University of Nebraska-Lincoln Data Management Plan for the Mid-America Transportation Center for Transportation Safety and Equity (MATC-TSE)

Regional University Transportation Center for Federal Region 7

Date: 09-29-2023

The University of Nebraska-Lincoln (UNL) has developed the following data management plan in response to receiving funding from the US Department of Transportation (USDOT) Office of the Assistant Secretary for Research and Technology (OST-R) as part of the grant titled "Mid-America Transportation Center for Transportation Safety and Equity (MATC-TSE)." The University of Nebraska-Lincoln leads the MATC-TSE team, which includes the Nebraska Indian Community College, the Missouri University of Science and Technology, the University of Iowa, the University of Kansas, and the University of Missouri-St. Louis.

1. Data Description

MATC-TSE serves as the regional university transportation center for the USDOT Region 7. Its statutory research priority area is promoting safety and it supports the USDOT Strategic Plan goals of safety (primary goal), economic strength and global competitiveness, equity, climate and sustainability, and transformation.

Safety of the US transportation systems remains a concern and a high priority with the USDOT. Researchers at UNL and partner universities will be collecting a variety of data as part of research projects aimed at improving highway safety as well as equity of safety measures. The products and processes that result from this research will be adopted for use and practice in the highway industry, federal, state, and local transportation agencies, and peer institutions. UNL and partner research projects and data collection will span the length of the five-year grant period, beginning June 01, 2023, and ending May 31, 2028. Projects will generally follow a one-year time frame. At the conclusion of each project, the respective PI will submit their final data to the UNL Program Coordinator for archiving, ensuring compliance with the USDOT Public Access Plan and identifying confidential data, if any.

UNL and partners anticipate collecting final data in various forms including, but not limited to, software codes, mathematical models, laboratory and field experimental data, design drawings, traffic/rail crash images, surveys, maps, system diagrams, sensed data (e.g., temperature, drone LiDAR data), and video data from stationary/mobile cameras. Data will be compiled from existing documents and collected by means of observation, experimentation, and simulation. The final data will be archived in machine-readable file formats such as TXT, PDF, Excel, JPEG, and PPTX.

2. Standards Used

UNL and partner research data will be stored through the UNL Data Repository, hosted by UNL as it supports the UTC researchers by providing a secure site to store data for long-term use and dissemination. At a minimum, the metadata will include Title, Creators (e.g., PI), Contributors (e.g., co-PIs), Identifiers (e.g., researcher ORCID IDs, digital object identifier (DOI), grant number), Publishers (e.g., university performing research, sponsor), Description, Types, Formats, Subjects, Date of Collection and Date of Submission. The established metadata will contribute to the discoverability and accessibility of the research data.

3. Access Policies

The UNL and partners' data will be publicly accessible and free of charge via the UNL's MATC Data Repository. Individual PI's will be responsible for protecting the identity and privacy of research participants and conducting their experiments according to the specific ethical codes and procedures of the UNL and/or partner institutions. PIs will remove personally identifiable information before submitting final data to UNL staff for archiving. Confidential information relating to organizations and national security may also be restricted from public use. Confidential data will be appropriately indicated in the database and stored for the purpose of preservation. Data marked as confidential will not be publicly accessible. Only the research team responsible for the confidential data may be granted access to it by UNL.

4. Re-Use, Redistribution, and Derivative Products Policies

UNL MATC staff will be responsible for collecting, inputting, and managing research data. They will work with the project PI/Co-PI's to ensure the data is properly described and archived for future users. The intellectual property rights of the data will follow UNL's policy on ownership of data at the time of deposit.

5. Archiving and Preservation Plans

The UNL and partner institution research data produced as part of the UTC will be archived and shared by UNL in a repository that follows a USDOT approved data management plan.

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