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COURSE INFORMATION

Alternate Title: Telecomm Project Data Collect

Description:

10-451-107 TELECOMMUNICATIONS PROJECT DATA COLLECTION ...prepares students for the different methods of data collection and data management for Telecommunications projects. (Co-Requisite: 10-607-112, AutoCAD for Civil Engineering)

Instructional Level: 10

Total Credits: 2

Total Hours: 90

COURSE HISTORY

Status: Active

Active Date: 5/23/2021

Last Revision Date: 7/31/2023

Revised By: Kristina Wendricks (15002977)

Last Approval Date: 8/21/2023

Approved By: Kristina Wendricks (15002977)

COURSE COMPETENCIES

1. Discuss data collection as it relates to telecommunications.

Status: Active

Assessment Strategies

1.1. Objective exam/quiz

Criteria

Learners will be successful when they are able to:

- 1.1. Identify potential hazards on the worksite and how to mitigate them.
- 1.2. Use proper PPE for field data collection.
- 1.3. Use traffic control devices in work areas.
- 1.4. Discuss tools available and what tool to use in each situation.
- 1.5. Identify different surveying tools and equipment.
- 1.6. Discuss tools available and what tool to use in each situation.
- 1.7. Identify different surveying tools and equipment.
- 1.8. Identify the difference between OSP (Outside Plant) Cabling and premise Cabling (sometimes referred to ISP or Inside Plant Cabling)

Learning Objectives

- 1.a. Discuss the importance of safety while working in the field.
- 1.b. Discuss tools that will be used and how to safely use them.
- 1.c. Discuss hardware and equipment that will be used and how to properly care for them.
- 1.d. Discuss the difference between OSP and Premise cabling.

2. Discuss the process to prepare in the office for field data collection.

Status: Active

Assessment Strategies

- 2.1. Objective exam/quiz
- 2.2. Project

Criteria

Learners will be successful when they are able to:

- 2.1. Check for existing digital data from sources such as municipal and state agencies.
- 2.2. Gather aerial imagery from GIS systems and Google Earth to preplan field work.
- 2.3. Check for control points and section corner information to determine property corners from digital data from sources.
- 2.4. Check for existing property information to determine property corners from digital data from sources.
- 2.5. Discuss the importance of accurate data and why it is essential to field verify accuracy.
- 2.6. Determine the difference between coordinate systems and which is typically used today and why it is used.
- 2.7. Setup tablet with WISCORS credentials for better accuracy.
- 2.8. Setup coordinate system for data collection.
- 2.9. Setup maps on tablet for data collection.

Learning Objectives

- 2.a. Research existing data and information from various sources.
- 2.b. Research control points and property corners to ensure accuracy.
- 2.c. Discuss coordinate systems and which coordinate systems are typically used.
- 2.d. Use hardware to prepare for field data collection.

3. Gather existing information in field prior to data collection.

Status: Active

Assessment Strategies

- 3.1. Objective exam/quiz
- 3.2. Project

Criteria

Learners will be successful when they are able to:

- 3.1. Use information gathered in the office to locate and expose control points, section corners, and other monuments.
- 3.2. Use information gathered in the office to locate and expose property corners and right of way markers.
- 3.3. Research and interpret municipal permit requirements and apply them to field data collection
- 3.4. Research and interpret county permit requirements and apply them to field data collection

- 3.5. Research and interpret state permit requirements and apply them to field data collection
- 3.6. Research and interpret railroad permit requirements and apply them to field data collection
- 3.7. Research and interpret DNR / wetland permit requirements and apply them to field data collection
- 3.8. Interpret Wisconsin and FHWA Manual on Uniform traffic Control Devices (MUTCD)
- 3.9. Set traffic control devices in the field prior to field data collection
- 3.10. Use PPE prior to field data collection
- 3.11. Carry out proposed route flagging for new installation
- 3.12. Set equipment for most accurate locating given current conditions
- 3.13. Carry out locating, painting, and flagging existing utility routes

Learning Objectives

- 3.a. Gather existing monument information and Control Points.
- 3.b. Research and interpret permit requirements.
- 3.c. Apply traffic control and safety elements for field data collection.
- 3.d. Carry out utility locating.

4. Carry out data collection and surveying of existing utilities and infrastructure.

Status: Active

Assessment Strategies

- 4.1. Objective exam/quiz
- 4.2. Project

Criteria

Learners will be successful when they are able to:

- 4.1. Apply process for equipment setup
- 4.2. Interpret data collection equipment to ensure accurate data collection
- 4.3. Collect data using GNSS surveying equipment
- 4.4. Employ organizational skills for accurate and interpretable data
- 4.5. Produce efficient and timely work without sacrificing accuracy and precision
- 4.6. Carry out field data collection and documentation of field inaccuracies and concerns
- 4.7. Address findings with design team and the impact on the project

Learning Objectives

- 4.a. Execute accurate field data collection.
- 4.b. Identify inaccuracies in the field and potential obstructions.

5. Carry out data processing and clean up for design staff.

Status: Active

Assessment Strategies

- 5.1. Objective exam/quiz
- 5.2. Project

Criteria

Learners will be successful when they are able to:

- 5.1. Comprehend process for transferring data from data collector for Designers and CAD Operators.

- 5.2. Validate data downloaded with gathered data from other sources
- 5.3. Carry out data corrections if necessary
- 5.4. Carry out data interpretations for missing data if unable to collect in the field
- 5.5. Analyze and eliminate duplicate points, lines, or other unnecessary field collections that are not required.

Learning Objectives

- 5.a. Execute data download from data collector.
- 5.b. Clean up data.

6. Carry out field stakeout for proposed installation.

Status: Active

Assessment Strategies

- 6.1. Objective exam/quiz
- 6.2. Project

Criteria

Learners will be successful when they are able to:

- 6.1. Check designs and survey information with project team
- 6.2. Carry out data uploads to data collector
- 6.3. Validate equipment accuracy to known control points
- 6.4. Carry out right of way and easement stake out and marking
- 6.5. Carry out running line and new structure stake out
- 6.6. Check all staked items and video record work

Learning Objectives

- 6.a. Carry out process for data upload to data collector.
- 6.b. Carry out field stake out procedures.