

GTE Responsibilities - Geodetics

Introductory Knowledge: A basic understanding of the objective

Working Knowledge: An understanding of the information and an ability to use and apply the information

Demonstrated Competency: The proven ability to perform the objective determined by the supervisor

	Objective Description	Introductory Knowledge	Working Knowledge	Demonstrated Competency
1	Hands-On Training: Obtain an introductory knowledge of types of surveys along with hands-on training in working with field crews on different types of surveys, depending upon the type of survey work available during the rotation.			
2	Hands-On Training: Identification and use of instruments, procedures, quality control process, and available techniques as part of field work with survey crews.			
3	Discussion Topic: Obtain an Introductory Knowledge of State Geodetics roles and responsibilities as part of the Project Development Network (PDN).			
4	Discussion Topic: Obtain a working knowledge of the TDOT Survey Manual and TDOT Feature Codes.			
5	Develop deliverables by processing Field Data using Microsoft / ORD software, including A. creation of a Digital Terrain Model (DTM), B. incorporation of TDOT's parcel numbering system, C. input deed and ROW plans information into Open Roads to determine ROW and property lines, D. draw drainage areas in Open Roads for drainage structures crossing proposed alignments, and E. checks for completeness and accuracy.			

6	Hands-On Training: Obtain an Introductory Knowledge of how LIDAR Scanning is used for survey applications, including processing and extraction and include the extraction of ground surface data and topographic features from point clouds. (Anticipate coordination with other Regions).			
7	Hands-On Training: Obtain an Introductory Knowledge of how Unmanned Aerial Vehicle (UAV) Drones are used for survey applications and processing of data.			
8	Accomplish Route Surveying on various projects using GNSS RTK and total station			
9	Assist with setting project controls, including stamping and setting points, GNSS static occupations, level loop and adjustments, horizontal distance check with total stations, and field book.			
10	Assist with survey staking for Right-of-Way and Geotech using GNSS RTK and total station			
11	Conduct property research to determine property boundaries and ownership.			
12	Attend ROW Strategy Meeting (will be implemented as part of Integrated Project Delivery). (Anticipate coordination with other Regions).			
13	Attend and participate in Staff Meetings and/or Kick Off Meetings. (Anticipate coordination with other Regions).			
14	Assist Party Chief with organizing crew work and understand how timing related to field crews is determined.			
15	Assist Office Lead with QC of field data to ensure surveys are complete and accurate			
16	Ensure quality meets or exceeds standards.			

17	Manage change by maintaining complete and accurate documentation, to assist in providing project continuity			
18	Develop and maintain a professional relationship with the survey team			
19	Effectively coordinate with the Preconstruction Units to ensure the needs of the project are met			