Hydraulics – Various Topics

Mark Bailey, PE
Office of Hydraulics Manager, INDOT

October 19th, 2016





INDOT Hydraulics

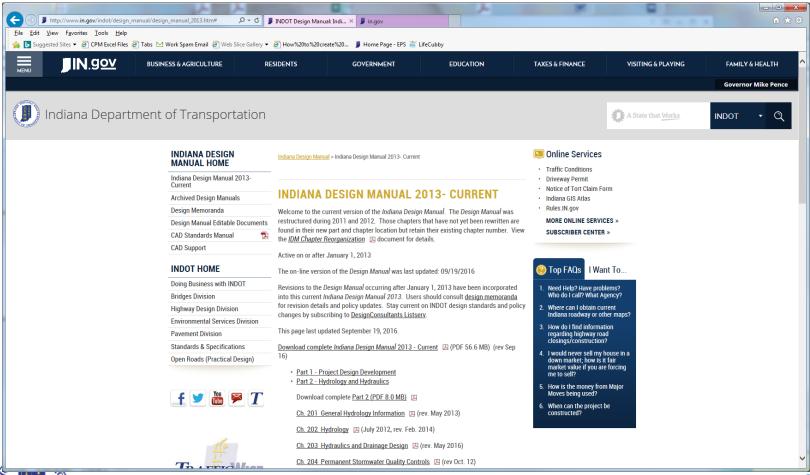
- Design Manual Updates
- Practice Pointers
- ERMS submittals





Design Manual Updates

http://www.in.gov/indot/design_manual/design_manual_ 2013.htm#





Design Manual Updates

- Bridges none (coming soon)
- Culverts
 - Minor revisions to the In-Kind Culvert Replacement section.
 - Added a requirement to run a semi-smooth culvert option with an n of 0.015 for all replacement projects.
 - Requiring version 7.2 of HY-8





Design Manual Updates - coming soon

- Minor revisions to the
- In-Kind
- **Culvert Replacement section.**
- Existing backwater > 3', proposed 3' or <</p>
- Minimum pipe size for jacking under interstate as part of a liner project is 18"





Design Manual Updates - coming soon

Bridge Backwater

If the existing backwater is	The allowable backwater will be
> 3 feet	3 feet or less
Between 0.14 and 3 feet	Match or improve existing
Less than 0.14 feet	Up to 0.14 feet





Design Manual Updates – coming soon

Spans:

- 1.) Number of spans not increased
- 2.) Spans between piers not decreased
- 3.) Total out-to-out span not decreased

Slopes:

- 1.) Change from vertical to sloping abutments allowed, but
- 2.) Check 10% EP to make sure elevation not increased

Road Overflow:

1.) Include impacts of changes to guardrail / barrier rail

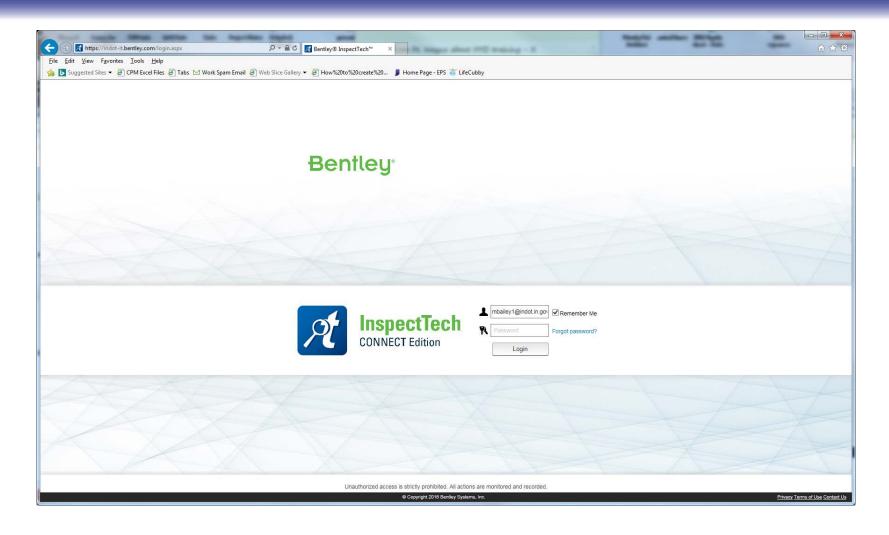




- Bridge Rehab Project Scour Analysis?
- Send an email to <u>mbailey1@indot.in.gov</u>?
- Call (317) 233-2096 and ask?
- Look it up yourself first!

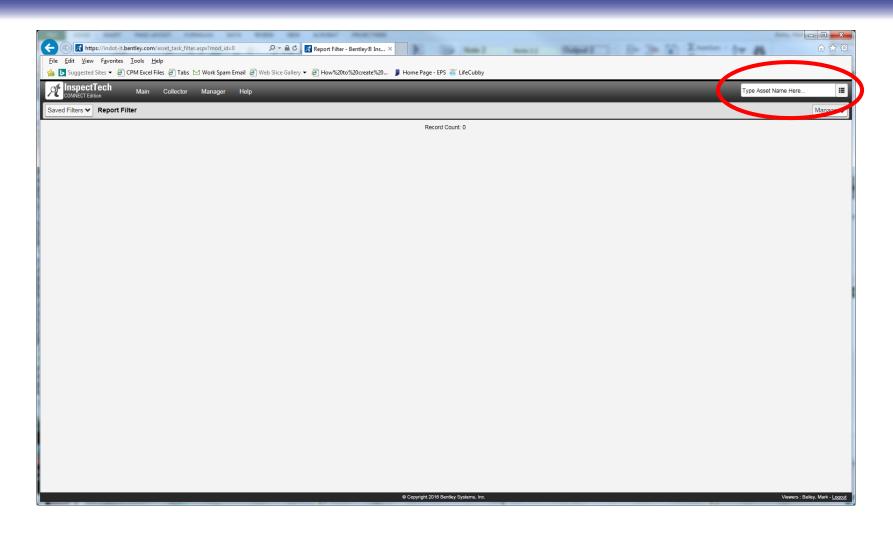






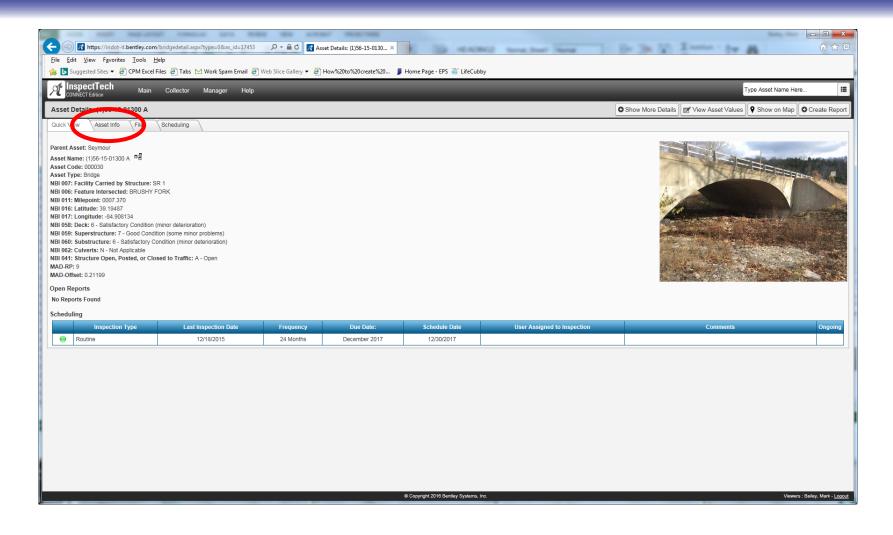






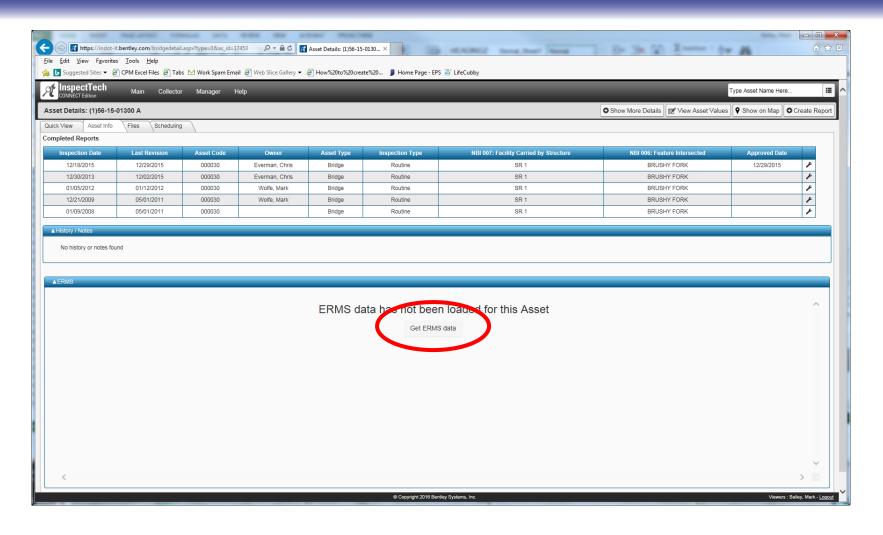






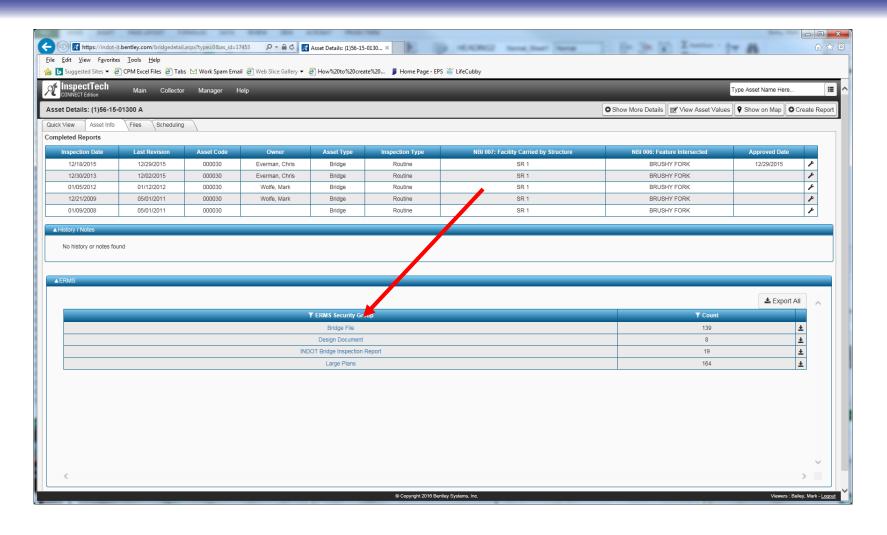






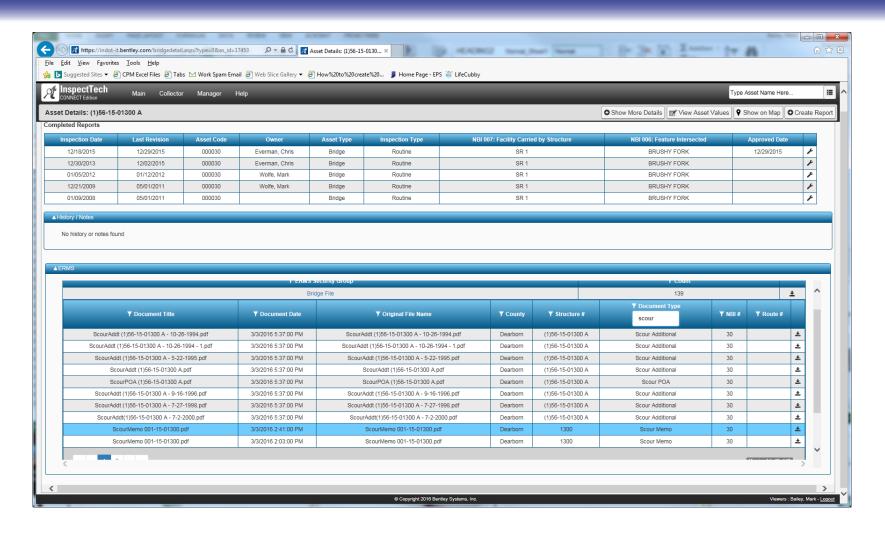






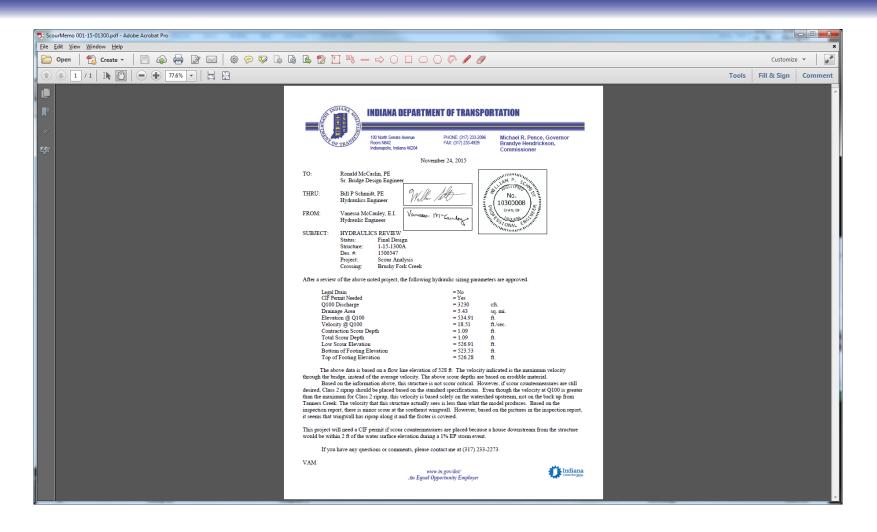
















- What other data is in InspectTech?
 - Bridge Inspections
 - As-built drawings
 - Plans
 - Reports
 - Correspondence
 -



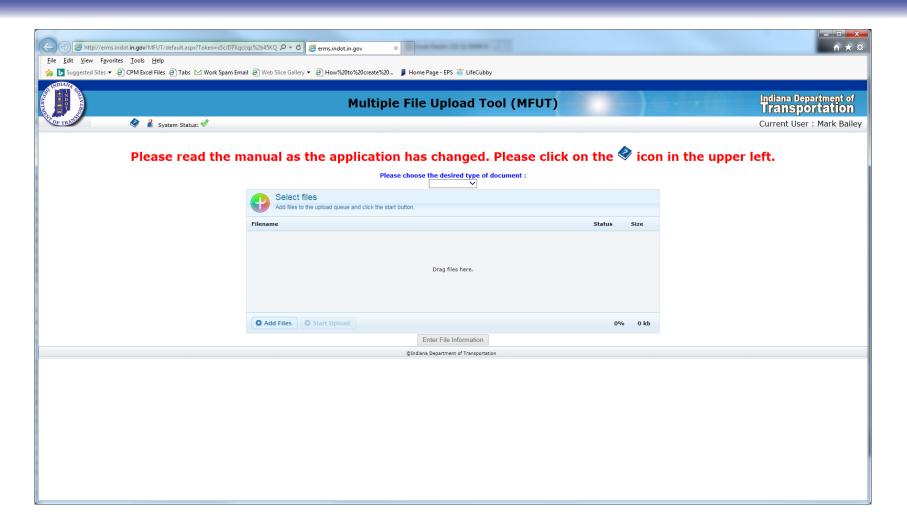


InspectTech

- Looks great, how do I get access?
 - Consultant ask your BIAS administrator
 - INDOT send an email to inbridgeshelp@indot.in.gov
 - County your consultant that submits your bridge inspection reports











Let your coordinator know!

- Send an email to indotcoordinatorX@indot.IN.gov
- X=
- 1 for Crawfordsville
- 2 for Fort Wayne
- 3 for Greenfield
- 4 for LaPorte
- 5 for Seymour
- 6 for Vincennes





Internal file shuffling







- What should I say in my submittal email to my district coordinator and who else should I copy?
 - Project name
 - INDOT District or LPA
 - County if LPA
 - Des #
 - Structure #
 - Type of submittal





Project name

- US 31 over Grassy Creek
- CR 300 N over Buck Creek
- Guilford Rd Reconstruction
- Fairfield Causeway Road over Brookville Lake
- SR 18 from SR 43 to Wood St
- I-74 0.9 mi W of SR 32
- CV 026-12-56.15





Type of submittal

- Scour Analysis
- Bridge Replacement
- Bridge Rehab
- Small Structure Replacement
- Small Structure Liner
- Detention
- Storm Sewer





- Who should I copy from INDOT?
 - The project manager





What if I still do cover letters?







Other tips

- 1 submittal per Des #
- contact person with contact info if your reviewer has any questions





Examples – The Good

From: Aaron Isch [mailto:aaron@eri.consulting]
Sent: Wednesday, September 28, 2016 12:43 PM

To: INDOT Coordinator 2 < indotcoordinator 2@indot.IN.gov >

Cc: Langmaid, John < JLANGMAID@indot.IN.gov>

Subject: 1383457 - Hydraulics Upload

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.

Coordinator 2,

We have uploaded Hydraulics documents for a culvert replacement that is part of the bridge replacement on Hillegas Rd over US 30, Des 1383457. Please see the attached transmittal letter for more information.

Thanks,

Aaron Isch, P.E.

Engineering Resources, Inc.

11020 Diebold Road Fort Wayne, IN 46845

Direct (260) 451-9702 | Office (260) 490-1025 Ext. 280

aaron@eri.consulting

From: MfutUploads@indot.in.gov [mailto:MfutUploads@indot.in.gov]

Sent: Wednesday, September 28, 2016 12:41 PM

To: Aaron Isch <aaron@eri.consulting>

Subject: Multiple File Upload Tool (MFUT) Confirmation

Please do not respond to this email. It is automatically generated.

The following files were added successfully into the ERMS system for user AISCH01:

HYD DgnComps 1383457 for Bridge Services.pdf as document type of Design Documents.

HCM Title

HVD DanComps 1383457 For Bridge Services





The Good

From: Kokosinski, Elizabeth [mailto:EKokosinski@structurepoint.com]

Sent: Tuesday, September 27, 2016 4:58 PM

To: INDOT Coordinator 1 < indotcoordinator 1@indot.IN.gov>

Cc: Logeman, Adam <alogeman@structurepoint.com>; Day, Dave <<u>Dday@structurepoint.com</u>>; Ahmed, Arshad <<u>ArAhmed@indot.IN.gov</u>>;

Subject: HYD Upload for DES 1500302

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.

Coordinator 1,

15 files have been revised and electronically uploaded onto the ERMS system for review, including the letter of transmittal.

DES NO.: 1500302 Proj. NO.: 1500302

Project: SR 234 over Jones and Armstrong Ditch (Replacement)

Submittal: Hydraulics

Attached to this email is a copy of the transmittal letter for the submittal and a receipt of the uploaded documents; the transmittal letter has been included in the posted documents.

If you have any questions, please contact me at the information below.

Thank you,

Elizabeth M. Kokosinski, El

Design Engineer, Bridge Group











The Bad

Sent: Thursday, October 13, 2016 3:18 PM

To: INDOT Coordinator 2 < indotcoordinator2@indot.IN.gov>
Subject: FW: Multiple File Upload Tool (MFUT) Confirmation

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Coordinator,

The 4 files listed below have been successfully uploaded to ERMS.

From: MfutUploads@indot.in.gov [mailto:MfutUploads@indot.in.gov]

Sent: Tuesday, October 04, 2016 2:11 PM
To: Mike Siffer <m.siffer@gaiconsultants.com>

Subject: Multiple File Upload Tool (MFUT) Confirmation

Please do not respond to this email. It is automatically generated.

The following files were added successfully into the ERMS system for user MSIFFER01:

HYD DgnComps 0301145 for Bridge Services.pdf as document type of Design Documents.	
UCM Title:	HYD DgnComps 0301145 For Bridge Services
Content ID:	DOT_4088344





The Bad

From: INDOT Coordinator 2

Sent: Friday, October 14, 2016 10:27 AM

To: INDOT Coordinator 8 < indotcoordinator 8 @indot.IN.gov >

Cc: Langmaid, John <<u>JLANGMAID@indot.IN.gov</u>>; Smith, Gregory <<u>GSmith2@indot.IN.gov</u>>; Lytton, Keith <<u>KI</u>

Subject: FW: Multiple File Upload Tool (MFUT) Confirmation, Des # 0301145

CO8,

4 Hydraulic files have been transitioned to Co COORD8 for review.

Please forward to Mark Bailey.

John & Greg,

4 Hydraulic files have been received and copied to the project folder.

Keith,

Pipeliner for Valentine Ditch, 3.2 mi N of Adams/Allen Co line, small structure # CV 027-002-103.75

L:\CONSULTANT SERVICES\STATE PROJECTS FILES\0301145\Hydraulics\10-14-16

Mandy O'Connor

Administrative Assistant - Capital Program Management

5333 Hatfield Road Fort Wayne, IN 46808 Office: (260) 969-8319

Email: aoconnor@indot.in.gov













The Ugly







The End

Thank you for your attention and help with ERMS submittals.

Any questions?



