

Collection of recent cases of efforts to prepare the improvement manual for electric power pole removal

TAKAMIYA, Susumu (Dr. (Arts and Sciences), Head
 IKEHARA Keiichi, Senior Researcher
 KIMURA Yasushi, Researcher

Road Department, Advanced Road Design and Safety Division

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1. Introduction

Plans to bury electric power cables and to remove power poles have been revised about every 5 years since 1986. And the removal of electric power poles is now being done based on the “Guideline to the Removal of Electric Power Poles” (Fig. 1). Among present improvement methods, electric power cable utility tunnels, originally introduced in 1995, are spreading widely, and there are cases where the more economical shallow burying method is adopted if other site conditions are satisfied. These methods are already stipulated in improvement manuals of many regional development bureaus.

On the other hand, the Simultaneous Improvement Method*1 has not widely penetrated because there is no technical document which describes a specific procedure, and some regional governments have made advanced efforts to use the electric power pole removal by none-burying method*2. There are also cases of innovations such as installing above ground devices at various locations.

The National Institute for Land and Infrastructure Management has collected cases of advanced improvement methods which have not penetrated nationwide, and cases of innovations thought to be effective by distributing information in various regions, and has prepared technical documents which regional development bureaus can use to reflect these improvement methods in their own improvement manuals.

*1: “Simultaneous execution” is a method of coordinating work periods to perform simultaneous execution in cases where an electric power cable utility tunnel and sidewalk improvement works are planned for the same period. “Simultaneous improvement” is a method of simultaneously newly constructing or widening a road and constructing an electric power cable utility tunnel at a location where it is predicted that it will be necessary to remove electric power poles in the future.

*2: “Method of installing electric power cables in eaves of buildings or in back alleys etc.

2. Advanced improvement methods

This simultaneous improvement method is superior to the normal electric power cable utility tunnel method in terms of work period and improvement cost, and because it is hypothesized that it will be used where there are few existing buried structures and that its tunnels will be linear with few bends, it will be possible to select this economically superior method (for example, adopting the shallow burying method or the I-shaped special parts to branch or connect electric power cables (integrating electric power and communication lines)). There are also cases presented for reference of the innovative adoption of the electric power pole removal by non-burying method in various regions through cooperation between road managers, electric power line managers, and roadside residents who discuss the cable installation methods and layout of aboveground devices. Photo 1 shows an example of such an innovative case.

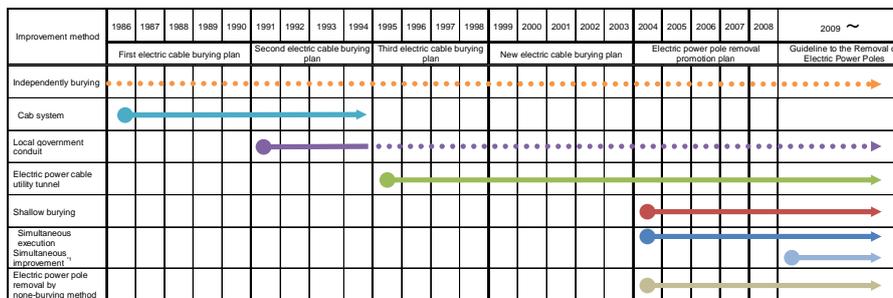
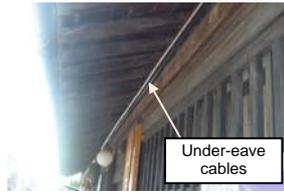


Figure 1. Electric Cable Burying and Electric Power Pole Removal Plans and Changing Improvement Methods



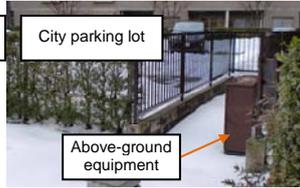
Transformer is in a back alley, eliminating above ground equipment.



This low voltage power line is colored to match the building



Above-ground equipment installed in the local garbage disposal site



Above-ground equipment installed on part of a city parking lot

Photo 1. Under-eave cables and examples of innovative layout of above-ground equipment

3. Conclusion

In the future, sample cases of advanced improvement methods which have been collected and technical documents which contribute to lowering the cost of removing electric power poles will be compiled and this information will be distributed throughout the country.