Bridge Construction Monitoring using LIDAR for Quantified, Objective Quality-Control Quality-Assurance (QOQCQA) Dataset

Dataset available at: https://doi.org/10.5281/zenodo.4273237

(This dataset supports report **Bridge Construction Monitoring using LIDAR for Quantified, Objective Quality-Control Quality-Assurance (QOQCQA)**)

This U.S. Department of Transportation-funded dataset is preserved in the Zenodo Repository (https://zenodo.org/), and is available at https://doi.org/10.5281/zenodo.4273237

The related final report **Bridge Construction Monitoring using LIDAR for Quantified, Objective Quality-Control Quality-Assurance (QOQCQA)**, is available from the National Transportation Library's Digital Repository at https://rosap.ntl.bts.gov/view/dot/58940.

Recommended citation:
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Dataset description:
This dataset contains 1 file collection described below.

Data-20201114T023951Z-001.zip:
- Data Folder
  - 11 LIDAR scanning wingwall data collection Folder
    - 0312 Scan data Folder
      - 2020-03-12_08-17-01_100pct_0mm_time_smoothing_Rebar (1).zip
      - Adobe-Acrobat-DC-Serialization-Files.zip
      - Rebar_Segmented_100pct_0mm_time_smoothing_scan - Cloud.e
      - Rebar_largeArea_Segmented.zip
    - HORIZON-Product-Card.pdf
    - LIDAR DATA.xlsx
    - Rebar_41sec_100pct_time_smoothing_scan.e
    - Tape measurement for wingwall rebar Folder
      - 1-5.png
      - 4-7.png
      - 6-10.png
      - 8-12.png
      - 9-12.png
      - A-C.png
      - B-E.png
      - D-G.png
      - F-WALL.png
      - drawing.PNG
    - VT_Alan Folder
      - IntPoly_cs.m
      - UNM_rebar_present[85299].pptx
      - densityByLayer_example.m
      - rebar_spacing_results_alan[93597].png
      - rebar_spacing_results_alan[93600].png
      - small_rebar_4M.mat
    - WALL-3.png
    - dataprocessing.rar
    - larger site 2.jpg
    - larger site.jpg
    - thumbnail_IMG_0745.jpg
  - 18 Wing wall data processing results Folder
    - Advanced Slice_method.rar
    - projection algorithm.rar

File Type Descriptions:
- The .e file type is associated with the EiffelStudio, an integrated development environment for Microsoft Windows, Apple Mac, Linux and other platforms. The e file

stores source data for EiffelStudio, (for more information on .e files and software, please visit https://www.file-extensions.org/e-file-extension-eiffelstudio-source-data).

- The .pdf file format is an Adobe Acrobat Portable Document Format (PDF) file and can be opened with the Adobe Acrobat software.
- The .xlsx and .xls file types are Microsoft Excel files, which can be opened with Excel, and other free available software, such as OpenRefine.
- The file extension .png is commonly used for images in Portable Network Graphics file format. PNG is a bitmap graphics format similar to GIF, that uses image compression mainly for web purposes (for more information on .png files and software, please visit https://www.file-extensions.org/png-file-extension).
- The .pptx file extension is related to Microsoft PowerPoint. PowerPoint is worldwide most popular powerful tool you can use to create and edit dynamic and great-looking presentations. The pptx files are used for editable slide shows, which are very often used for presentations (for more information on .pptx files and software, please visit https://www.file-extensions.org/pptx-file-extension).
- File extension .m is associated with the Objective-C, a general-purpose, object-oriented programming language based on Smalltalk language developed by Apple, Inc (for more information on the .m file type and associated software, please visit https://www.file-extensions.org/m-file-extension).
- The .mat file extension is associated with Ox. Ox is an object-oriented statistical system. At its core is a powerful matrix language, which is complemented by a comprehensive statistical library (for more information on the .mat file type and associated software, please visit https://www.file-extensions.org/mat-file-extension-ox-object-oriented-matrix-programming-language-matrix).
- The .jpg file extension is associated with JPEG (Joint Photographic Experts Group) file format. JPEG is a lossy image compression algorithm that significantly reduces the file size of the original image at the cost of quality. The higher the compression ratio the lower the quality of the .jpg file (for more information on .jpg files and software, please visit https://www.file-extensions.org/jpg-file-extension).
- The .rar file type is best known for its use as a compressed archive format, similar to other compressed file archive formats, .rar files are data containers, that store one or several files and folders in compressed form. Compressed data can be in one single file or multiple splitted files, (for more information on .rar files and software, please visit https://www.file-extensions.org/rar-file-extension).

National Transportation Library (NTL) Curation Note:
As this dataset is preserved in a repository outside U.S. DOT control, as allowed by the U.S. DOT's Public Access Plan (https://ntl.bts.gov/public-access) Section 7.4.2 Data, the NTL staff has performed *NO* additional curation actions on this dataset. NTL staff last accessed this dataset at https://doi.org/10.5281/zenodo.4273237 on 2022-05-09. If, in the future, you have trouble accessing this dataset at the host repository, please email NTLDataCurator@dot.gov describing your problem. NTL staff will do its best to assist you at that time.