

# 2021 Workshop: Bridge Inspection Manual PowerPoint

Presenters: Andrew Fitzgerald, PTOE, PE  
Bridge Inspection Manager

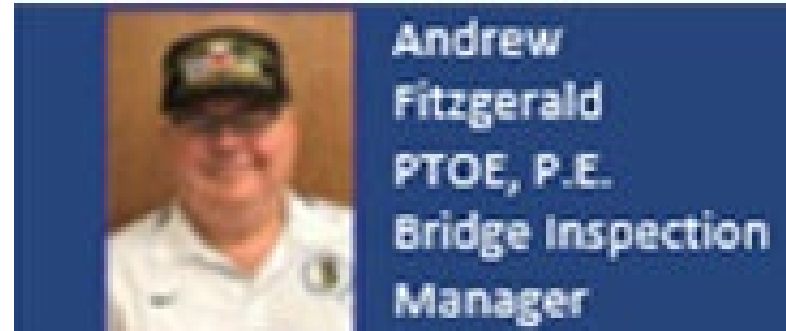
January 22, 2021

Microsoft Teams

# BIOGRAPHICAL

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- **Facilitator:** Andrew Fitzgerald, PTOE, PE
- **INDOT Position:** Bridge INDOT Manager
- **Bridge Inspector:** since 2008
- **Tunnel Inspector:** since 2019
- **INDOT Engineer:** Since 1997
- **Military:** 33 plus years, currently the Chief of Staff of the Indiana Guard Reserve with the rank of Colonel



# INTRODUCTION

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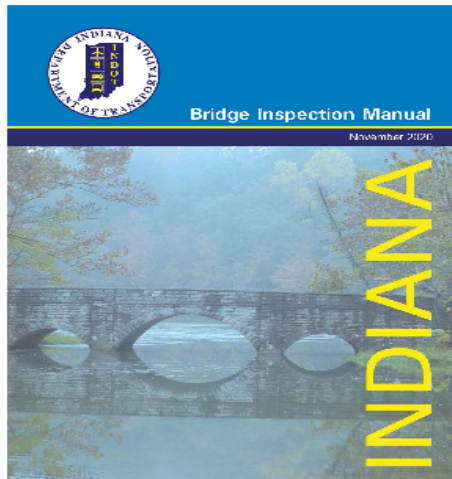
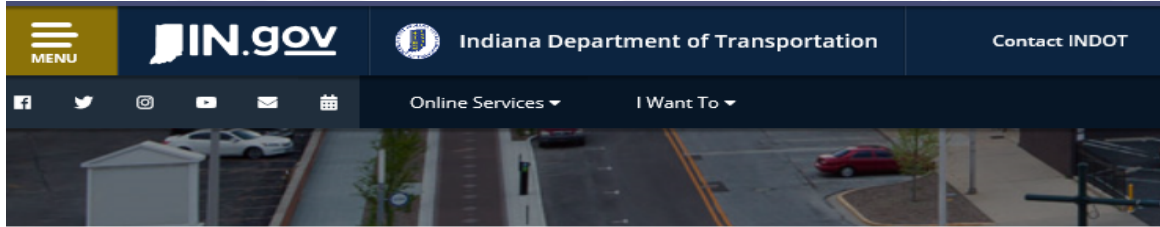
- **Introduction- Andy**
- **Webpage- Andy**
- **Part 1 (Administration)- Bill**
- **Part 2 (Types of Inspections)- Bill**
- **Part 3 (Load Rating)- Bill**
- **Part 4 (QA/QC)- Randy**
- **Part 5 (Fatigue & Fracture Critical Inspection)- Tony**
- **Part 6 (Scour)- Tony**
- **Part 7 (Wearing Surface)- Randy**
- **Part 8 (Asbestos)- Randy**
- **Part 9 (Environmental Concerns)- Andy**
- **Appendix- Andy**
- **Conclusion- Andy**
- **Questions- All**

# Introduction- Andy

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- The Bridge Inspection Manual has been revised
- Future revisions will be **highlighted in yellow** in the manual
- MEMO will be issued when there is a change
- At the end of the year, highlights will be removed
- MEMOs at closing year, will be **archived** except a few exceptions
- **Expansion of Bridge Inspection Manual does not require a complete revision**
- **Appendix shall be at the end (no part number)**

# Webpage- Location of Bridge Inspection Manual



- Part 1: [Administration](#)
- Part 2: [Types of Inspections](#)
- Part 3: [Load Rating](#)
- Part 4: [QA/QC](#)
- Part 5: [Fatigue and Fracture Critical Inspections](#)
- Part 6: [Scour](#)
- Part 7: [Wearing Surfaces](#)
- Part 8: [Asbestos](#)
- Part 9: [Environmental Concerns](#)
- Part : [APPENDICES](#)

2020 Bridge Inspection Manual: [2020 Bridge Inspection Manual](#)

## [Bridge Inspection Policy](#)

[INDOT Bridge Inspection Manual](#)

## [Tunnel Inspection Policy](#)

[INDOT Tunnel Inspection Manual](#)

## [Memorandums & Other Documents](#)

- [Active Memos](#)
- [Archived Memos](#)
- [Bridge Inspection Documents](#)
- [LPA Bridges](#)

## [Conferences, Workshops & Training](#)

- [Announcements & Upcoming Events](#) **NEW**

<https://www.in.gov/indot/div/public/bridgeinspect/>

# Introduction

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- Bill Dittrich will now discuss first parts of the Bridge Inspection Manual

# Part 9 (Environmental Concerns)- Andy

- Some bats are listed as **endangered or threatened**
- Some bats protected under **Endangered Species Act**
- Many birds protected under the **Migratory Bird Treaty Act**
- Both FED Laws **prohibit actions that harm these animals**
- Bats and birds may **use bridges for roosting or nesting**
- could be harmed by construction activities
- Inspectors **must** perform a preliminary screening for bats and cliff swallows as a part of each inspection for state-owned bridges.



# Part 9 (Environmental Concerns)- Andy

- Some **species of bird's nest** under bridges on walls or beams
- Typically, nest near waterways or reservoirs
- In particular, inspectors should look for two types of swallow nests.
- **Cliff swallow** nests have a distinctive rounded top
- Cliff swallows are a colony nesting bird (possibly 100s of them)
- Barn swallows do not nest in colonies.
- Their nests are generally found alone, and the shape is indistinct.
- Barn swallows: not tracked by **Indiana State Department of Natural Resources**



# Part 9 (Environmental Concerns)- Andy

- Bats may roost in any dark, warm, quiet spot on a bridge
- Most bats in Indiana are very small (about the size of an adult's thumb)
- some species prefer to wedge into small crevasses to roost
- **Bats may leave signs of use**, such as guano or staining, even if a structure is inspected during the bats' inactive season (mid-fall through mid-spring)
- Droppings are usually small and mouse-like, brown, or black, and appear directly under the roost site.
- Urine stains are usually a few inches in size immediately below roosts and may have a strong odor.
- Stains from fur oil may also be visible at the entrance to cavity roosts
- **Indiana Bat: 1.5 to 2 inches. 1/4 of an ounce. Reside in the Midwest.**
- **INDOT's Environmental Services Division** has developed a short online tutorial about investigating structures for bats. This tutorial is available through INDOT University.



# Part 9 (Environmental Concerns)- Andy

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- **Do not to touch any bats or expose yourself to danger**
- If bitten, contact **Department of Health (317-233-1325)**. Record the incident immediately.
- **Few bats have rabies (deadly virus)**. If bitten by a bat, you may need rabies post-exposure shots.
- **In general, investigation of the structure should include the following:**
  - 1. Screen the entire structure for bird nests and provide photographs.
  - 2. Look for roosting bats in sheltered features of the structure, including all protected joints, cracks, and small cavities.
  - 3. Look for signs of bat use. Note the location of guano piles, urine stains, and fur stains.
  - 4. Listen for squeaks or chirps and note location.
  - 5. Photograph roosting bats, guano, urine, or fur stains.
- **The presence or signs of bats, or birds are recorded in the inspection report. Add photographs of what is found.**

# Appendix- Andy

- Appendix does not have part number
- It will always be at the end
- Contains forms and diagrams

## BRIDGE INSPECTION MANUAL APPENDICES: BRIDGE INSPECTION

### APPENDIX 2A:



### How to complete a Delinquent Inspection Form

1. Download this document and open on local format (download is located on far right of this page)
2. Once document is open proceed to editable pdf Delinquent Inspection form and fill in the blanks required for your situation and save document.
3. Open BIAS and bring up the asset that is going to be late

4. Click on the FILES tab

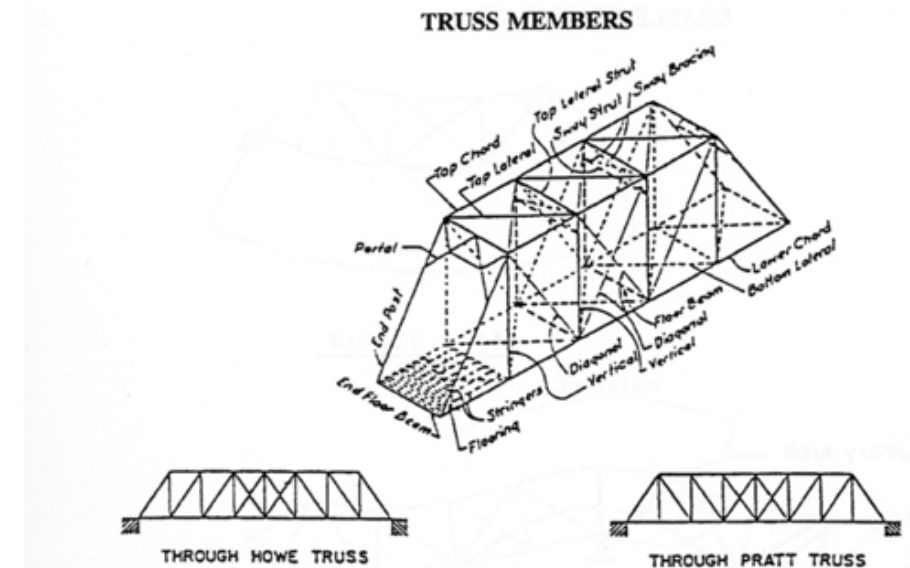
Asset Details: Test Asset 4

Quick View	Asset Info	<b>Files</b>	Maintenance
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Attach Picture/File

## BRIDGE INSPECTION MANUAL APPENDICES: BRIDGE INSPECTION

### APPENDIX 5A:FRACTURE CRITICAL EXAMPLES



# Conclusion- Andy

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- Some highlights and summary:
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  - Conclusion- Andy

# Questions

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- Thank you!
- We will now answer any submitted questions.

