



CH2M HILL ESPAÑA S.L.

Telecommunication Design Management Services

Client

Corning Cable Systems

Location

Telherias and Oporto, Portugal

Corning Cable Systems Optical Network Design

Corning Cable Systems, part of Corning's telecommunications segment, is a leading manufacturer of fiber optic communication system solutions for voice, data, and video network applications worldwide. Corning and CH2M HILL collaborated on the network design phase to launch the FTTH-GPON network owned by Portugal Telecom in the areas of Telherias and Oporto, Portugal.

Portugal Telecom's FTTH-GPON network is a passive optical solution in which active devices between the customer and the central office are removed. In its place, an optical network made up of fibers and passive devices that split the optical signal is laid out, thereby minimizing investments in infrastructure and outdoor active equipment, and offering high-performance services through fiber optic cable.

From its Design Center facilities in Madrid, CH2M HILL managed construction in the assigned areas, following Corning Cable Systems' project criteria. The CH2M HILL team reviewed the field survey information, selected the most suitable topology design for each area, and developed the corresponding designs.

To optimize and improve project delivery, developments in Visual Basic and AUTOLISP were implemented to automate the production process of schematic designs and fiber allocation sheets.

Project implementation included completing the following tasks:

- Developing technical and administrative project descriptions
- Developing schematic designs, designing optical distribution frames, and defining splices
- Developing civil infrastructure and activity maps
- Configuring the cable layouts and developing coinciding maps
- Specifying the bill of materials

To date, CH2MHILL has assisted in reaching more than 12,000 units.