

TR202311 Asset Characterization Using Automated Methods

Q & A

1. What are specific LiDAR instruments (terrain, handheld/portable, aerial, or even imaging-based via 3D reconstruction) that MoDOT uses in practice? Should an offer provide their own LiDAR equipment?

It should be understood that MoDOT would have no LiDAR data, or limited data, and no LiDAR instruments for use during the research project. If needed, the researcher should provide their own LiDAR equipment or utilize existing available LiDAR data available from other sources.

2. Under objective (#2), does MoDOT expect to identify structural element types besides geometric attributes from the point cloud data (e.g., deck, pier, bearing)?

Main interest is related to geometric attributes and basic asset/structure type and size (e.g., 36" circular metal/concrete pipe or multiple pipes, 48" box culvert, low water slab, etc.).

3. Does MoDOT provide pre-existing blueprints for structures, or will the cataloging be blindly conducted (without any existing blueprints or other database support)?

Main purpose of this research is to identify an efficient method to identify and characterize undocumented assets, cataloging of most assets will be conducted blindly. Pre-existing data may be available for certain structures (bridges/box culverts over 20ft length), all smaller structures would have limited details, if any.

4. Objective #5 – "Identify first-party and third-party data that are available to produce the data," can you explain more? How 'third-party' data can be used to produce 'the data'?

Interested in third party data such as state/federal LiDAR data, other federal/state/local programs that may have related asset details that have been collected for other purposes (fish passage, hazard mitigation grants, stream hydro studies, etc.).

5. Many structures, particularly river crossing bridges, may be hard to access. Even if accessible, there will be obstructed local volume. Cataloging such structures using LiDAR data may have 'holes' in the volume data. If these holes are documented, is that acceptable?

Yes, it is expected there will be limitations on data that is collected remotely. Documenting the limitations of the data accuracy is acceptable.