

## 6.1 Introduction

This Chapter provides guidance for the arrangement of utility corridors at junctions within urban areas, and addresses transitions of utility corridors from new to existing streets. Special details for tunnels, bridges, underpasses and dedicated transit corridors, with respect to utility corridors are also provided.

## 6.2 Junctions

As defined in the USDM, junctions are intersections of streets where through moving and turning pedestrians, cyclists, transit vehicles and motor vehicles all share the same space. Types of junctions include rectilinear junctions, T-junctions, roundabouts, etc.

The development of utility corridor arrangements within junctions considers utility corridors intersecting or changing direction within intersecting streets, and shall be treated on a case-by-case basis, considering street type, street composition, plot chamfering, etc.

The guidance below should be followed when developing utility corridor arrangements at junctions. Figure 6.1 illustrates an example of utility corridors arrangement at an Access Lane/Access Lane junction.

- (A) Where possible, chambers should be located away from junctions to limit disruption.
- (B) Where a utility corridor is located under the Pedestrian Realm on one street and changes direction when intersecting with another street, its location should remain under the Pedestrian Realm as far as practical.
- (C) Where a utility corridor is located under the Pedestrian Realm of two opposite junction legs, its alignment shall divert around the junction (as opposed to crossing straight through it); or
- (D) Where a utility corridor is located under the Traveled Way of two opposite junction legs, its alignment shall be a straight line through the junction (as opposed to diverting around it).
- (E) Where a utility corridor crosses a street, the crossing should be perpendicular to the street.
- (F) Where a chamber is required within a junction, access to the chamber should be positioned to avoid closure of more than one travel lane during maintenance.

- (G) Chamfering of plots at junctions may be required to accommodate the particular street design or the space needed for utilities to change direction (e.g. to avoid sharp bends for a gravity network or to accommodate minimum bend radii for cables).

Lateral connections for gravity networks generally connect to the mains at junctions with larger streets, however, where possible, low points of the gravity mains should be avoided at junctions to prevent the need for lifting stations at these locations.

Interdisciplinary coordination should be undertaken when resolving utility conflicts, including ensuring the required vertical clearances are maintained.

The above guidance shall be followed in conjunction with the requirements of the local Municipality, DoT, UPC and relevant utility providers.

Surface grading is generally designed such that surface water flows away from junctions to avoid the risk of collecting as ponds. This in turn influences the location of stormwater inlets and reduces the need for gravity mains to pass through intersecting Access Lanes.