

# Bridge Inspection Program



2020 Statewide Infrastructure Webinar

Bryon Fuchs, PE

NDDOT

# History

- ▶ NDDOT
  - ▶ Completing inspections on state and local bridges (>20.0' in length) since the NBIS program began
  - ▶ Original agreements with the counties signed back in 1980, new agreements were sent and signed 2020
  - ▶ NDDOT internal staff
    - ▶ Engineering, Construction, and Maintenance staff
      - ▶ All had the proper training, met inspection requirements, and had oversight
  - ▶ NDDOT used Consultants for the underwater inspections and Pin/Hanger inspections that are required on certain bridges – under separate contracts (to continue)
  - ▶ NDDOT used Federal funds and billed the LPA's for the local match

# Why now, what changed?

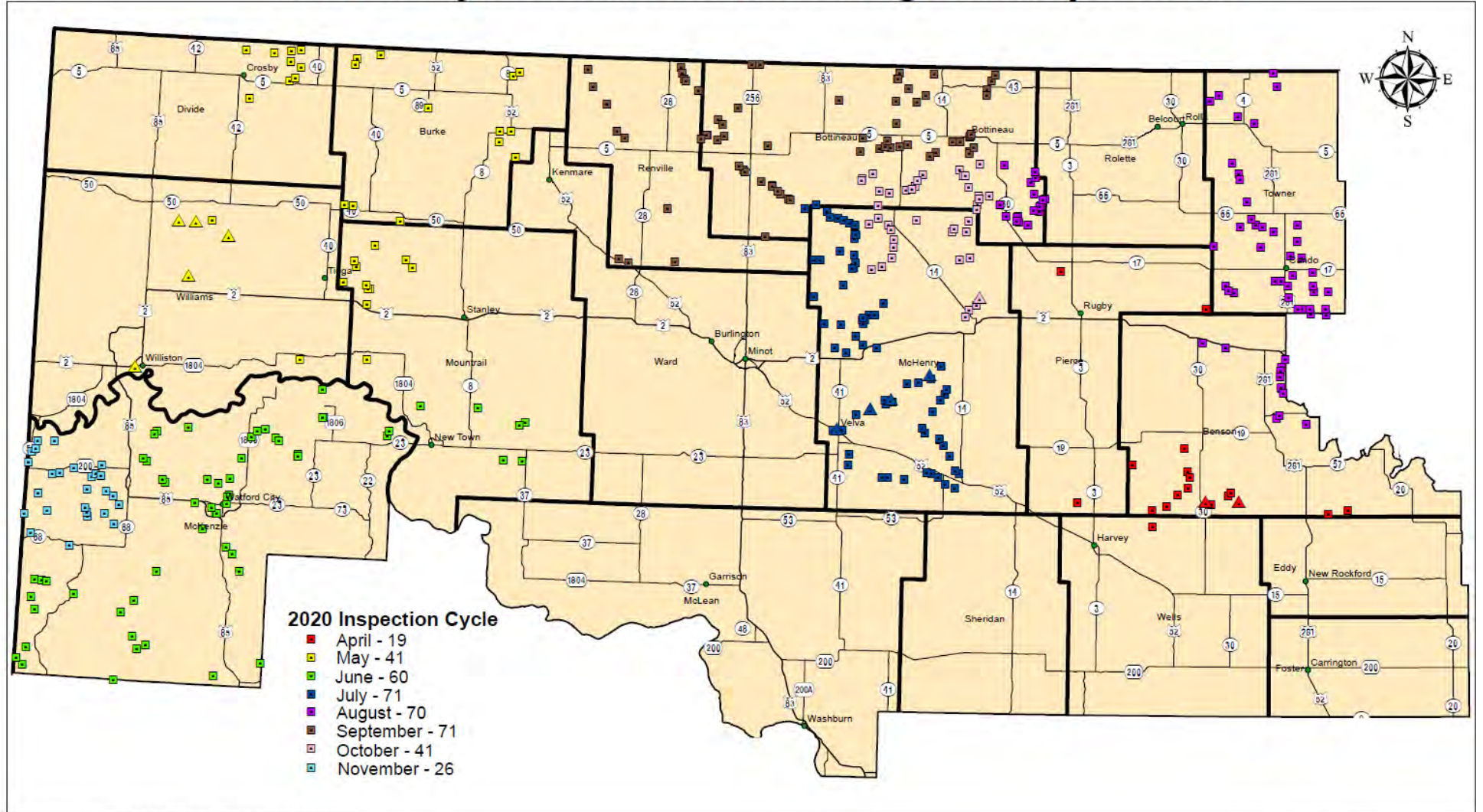
- Ensure the continued SAFETY of Bridges on the LPA system!!
- Federal requirements
  - 23 Metrics
    - Inspection timing/frequency
    - Inspection documentation
    - Inspection Documentation 2
    - Load rating of all bridges
- NDDOT staffing



# Where are we at?

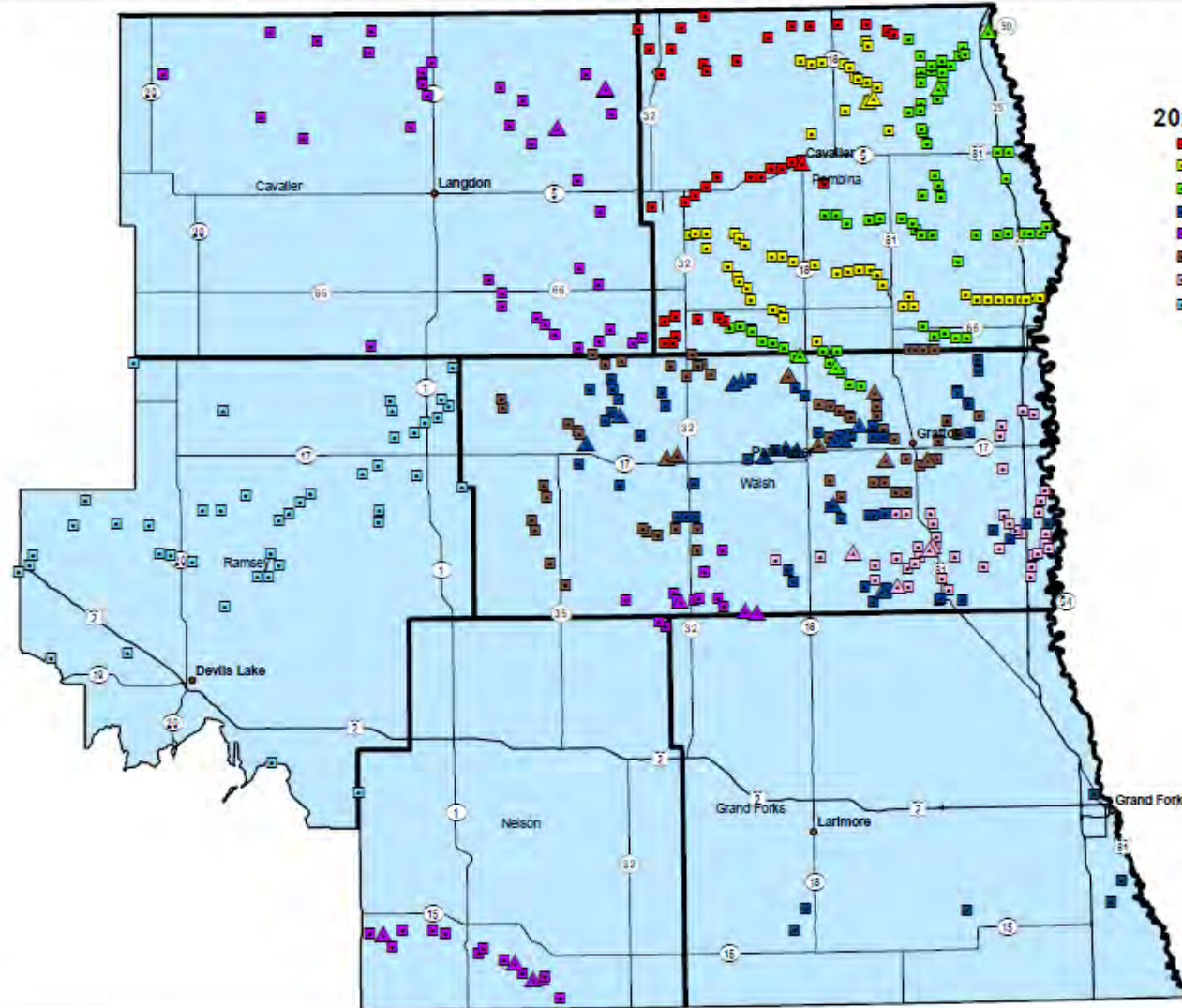
- ▶ NDDOT divided the state into 4 – regions with approximately the same number of bridges in each region
- ▶ NDDOT hired 4 consultants
  - ▶ AECOM – NW Region
  - ▶ Collins/SRF – NE Region
  - ▶ HDR – SW Region
  - ▶ Stantec – SE Region
- ▶ All consultants are currently inspecting and gather data to load rate the bridges

# 2020 Projected Northwest Region Inspections



23 USC § 409 Documents  
NDDOT Reserves All Objections

# 2020 Projected Northeast Region Inspections



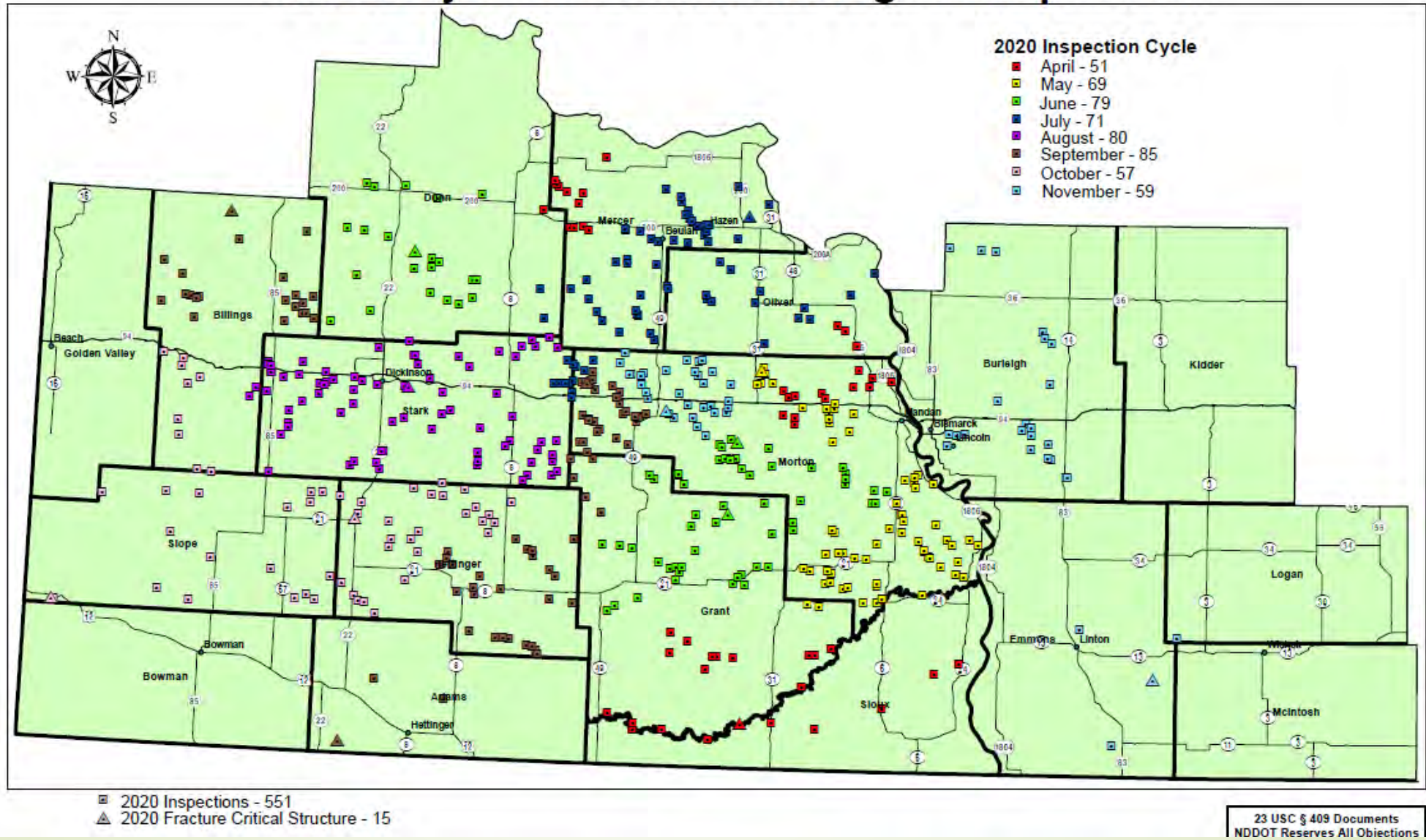
## 2020 Inspection Cycle

- April - 37
- May - 55
- June - 71
- July - 72
- August - 68
- September - 62
- October - 45
- November - 43

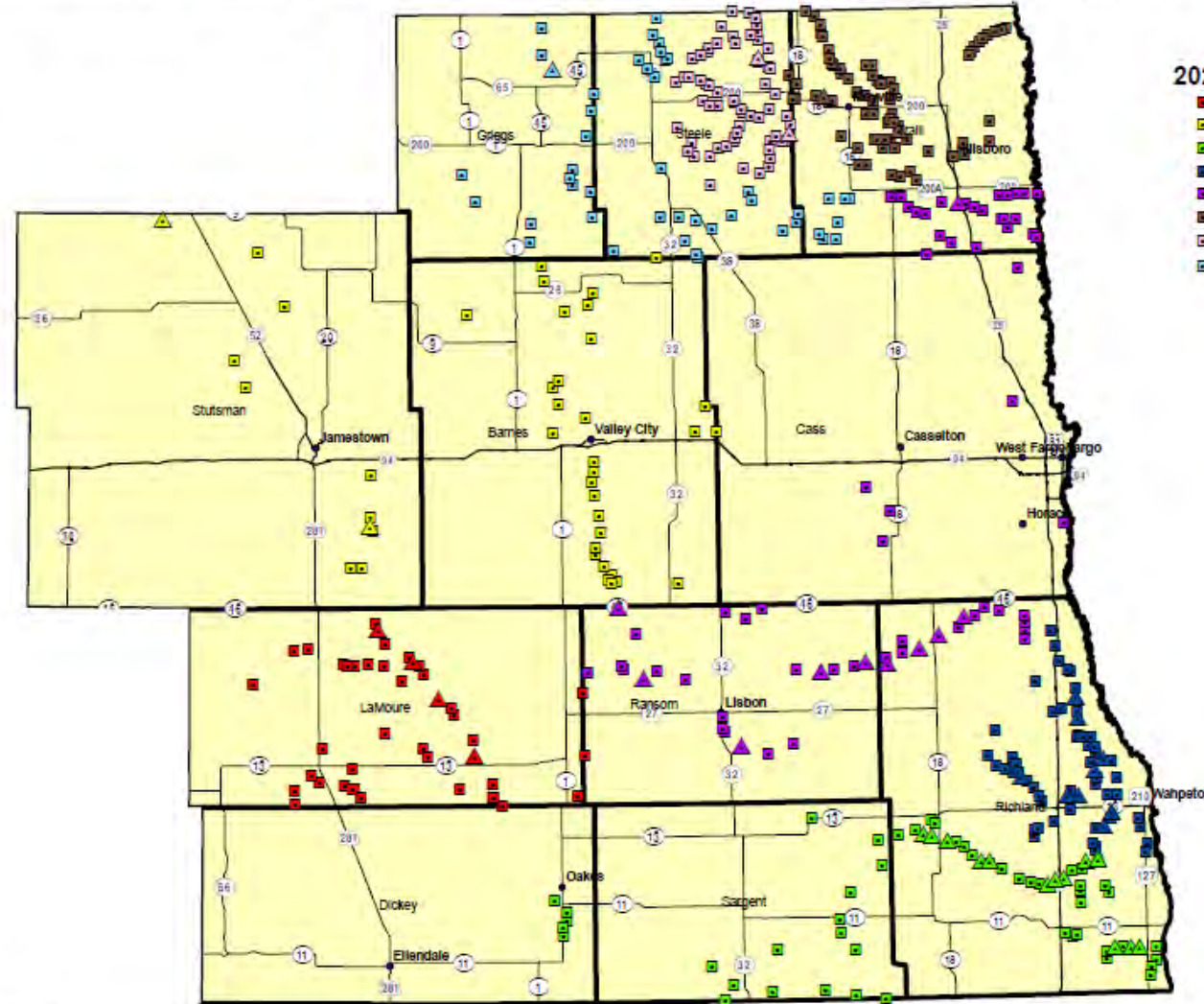
- 2020 Inspections - 453
- ▲ 2020 Fracture Critical Structure - 39

23 USC § 409 Documents  
NDDOT Reserves All Objections

# 2020 Projected Southwest Region Inspections



# 2020 Projected Southeast Region Inspections



### 2020 Inspection Cycle

- April - 42
- May - 41
- June - 63
- July - 62
- August - 71
- September - 71
- October - 64
- November - 46

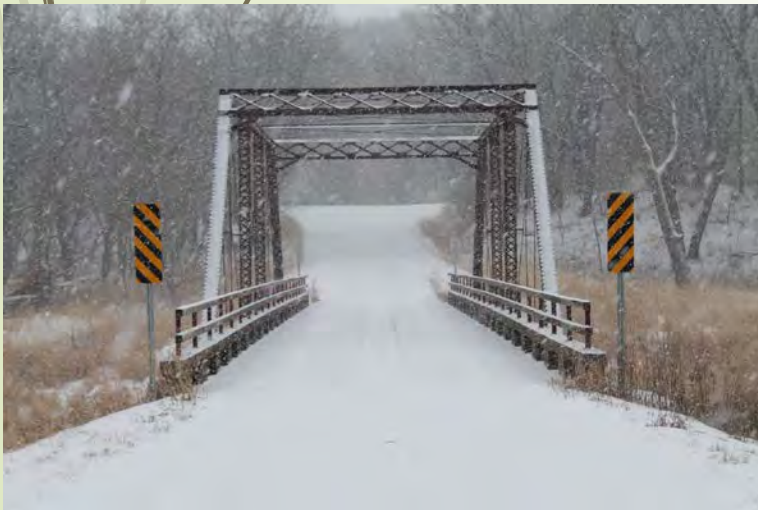
■ 2020 Inspections - 460  
▲ 2020 Fracture Critical Structure - 43

23 USC § 409 Document  
NDDOT Reserves All Objectives



# Scope and Fee Structure

- ▶ Inspection – Lump Sum per Bridge
  - ▶ Inspection cost for the bridge
    - ▶ Add-ons
      - ▶ Fracture Critical
      - ▶ Traffic control needed if more than some cones and signs. Such as a complete lane closure, flagging, etc.
      - ▶ Special access required – such as a snooper or lift truck
      - ▶ Stream crossing – to complete scour/channel profiles, plotting the information and prior information, boats may be needed or other equipment
      - ▶ RR crossing – insurance, permits, agreements, and flagging



# Scope and Fee Structure

- ▶ Closed bridge Inspection Cost
- ▶ Routine load rating of the structure
- ▶ Fracture critical load rating of a structure
- ▶ Additional Investigation Service needs as a result of routine inspection
  - ▶ Special non-destructive testing needed
    - ▶ Consultant will need to discuss with Bridge Division first for a recommendation and justification prior to completing any work.
- ▶ Additional load rating service needs
  - ▶ Looking for plans, shop drawings, or other bridge information required in order to perform the load rating on the structure

# Costs

- ▶ Going to be higher than when NDDOT completed the inspections
  - ▶ More thorough documentation required
  - ▶ Load rating portion (one time), NDDOT hopes to be able to do the “maintenance” load rating in the future
  - ▶ Don't have plans or shop drawings, need to do field measurements, look for data
  - ▶ Etc.



# Funding

- Inspections
  - Federal – 80.93% (Allocations to LPA's)
  - Local match – 19.07%
- Load Rating
  - Federal – 80.93% (NDDOT federal funds)
  - Local match – 19.07%
- Billing Local Match (monthly)
  - Billed after accepted/approved inspection report
  - Billed after accepted/approved load rating



# Funding

- Additional funding to the state – Bridge Replacement and Rehabilitation Program (poor bridges)
  - Load rating – coming from additional funds
  - Bridge replacement – coming from additional funds (offset \$ from County bridge program)



# Additional Info related to Bridge Inspections/Load Rating – New or Newer Things

- ▶ Do Not contact NDDOT inspectors, they longer do LPA bridge inspections
  - ▶ Contact Bryon at 328-2516 or [blfuchs@nd.gov](mailto:blfuchs@nd.gov)
- ▶ Critical Findings
  - ▶ New term – replacing Alert code 3's and load postings will be the most notable
    - ▶ Will be sent out as NDDOT is notified, no longer once or twice a year – those days are gone
    - ▶ Closures will need to be immediately done with photos/date
    - ▶ Postings will need to be done within 30-days
- ▶ Bridge numbers
  - ▶ New bridge numbers will be assigned when an existing bridge is replaced
- ▶ Structural Notification Form
  - ▶ Required for repaired, rehabbed, or new/replaced bridges
    - ▶ Needed to schedule inspection and possible load rating of the bridge
- ▶ **InspectX – LPA view access for 1 or 2 within each agency!**
  - ▶ LPA's that are interested – provide your name, email address, and phone # to me

# Questions?

