

Gosfield North Communications Fiber-to-the-Home (FTTH)



Client:

Gosfield North Communications
Co-operative Ltd.

Location:

Essex County, Ontario

Completion Date:

Summer 2013

Construction Value:

\$3.5 million

Client Contact:

Available upon request

Key Personnel:

Bill Weekes CET RCDD CFOT

Osamah AlJanabi B.Sc HD.PM ITIL

Kenji Tan

Jeremy Lambert

Project Type: Design-Bid-Build

Project Role: Lead Design and Project Management Consultants

Project Description: Gosfield North Communications' Fibre-to-the-Home (FTTH) design provides Triple Play (Voice, IPTV and high speed data) services to the clients residing on County Road 27 and across Hwy 401 to County Road 42 in Essex County. The coverage includes the roads parallel to County Road 27. The total distance of the rollout is an estimated 40 kilometers in length connecting nearly 1000 residential and commercial establishments.

Fancom designed the detailed FTTH solution to be tendered out to contractors and provided both project management and cost consultancy services to Gosfield North Communications throughout the course of the project.

Prior to the design phase, Fancom undertook an extensive site investigation to locate and identify all potential constraints and physical site impediments including bridges, rivers, creeks and existing utility services provided to the local townships.

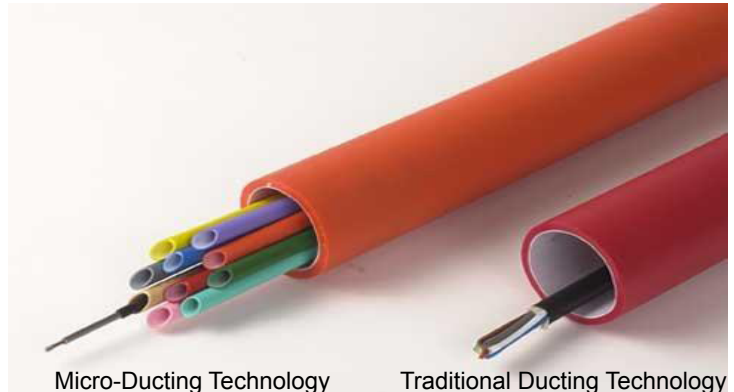
In order to provide a cost effective, yet flexible and robust FTTH solution, it was vital that Fancom coordinate with the major industry manufacturers to provide the most up-to-date solution to meet the customer's requirements. Fancom worked with the supplier to tweak their current product offerings to meet the product design requirements and adapt to the environmental surroundings in which the solution was to be implemented.

Services Provided:

- Project Management
- Site Survey and Audit
- Technical Feasibility Study
- Conceptual Design
- Detailed Construction Drawings & Specifications
- Tender Support
- Construction Administration



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Micro-Ducting Technology

Traditional Ducting Technology

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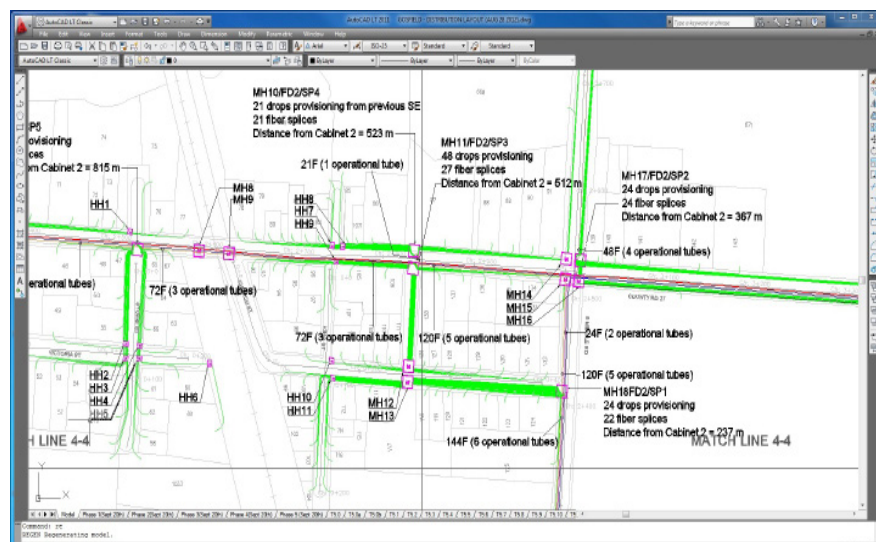
Jeremy Lambert

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Fancom adopted the following design approach:

1. A GPON micro-ducting containment distribution method was used (plow/directional boring deployment of micro fiber blown duct)
2. 1:16 splitters were used for the PON concept, housed inside 4 passive street cabinets to be placed in precise key locations throughout the project area
3. Strategically located active street cabinet housing the OLT (Optical Line Termination) of the PON linked to the GNC Central Office via 48 core micro-fiber OSP dedicated main trunk line (nearly 5 km) and another 48 core micro-fiber serving as a redundant line to the active cabinet (6.5 km)
4. Specialized and customized passive underground street splice enclosures housed inside manholes buried to flush with street levels
5. The entire fiber path was marked with visible street markers labelled "Gosfield North Communications FTTH Fiber"
6. The design was future-proofed to handle potential growth of client subscriptions of up to 200-300%



Screenshot of AutoCAD detailed design