POLICIES AND ORDINANCES THAT FACILITATE BROADBAND DEPLOYMENT

There are many policies and ordinances that can be put in place to reduce the capital costs of broadband deployment.

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Implement Policies and Ordinances that are Broadband Friendly

Municipalities have the power to significantly reduce the capital costs of broadband infrastructure deployment. Whenever possible, cities and counties can put in place policies and ordinances to help encourage broadband investment. These policies can be implemented to facilitate investment from the private sector and can also be used to gain substantial assets that can be leveraged for broadband deployment.

Sixty to eighty percent of a fiber optic network's capital costs are in opening a trench or in burying conduit that will house fiber optic cable. Policies that encourage placement of conduit or fiber optic cable when a trench is open eliminate much of the capital costs for network deployment. By coordinating with other City, County or State capital projects such as sidewalk improvements, establishment of trails, implementation of street lighting, road construction and road widening projects, additional conduit can be placed within the trench when other work is being performed in the right of way. Coordination with other utility projects can substantially decrease the costs of broadband infrastructure.

A ***Dig Once Policy*** typically has the following components:

- All public works or installation of other telecom, cable or utility infrastructure allows for conduit to be placed on behalf of the local or State government and any other entities that want to participate. If there is an open trench, the policy provides for coordination of street cuts and excavations with utilities, public works, developers and other interested parties. This maximizes the opportunity for broadband-specific conduit installation, while minimizing cost, community disruption and damage to existing infrastructure.
- A notice period informing other entities that an open trench will be available for placement of their conduit and/or fiber optic facilities.
- Allows for shadow conduit to be placed on behalf of the local and/or State government. The installation of empty and/or spare conduit by a public agency when excavations occur in the public right of way, with the local government agency's costs limited to the incremental costs of the conduit only.

A standard, conduit-specification document can be developed that addresses capacity, separation of facilities, proper sizing and placement. The specification document also addresses access to the conduit with detailed provisions for vaults and all access points. Cost sharing or cost recovery stipulations can be put in place for materials and labor assignment. Engineering specifications and drawings that address conduit sweeps, bend radius and physical placement requirements can be provided with the standard conduit specification.

Additionally, various government agencies can establish ***Joint Trench Agreements*** and ***Joint Build Agreement***s with other telecommunications, cable or utility providers. Cost for placement of conduit or fiber will be shared amongst all entities, allowing each to take advantage of the other's trenching. Standardization of these agreements across all potential owners of underground infrastructure can be established to ensure all parties are aware of the joint trenching opportunities as they become available.

Streamlined Permitting Processes and Abandoned Fiber and Conduit Policies

A slow permitting process can add uncertainty in the construction timeline as well as significant costs. Crews can sit idle while waiting for permitting approvals and this adds to the overall cost of construction. A ***Streamlined Permitting Process*** can be implemented placing the responsibility for approval of broadband infrastructure projects solely in the public works department via an encroachment permit processes. Limiting this process to one department can reduce delays in the approval process. Additionally, a bulk permitting process can enable a single approval for multiple sections, further streamlining the overall process.

Create an ***Abandoned Fiber and Conduit Policy*** **to** regain control of abandoned facilities. Any abandoned fiber and/or conduit that is left vacant, and is not claimed by the owner within a designated time period, would revert to the local government agency.

One-touch Make Ready Processes

One of the most unpredictable and costly components of fiber optic construction is the "make-ready" process. "Make-Ready" refers to the inspections, engineering, and rearrangements necessary to accommodate the installation of multiple cables on a utility pole. Make-ready engineering for placement of fiber optic cables needs to comply with the National Electric Safety Code (NESC). Compliance may include moving existing fiber optic cable, increasing the load bearing ability of poles and/or the transfer or replacement of existing poles required to accommodate the attachment of new fiber optic cable. At times, the make-ready process can require multiple companies to dispatch crews with specialized equipment and bucket trucks to move their physical attachments on the communications portion of utility poles, causing slowdowns and duplicate expense for deployments.

In order to better streamline this time consuming and high-cost element, a ***One-touch Make-Ready Process*** or ***One Truck-Roll Procedure*** can be established to enable and encourage all of this work to be done by one company rather than by many.

Encourage standards for placement of conduit and/or fiber in new developments.

The integration of broadband "utility" codes into land development policies and city ordinances ensures uniform and standardized placement of conduit and/or fiber optic facilities. These land development codes would require all new commercial and residential developments to install fiber optic infrastructure. New building codes could describe the specific and compatible communications components and architectures of all new construction. Further, theses codes could describe the development and use of City/County right-of-ways for communications connectivity, and could specify standardized wiring requirements for new buildings.

Standardize Pole Attachment Rates for Placement of Aerial Fiber, Reducing the Operational Costs for Pole Rental Rates.

Pole attachment rates vary dramatically across various jurisdictions and utility companies for attaching aerial fiber on existing utility poles. Rates are typically charged per pole per year and can range from $4 per pole up to $26 per pole. Standardizing the pole attachment rates to a reasonable annual fee per pole per year will reduce the operating expenses for placement of fiber optic cable. Deploying fiber using existing utility poles is less expensive than placement of fiber in a conduit where a trench would need to be opened. Standardizing and minimizing the pole attachment rates can eliminate uncertainty and operational expenses.

Set up funding mechanisms or Set-asides to allow for adoption of these policies.

Conduit is not expensive. However, if the funding mechanism does not exist to place conduit, often opportunities to take advantage of open trenches or joint builds do not occur. A funding set-aside or budget process must be put in place to allow for implementation of these policies. The funding mechanism will allocate monies to build broadband infrastructure when opportunities arise and the fund would maintain a reserve or set-aside for unanticipated projects.

Keep a GIS database of all infrastructure, and provide for a process to submit plans.

Develop a policy that all construction permits issued would require the submission of final as-built drawings. This policy would define all planning and construction documentation requirements for utilities, developers, contractors and others in an appropriate GIS format.

Conclusion

The good news for municipalities looking to provide their constituents with next-century broadband is that they have the power to mitigate costs. By implementing dig once policies, streamlined permitting processes, and creating “make-ready” and conduit standards, your community can lay the groundwork literally - for a fiber-optic, robust broadband network. Legislative and procedural foresight in your community will empower your community’s broadband future.