

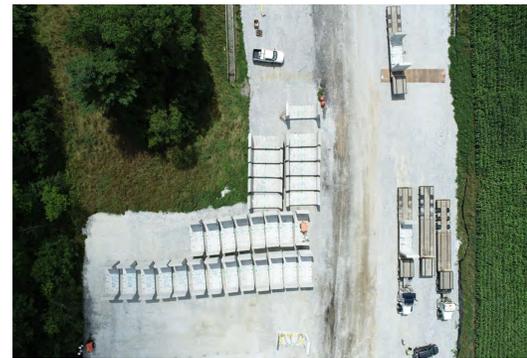
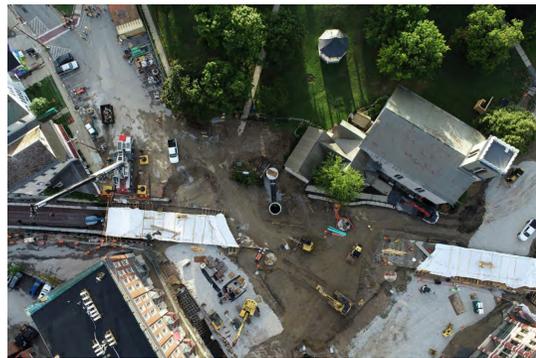
Vermont Agency of Transportation UAS Collaboration Initiative

VTrans UAS Team
Rail and Aviation Bureau



VTrans UAS – Transportation Applications

VTrans UAS is in the process of defining its capability to provide support for: emergency response, search and rescue, infrastructure inspection, construction site monitoring, environmental habitat inspection, and remote aerial imagery. VTrans, as well as other state agencies will benefit from the UAS program. VTrans also serves as a resource for public inquiry regarding UAS operations.



Middlebury Tunnel Project Imagery – August, 2020

Inter-Agency Collaboration

Any state agency may request a UAS operation to be conducted by the VTrans UAS team. In a state with limited resources, developing the capability to share information and resources is essential. In October 2019, VTrans UAS was recruited to provide Vermont DEC with georeferenced imagery of the Clarendon Gorge. The façade inspection of geological formations helped map the distribution of ground water in the region to decipher potential contamination of PFAS. See detailed boster courtesy of Jon Kim, et al., here: <https://anrweb.vt.gov/PubDocs/DEC/GEO/TechReports/VGTR2020-1RutlandAQPoster.pdf>



Clarendon Gorge Geology Analysis- for ANR- October, 2019.

Imagery Publication and Sharing

Imagery and datasets produced by UAS are extremely high resolution, therefore the files are very large. It has been a challenge to share this imagery across agencies with ease. Our team has designed and implemented a cached tile imagery service, available to anyone in the world using the ArcGIS Online platform. This allows large (up to approximately 20gb) georeferenced ortho-maps to be shared without the need for large FTP file transfers. Any GIS professional is able to access this data as well for use in their own projects. This has allowed for ease of sharing data, and has provided a means for interested parties to access past flight data. This will help alleviate the need for repetitive flights. This imagery service is hosted by VTrans, but is also accessible through the VCGI website. In working with VCGI, the VTrans Imagery has been publicized and become easily accessible to all.

VTrans UAS Imagery:

<http://vtrans.maps.arcgis.com/apps/webappviewer/index.html?id=ed348dfcf8dc4effa2e5d5a10c22a3d1>

VCGI Data Release:

<https://vcgi.vermont.gov/data-release/vtrans-uas-program-imagery-now-available>

Future Developments

VTrans UAS will continue to define and improve its capability as a functioning UAS team. In parallel, it will continue to develop relationships across all Vermont agencies, as well as regional and national DOT relationships. In the coming year, VTrans will be involved with a large collaboration between MassDOT, NHDOT, MaineDOT, and the Vermont State Police. This is a regional multi-event workshop that will provide opportunities for professional level advanced UAS training, specific to DOT and VSP needs. This opportunity is funded through the NCHRP.

Acknowledgments

FHWA has afforded VTrans the opportunity to join the UAS community via the STIC Incentive program.

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