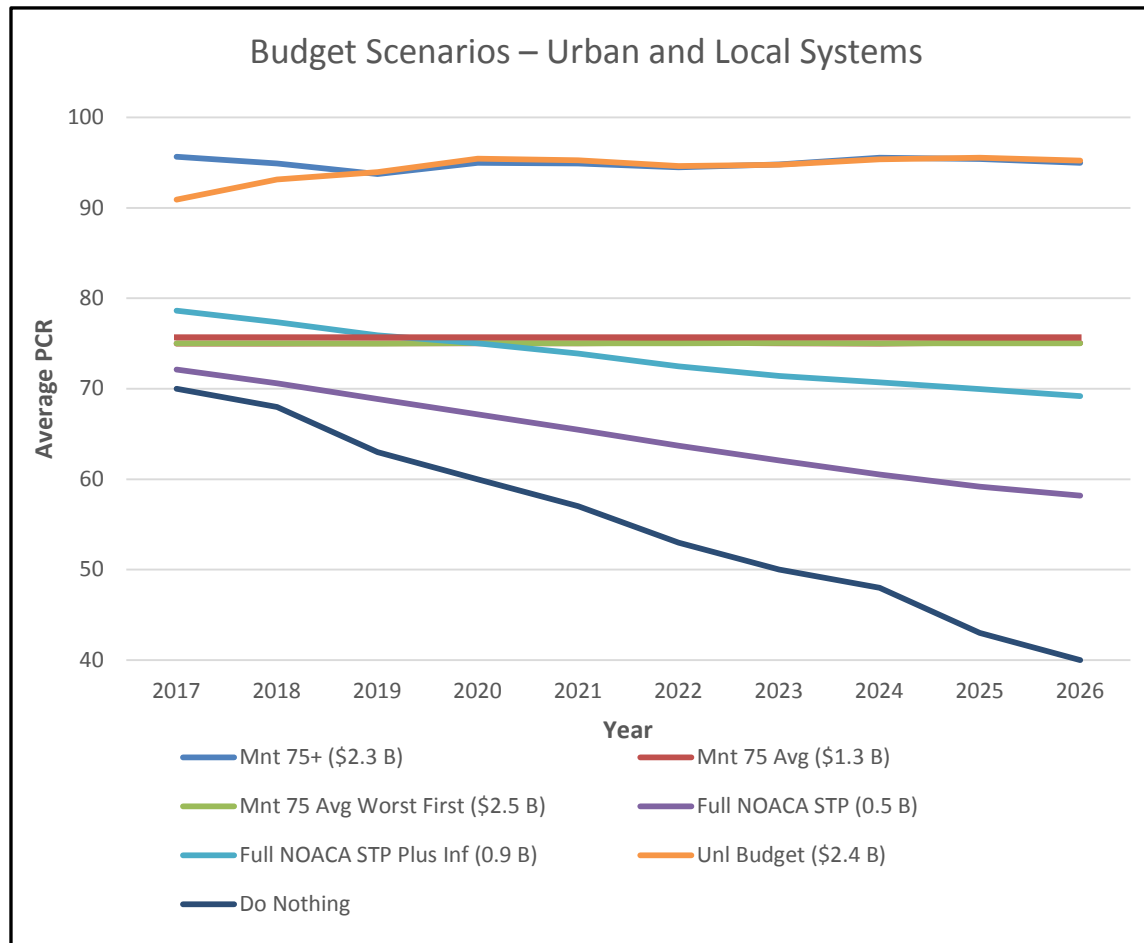
Observations

- Mnt 75+ and Unlimited budgets are about the same at \$3.5B.
- Historical Budget* avg about \$200M/yr maintains current condition over time
- With no spending average road conditions plummet over time to PCR about 40

*Historical budget based on project spending which includes a Federal and State component. Likely underestimates local investment.

Developed by Applied Pavement Technology using Stantec's RoadMatrix tool

Pavement Performance Scenario Results



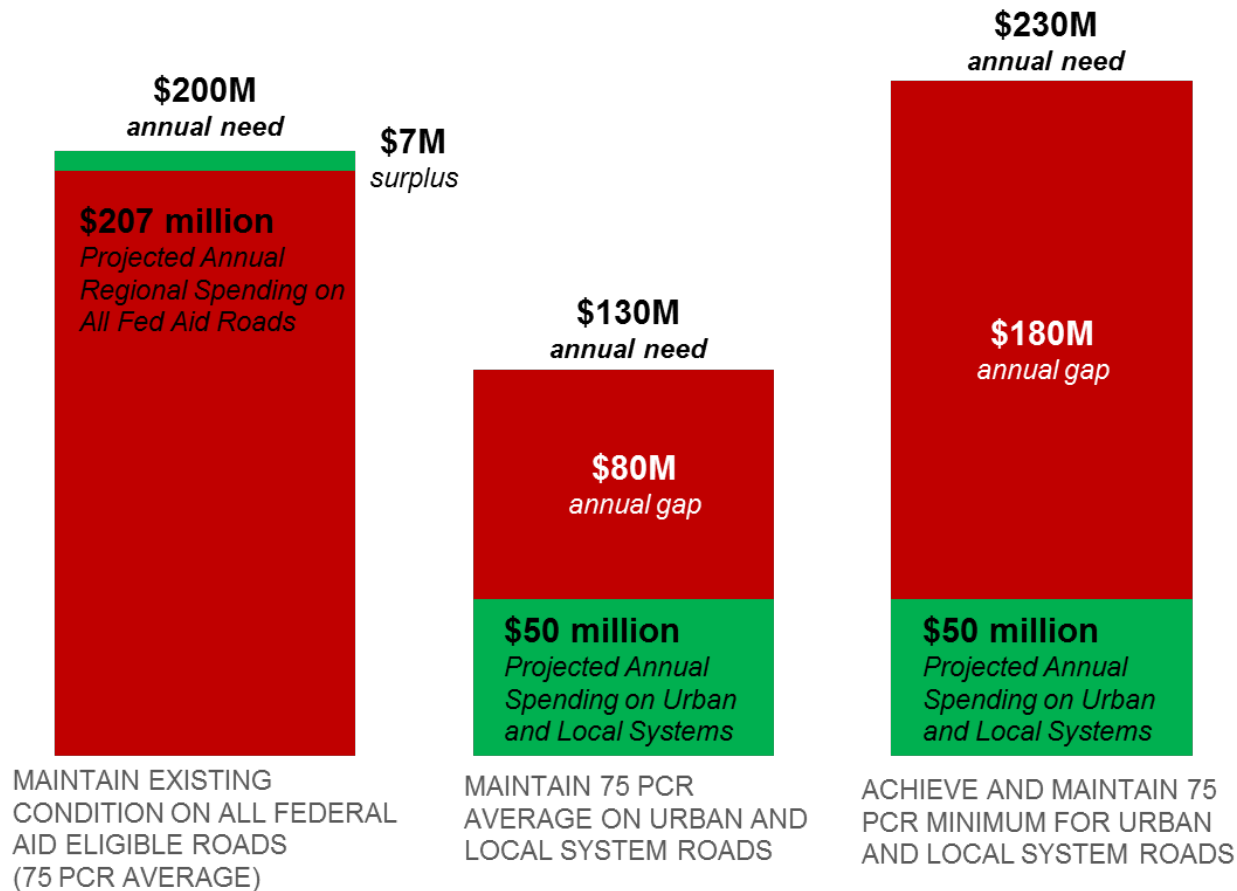
Observations

- Mnt 75+, Unlimited, and Mnt Avg 75 (Worst First) all total about \$2.5B
- If NOACA devotes full STBG to roads* still see decline over time. Also true of STBG plus Infusion of extra 10-years STBG funds.
- Mnt 75 Avg with efficient treatment strategy achieves same goal at about half the cost (Avg about \$130M/yr).

*Scenario includes NOACA STBG projections (w/o TAP), ODOT Urban Paving Program, and Local Matches

Developed by Applied Pavement Technology using Stantec's RoadMatrix tool

Pavement SOGR Performance Gaps



TAMP Conclusions

- **Significant challenges in projected regional infrastructure condition**
- **Needs vary greatly by system (Priority, General, Urban, Local)**
- **NOACA should allocate STBG funds to Urban and Local pavements**
- **NOACA should support data-driven project selection by using PMS in coordination with local sponsors**
- **Continue close collaboration with ODOT**

When Developing a Regional TAM Program...

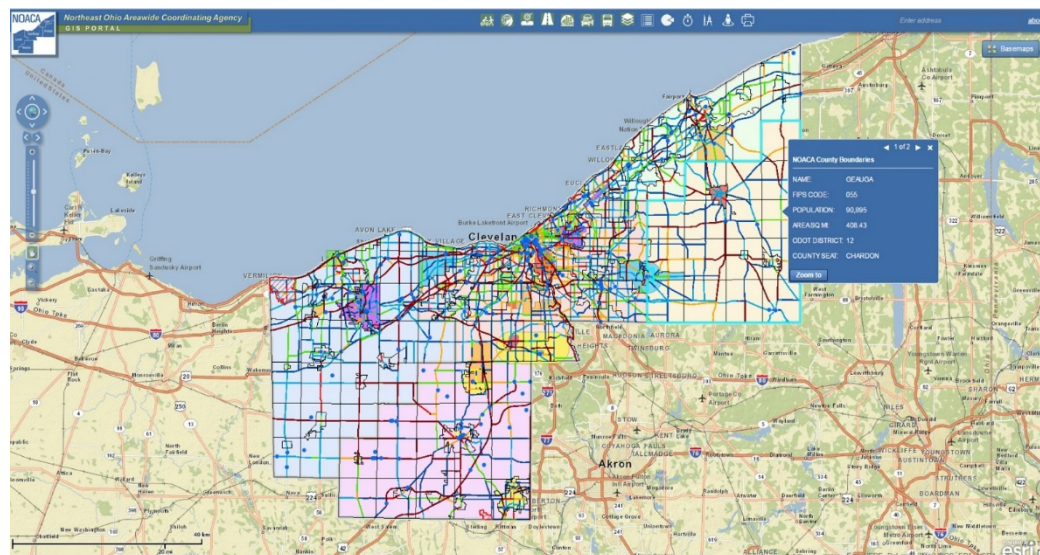
Five Key Takeaways from Cleveland

- Choose the flavor of TAMP best suited to your region
- Use the opportunity to upgrade your AM tools and capabilities
- Take advantage of the opportunities that present themselves (*pre-planning goes a long way*)
- Show the value, not just the cost
- Collaborate with regional stakeholders to identify ways to “move the needle” (*and spend your time on what you can control*)

Upgrading Capabilities and Tools

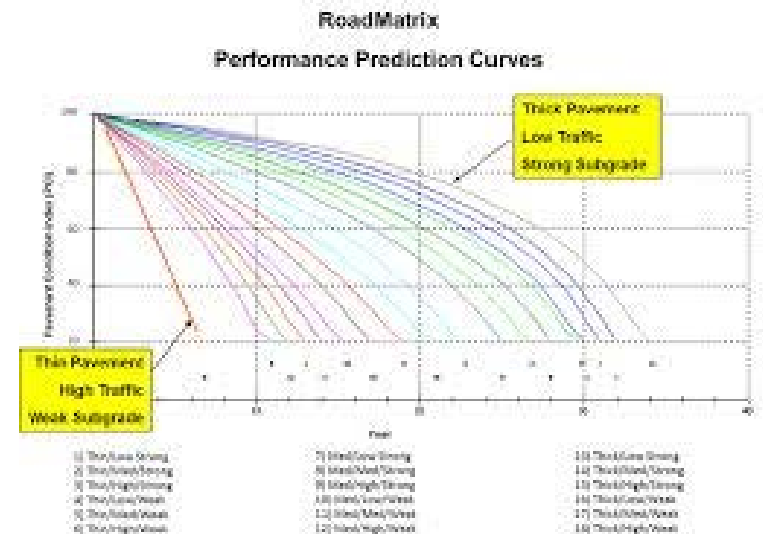
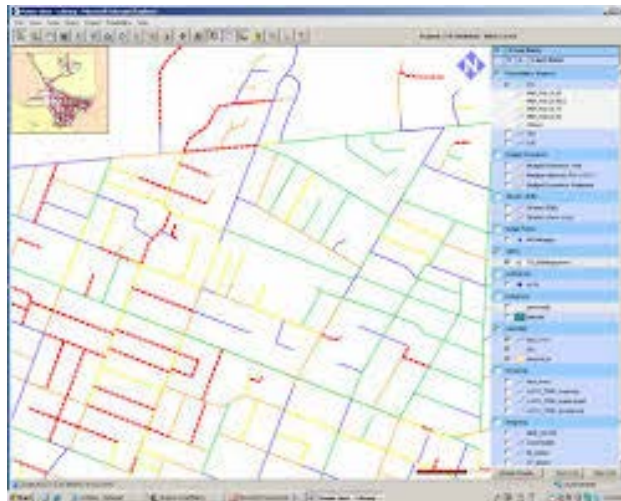
NOACA GIS Portal

- New data has been added
- New tools are available, such as Google Street View
- General category has been divided into specific groups
- Continuously updated
- Future work will be done to improve functionality



Upgrading Capabilities and Tools

- **Pavement Management System**
 - » Prioritize and select projects
 - » Reduce substantial backlog
 - » Maintain acceptable balance of pavement condition
 - » Configuration flexibility



Taking Advantage of Opportunities

- **NOACA Regional Strategic Plan**
- **FHWA AID Grant**
- **Synchronicity with ODOT TAMP**
- **Provisional Transportation Asset Management Program**



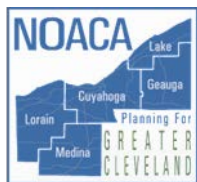
Demonstrating the Value

- The Northeast Ohio economy \$159 billion
- Largest in Ohio representing 28% of the State's economy



Collaboration in Planning

- **NOACA Transportation Asset Management Steering Committee**
 - » **Engineers and Planners from City and County Government, ODOT and FHWA**
 - **Guide the development of the TAMP**
 - **Provide expertise**



Collaboration in Preservation

- **NOACA/ODOT level of preservation investment over the next 4 years (2016 – 2019 TIP)**
 - » **NOACA is dedicating 92% of total TIP funding towards preservation**
 - » **ODOT is dedicating 93% of its funding towards preservation**



Collaboration in Data Collection and Sharing

- **ODOT collects over 1,400 miles of Pavement Condition Ratings (PCR) in the NOACA Region**
- **ODOT collects IRI data on both the State System and NHS in the NOACA Region**
- **ODOT provides training to the Locals in Transportation Asset Management**
- **ODOT provides free software to the Locals for Pavement Condition Assessments and Analysis**

Collaborating to “move the needle”

- **Asset Inventory**
 - » What assets are most important for the region?
 - » Who is responsible for which assets?
- **Risk register**
 - » What are the risks facing the region?
 - » Which risks can the MPO address?
- **Financial plan / Investment strategies**
 - » Where can MPO funding make a difference?
- **AM Process Enhancements**
 - » What resources can the MPO provide to support members?

THANK YOU

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