

Planning for Poles

Too many fiber network projects fail because deployers make unrealistic assumptions about pole attachments. Don't let that happen to your project!

By Ken Demlow / *NewCom Technologies*

Every potential fiber project has many critical steps, and each step has many important details. Before construction starts, there can be months of activity – surveys, current provider analysis, meetings, needs analysis, peering option exploration, data gathering, cost estimation, vendor input, financial modeling, operational decisions, open access decisions, legal opinions, political will determination, funding options and more. Doing the work necessary in each step is important to the success of the project.

However, one subject has been overlooked in so many projects NewCom has seen that it needs to be highlighted: poles. Yes, poles.

In the good old days (not that long ago), if someone needed to attach communications cables to someone else's poles, the process was usually quick and informal, and the communications company could start attaching its cables fairly quickly. There weren't many attachers, and the pole owners knew what was on their poles already, so a handshake (and maybe a piece of paper) was exchanged, and communications cables went up.

That still happens in some places – but not nearly as often as it used to.

In some projects we have seen, would-be attachers just assumed that attaching their cables would be easy and inexpensive. They relied on aerial costs in the construction estimates for their business modeling and funding commitments. When it came time to do the project, they ran into problems.

Here are some examples:

- One municipality built its aerial costs on poles owned by a cooperative. For several reasons, the cooperative wasn't allowing anyone to attach new cables to its poles. So the municipality planned on about 90 percent aerial construction and found that at most 10 percent would be possible. The project was never started.
- Another provider wanted to run fiber in an area that had a very high rock table. Therefore, it saw aerial construction as necessary. The local electric utility, which owned the majority of the poles, developed a very stringent process and attachment guidelines. The process included having to model every pole in pole modeling software. The costs to attach became very high – including having to replace a significant percentage of the poles.
- A municipality, in its financing and business models, counted on using poles that belonged to several other owners. In the detailed design stage, it found out there just wasn't room on many of the poles. The municipality's options were to replace poles or go underground. It had not factored any

Pole owners may not allow new attachers at all, or they may impose onerous, expensive requirements.

of those costs into its plans. When it reran the numbers, it didn't think the project was feasible.

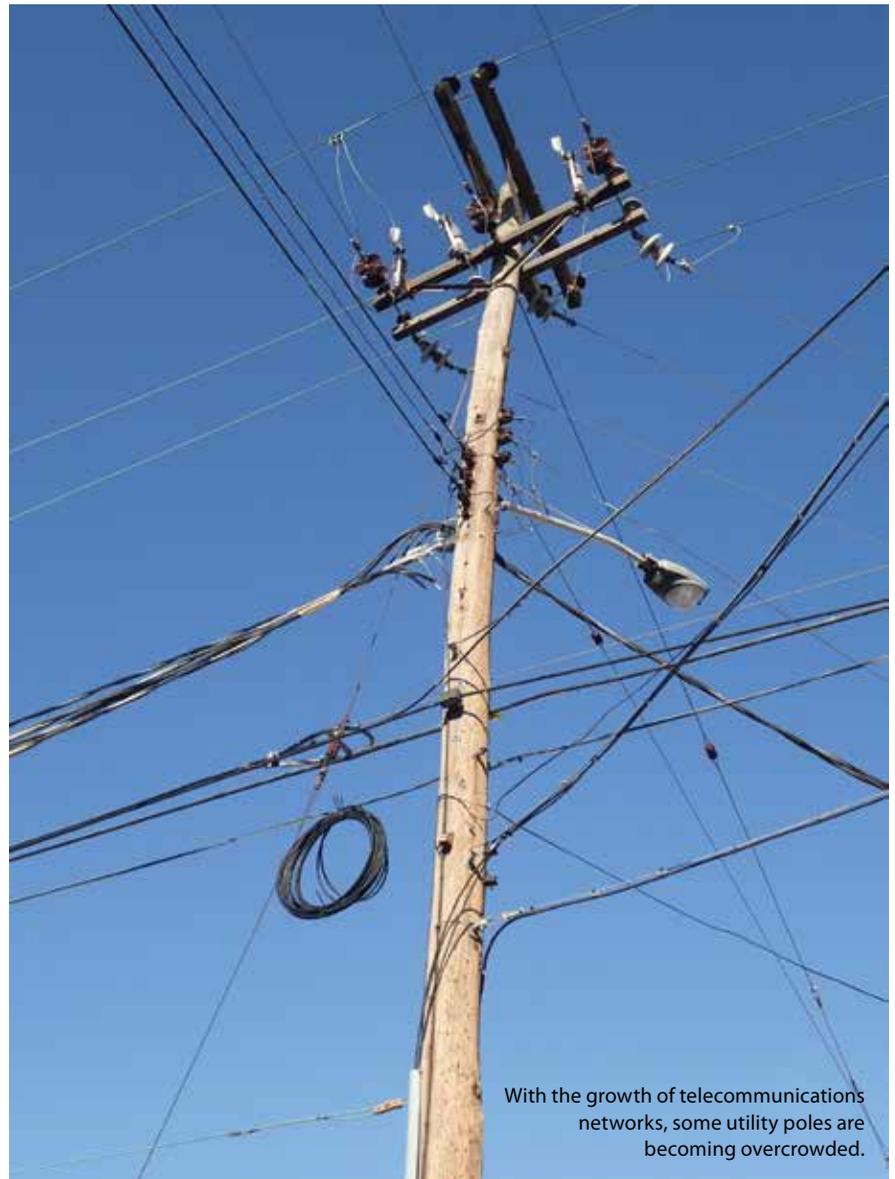
- A municipality found it had more pole owners to deal with, crossings were more expensive and approvals took longer than anticipated. The project succeeded but was more time-consuming and costly than expected.

From the pole owners' perspective, the process isn't as simple as it used to be. They have aging infrastructure. More companies are requesting to attach cables to their poles. In many cases, they are forced to develop a consistent, thorough process for deciding who can attach cables. All those things cost money and require additional personnel.

Typically, pole owners have contracts with existing attachers. This causes problems in large projects when existing attachers must move cables to allow for a new attacher. Sometimes, coordinating crews of six different attachers can add months to a schedule. In one case, a community decided to pass a one-touch law that assigned one contractor to do all the attaching and moving. The municipal electric utility (which owned the poles) then revealed that some of its contracts stipulated that only the attacher's union crews would move their attachments. Which takes precedence, a city council vote or a contract with the municipal utility? The courts are sorting that out.

Easements are another consideration. Pole owners have easements for placing poles for their own use. However, their easements do not cover cables or attachments of other owners. Therefore, the attachers or providers are responsible for negotiating easements – not the pole owners. Even a municipal or cooperative electric company that wants to deliver broadband services may find it can't legally use its own poles for this purpose without negotiating new easements.

Based on experience in many projects across the United States, NewCom recommends taking the following actions before beginning a fiber project:



With the growth of telecommunications networks, some utility poles are becoming overcrowded.

- Analyze the route as part of the feasibility study, and make sure there is real documentation that can be used later. This documentation should specify which parts of the route will likely be overhead and which will likely be underground. For aerial segments, identify the poles and their owners. Having this information in a format that can be used later can save time and money if the project moves forward. In our experience, GIS is one of the most usable formats for storing information during early phases. Because GIS makes changing and adding data easy, the original map can be used throughout the project.
- In the route analysis, identify the

relevant pole owners and crossings. Gather the following critical details:

- Is the pole owner willing to add attachers?
- Is there room on the poles to attach new cables?
- Are there requests from other potential attachers that could take the space you need?
- What is the pole owner's attachment process? What do the pole applications look like, how long do they take to review and how stringent is the analysis?
- What fees does the pole owner charge?
- What is the timeline for attachment?

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- How many poles might need to be replaced?
- Make sure the costs associated with attaching cables are defined and part of your financial forecasts. Some questions to consider include
 - Will you be responsible for doing the pole analysis. If so, how much will that cost?
 - What are the pole owner's attachment guidelines? Will they add significant costs?
 - Does the owner require pole modeling? If so, does it require using specific software?
 - Can the poles be accessed for survey, analysis and construction?
 - Who pays if a pole needs to be replaced (either because of an existing problem or because your fiber overloads it)?
 - Is the project big enough to warrant a discussion of

one-touch attachment? In some projects, the time it takes to coordinate all the current attachers moving their attachments on each pole can be a concern. If a one-touch rule would be beneficial, there could be issues such as existing contracts with attachers, union rules about who can do that work and so forth.

- Make sure you have the proper easements. Hiring an easement expert to give you some idea of what will be necessary can be an important step in making sure this is properly accounted for in your feasibility study.

Doing all these tasks in advance of or as part of your feasibility study is very important. The answers to these questions can significantly affect the project's feasibility. Pole issues can

be so important to the project costs that failing to perform this analysis can render your project financially unfeasible. It is much better to know these impacts during the feasibility study than when everything else is done and you want to start construction.

Hoping that pole owners will still operate as they did several years ago is quicker, easier and less costly up front. But that approach can add significant costs later and cause financial problems – eating up cash that wasn't budgeted for or even making the project unachievable. ❖

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