

Drainage Services Department
Technical Circular No. 2/2005

Improvement Measures for Pipelaying Contracts in Urban Areas

Introduction

Pipelaying in urban areas unavoidably requires partial or even complete closure of roads for a certain period of time. Closure of roads, particularly in congested or environmentally sensitive urban areas, will not be welcome by shop owners and road users. The Department has reviewed recent pipelaying contracts and identified several useful measures aimed to improve contract administration, ensure better control and reduce public disturbance.

Scope

2. This Circular provides guidelines on improvement measures for pipelaying contracts in urban areas. These guidelines serve to supplement those stipulated in the Project Administration Handbook or Environment, Transport and Works Bureau Technical Circulars (Works). This Circular shall take immediate effect.

Use of Trenchless Techniques

3. Over the years, the Department has adopted trenchless techniques (mostly pipe-jacking techniques) in a number of projects for the installation of underground pipelines, mainly in congested urban areas where using conventional cut and cover method would cause unacceptable adverse impact

to road traffic. Apart from causing less disturbance to traffic, trenchless method is also more advantageous than the conventional cut and cover method in terms of faster construction, less ground settlement, and reduced utility conflict at the launching and receiving shaft locations. However, trenchless techniques are not without limitations. They are much more expensive. The launching and receiving shafts will have to occupy the road surface for several months (or even up to a year or two), thus causing more inconvenience and disturbance to the shops and buildings in the vicinity of the shafts than the conventional cut and cover method. Furthermore, they are generally applicable for deep pipes only because of the need to avoid underground utilities and causing unacceptable ground movement.

4. Given the advantages of the trenchless techniques, their use should be adopted whenever feasible and justified. The designer should always carefully consider the merits or otherwise of each individual case including cost effectiveness, traffic and social impacts, and other constraints (e.g. working space, depth of the pipes) before a decision is made on the most appropriate construction method.

Use of Works Order Type of Contracts

5. From time to time, there are criticisms that the Government has allowed its contractors to open too many trenches on roads but they are left idle due to contractors' inadequate resources. This situation is undesirable from traffic and social impact point of view. In response to these criticisms, the Department has developed in the last few years a new Works Order type of contracts for use in certain projects involving extensive road openings with substantial traffic impacts. This type of contract proves to have several advantages over the conventional type of contracts. Typical ones are listed below :-

- (a) The Engineer will only issue the works orders to the Contractor to suit the Contractor's resources and ability. That is, the Employer and the Engineer will have an overall control on the number of work sites that can be worked on by the Contractor at any time.
 - (b) The Contractor will have more incentive to promptly complete the road opening works in an efficient and proper manner with a view to getting more works orders from the Engineer.
 - (c) Because of the need to have rigorous forward planning and control, the overall traffic impact and public disturbance due to the works will be reduced.
6. Given the benefits of the Works Order type of contracts, consideration should be given to use this contract form in appropriate projects that involve extensive road openings with substantial traffic and/or social impacts, taking into account the scale, complexity and location of the works.

Public Relation Measures

7. The following measures have been implemented in some recent projects and well received by the public :-
- (a) Setting up of a 24-hour patrol team to ensure proper maintenance of safety, lighting, signing and guarding for the works.
 - (b) Setting up of a 24-hour complaint hotline.
 - (c) Setting up of a dedicated public relations team to handle all public complaints/enquiries and to promote public relations.

- (d) The use of transparent (partly or fully) hoardings to enhance the environment and reduce obstruction to the visibility of shops.
- (e) The use of silenced equipment or methods, such as pipe-piling or other forms of piling utilizing silenced equipment in lieu of sheet-piling as the temporary works, for the construction of deep trenches or pipejacking shafts. This is to reduce the noise and vibration generated by sheet-piling operations which are likely to attract complaints in sensitive areas.

8. Given the positive reception from the public, the project office should adopt these measures whenever practicable and cost-effective, having regard to the scale and complexity of the works, as well as the sensitivity of the environment in which the works are located.

Restrictions on Working Hours

9. Where a contract involves works to be carried out in areas which are very sensitive to traffic, restrictions on working hours may sometimes be imposed in the contract, often at the request of concerned authorities (e.g. Transport Department, Police). Drainage Services Department Technical Circular No. 8/96 sets out the procedures to cover situations when restrictions on working hours, where stipulated in a contract, are relaxed during the construction stage. However, situations may also arise whereby the concerned authorities may impose additional restrictions on working hours during the construction stage to cater for the latest traffic conditions. To ensure that the contract documents have incorporated the most updated requirements, the project office should confirm with the concerned authorities on the validity of the working hours restriction or traffic restriction areas prior to tendering of the contract.

10. Consideration should also be given to include provisional items in the Bills of Quantities, so as to allow for possible locations where restricted hours of working may subsequently be found necessary. However, whether provisional items should be included and exactly how the provisional items should be structured shall depend on the circumstances of each individual contract, taking account of the sectioning and portioning of the contract, the likelihood of particular locations in which restricted hours of working may be required and the actual hours of a day for which restriction may be imposed at individual locations. The Contract Advisory Unit should be consulted on the contract provisions, itemizations of quantities and the like in case of doubt.



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Director of Drainage Services