

# Bridge Inspection & Load Rating



2022 COUNTY ROADS CONFERENCE  
BRYON FUCHS, PE  
NDDOT

# History

- ▶ NDDOT
  - ▶ Completing inspections on state and local bridges (>20.0' in length) since the Bridge Inspection Program began
    - ▶ NDDOT internal staff
  - ▶ In 2020, moved to Consultants for all locally owned bridges and some state-owned bridges with NDDOT staff managing the contracts
  - ▶ NDDOT is still inspecting the majority of the state-owned bridges, but consulting the remaining

# Why we invest so much time, effort, and funds for Inspections/Load Rating?

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- ▶ Safety is #1!
- ▶ Mobility
- ▶ Movement of freight (agriculture, oil, etc.)
  - ▶ Vital link in the transportation network
- ▶ Emergency Services
- ▶ Asset Management

## So Where are we at?

- ▶ 2020/2021 Bridge inspection cycle has been completed
- ▶ Most of the 2020 load rating have been completed and approved
- ▶ 2021 load ratings are coming – all are due by June 30, 2022

# What did we learn and some numbers?

- ▶ Improved inspections and Documentation!!!!
- ▶ Some bridges weren't as good as we thought!
- ▶ Inspections/load ratings are showing the need for some repairs and/or rehab to remain open or improve load carrying capacity
- ▶ Critical findings
  - ▶ 182 were issued
    - ▶ Load posting signs and substructure issues were the majority, some closures
- ▶ New or Reduced Load Postings (about 45% Load Rating are in)
  - ▶ 183 load postings
- ▶ Closures based on Load Ratings
  - ▶ About 10 so far

# Reminders!!

- ▶ Critical findings – closures and load postings
  - ▶ 30-days to post
  - ▶ Closures are supposed to be done immediately
- ▶ Repairs, new construction, replaced
  - ▶ Structural Inspection Notification form
    - ▶ Submit prior to opening bridge, **not at the end of the year!!!**
    - ▶ Proposed changes will require an inspection prior to opening
    - ▶ Document everything!!!

# Reminders!!

- ▶ New or Replaced bridges will get a new Bridge #!?!
  - ▶ Once you know the size and location, please notify us and provide the information – new bridge ID will be provided if necessary
- ▶ Load postings as a result load ratings go out on a monthly basis
  - ▶ Operating rating may no longer be the max posting allowed

# Reminder and look ahead

- ▶ All Load ratings for new bridges need to be done by the designer
  - ▶ Needs to be done prior to opening to traffic
  - ▶ Started with the Oct 2020 bid opening or locally funded bridges in 2020
  
- ▶ Starting to look at 2022 Bridge inspection cycle
  - ▶ Let us know about removals, replacements, planned repairs, etc.
  - ▶ The inspection month (schedule) is in InspectX – plan accordingly



## Bridge Inspections (2022/2023)

- ▶ Consultants will be completing inspections again and possibly some load ratings as needed
- ▶ Interviews were held (9), entering negotiation fee
- ▶ 4 Regions again
- ▶ Will start in April and go through November
- ▶ Costs should be about 50% of what they previously were since no load ratings will be completed on every bridge this time
- ▶ Extended contracts possibly – 2024/2025

# InspectX

- ▶ InspectX
  - ▶ Full name, email, and phone #
  - ▶ 21 Counties HAVE NOT requested access to obtain their bridge inspection reports, etc.

# Bridge Inspections

- ▶ Discussion

# Funding

- ▶ HB 1505 Bridge Projects (ARPA)
- ▶ New Highway Bill (IIJA)

## Funding – HB 1505 Bridge Projects

- ▶ 39 Counties submitted at least 1 application
  - ▶ 111 applications received
  - ▶ 129 total bridges were submitted
  - ▶ Total Cost - \$109M
  - ▶ Funds Requested - \$89.9M
  - ▶ Available Funds \$24,652,429
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- ▶ Executive office is reviewing list for approval

## Funding – IIJA Preliminary #'s

- ▶ Approximately about \$103M more
  - ▶ NHPP - \$26M
  - ▶ STBGP - \$6M (55% sub-allocation)
  - ▶ HSIP - \$4M
  - ▶ EV - \$5M (new)
  - ▶ Bridge - \$45M (new), 15% minimum
  - ▶ Carbon Reduction - \$8M (new) (65% sub-allocation)
  - ▶ PROTECT - \$9M (new)
- ▶ Population shifts
  - ▶ Old – 57.6% Urban vs 42.4% Rural
  - ▶ New – 61.7% Urban vs 38.3% Rural (Preliminary)

## Funding – IIJA Preliminary #'s

- ▶ Transportation Alternatives (TA) – (59% sub-allocation)
  - ▶ Should more than double current available funding

# Funding – IIJA Preliminary #'s

- ▶ Bridge Funding
  - ▶ Significantly more
  - ▶ Looking at a Separate program – go away if not used
    - ▶ [Bridge View](#)
- ▶ Backlog of Projects/Applications
  - ▶ Previously approved for Funding - \$24M (federal)
  - ▶ Tentatively approved - \$14M (federal)
  - ▶ Unfunded HB 1505 Applications - \$65M (federal)



# Funding

- ▶ Discussion

# Questions



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